

# Empa Activities 2012

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# Empa Activities 2012

## Awards

<b>Advanced Fibers</b>	<b>Guex, Géraldine/Giraud, Marie-Noelle/Körner, Enrico/Carrell, Thierry/Tevearai, Hendrik/Fortunato, Giuseppino</b>	Best contribution, 7 <sup>th</sup> Ascona International Workshop on Cardiomyocyte Biology
<b>Advanced Fibers / Materials-Biology Interactions</b>	<b>Maniura, Katharina/Hufenus, Rudolf/Reifler, Felix</b>	«Best of Macromolecular Journals 2012»
<b>Air Pollution/Environmental Technology</b>	<b>Mangold, Markus</b>	Best Poster Award, MIOMD 2012, Chicago (USA)
<b>Analytical Chemistry</b>	<b>Hess, Adrian</b>	1 <sup>st</sup> Best Poster Award/16. ETH Conference on Combustion Generated Nanoparticles 2012
<b>Analytical Chemistry</b>	<b>Müller, Claudia</b>	«First Runner-Up» Award der Zeitschrift Environmental Science & Technology
<b>Analytical Chemistry</b>	<b>Ott, Noémi</b>	SCNAT/SCS Chemistry Travel Award 2012
<b>Analytical Chemistry</b>	<b>Ulrich, Andrea</b>	3 <sup>rd</sup> Best Poster Award/16 <sup>th</sup> ETH Conference on Combustion Generated Nanoparticles 2012
<b>Applied Wood Materials</b>	<b>Sehaqui, Houssine</b>	Gold Medal Award for the best PhD thesis in the competition in 2011–2012, International Academy of Wood Science
<b>Biomaterials</b>	<b>Le Meur, Sylvaine</b>	SGVC Science Award Winner 2012/Biocatalysis
<b>Building Science and Technology</b>	<b>Allegrini, Jonas</b>	AMS-IAUC Student Award, 8 <sup>th</sup> International Conference on Urban Climate, Dublin
<b>Concrete/Construction Chemistry</b>	<b>Griffa, Michele</b>	Poster: 1. Preis: Soft Matter Conference, 12. –16. August 2012, Ascona
<b>Concrete/Construction Chemistry</b>	<b>Schöler, Axel</b>	Poster: 3. Preis: GDCh-Tagung 11 –12.10.2012, Dübendorf
<b>Concrete/Construction Chemistry</b>	<b>Trtik, Pavel</b>	Poster: 3. Preis: GDCh-Tagung 11 –12.10.2012, Dübendorf
<b>Electron Microscopy Center</b>	<b>Erni, Rolf</b>	European Microscopy Society, EMS Outstanding Paper Award, Category: Instrumentation and Technique Development
<b>Electron Microscopy Center</b>	<b>Rossell, Marta D.</b>	European Microscopy Society, EMS Outstanding Paper Award, Category: Instrumentation and Technique Development and Materials Science
<b>Functional Polymers</b>	<b>Tisserant, Jean-Nicolas</b>	EMRS Graduate Student Award 2012
<b>Functional Polymers</b>	<b>Wicht, Gaëtan</b>	Presentation award, World Materials Research Institutes Forum
<b>High Performance Ceramics</b>	<b>Florent Boudoire</b>	1 <sup>st</sup> Place Oral Presentation Award, Empa PhD Symposium
<b>High Performance Ceramics</b>	<b>Navickas, Edvinas</b>	EMRS Young Scientist Award 2012, Strassbourg
<b>Hydrogen and Energy</b>	<b>Bliersbach, Andreas</b>	Poster Award, 6 <sup>th</sup> International Symposium Hydrogen & Energy, Stoos, Schweiz
<b>Hydrogen and Energy</b>	<b>Callini, Elsa</b>	Excellent Poster Award, MH2012, 21–26 October 2012, Kyoto, Japan
<b>Joining Technologies and Corrosion</b>	<b>Duarte, Liliana/Beni, Alessandra/Schmutz, Patrik</b>	ICT Outstanding Scientific Poster award, 31 <sup>st</sup> International & 10 <sup>th</sup> European Conference on Thermoelectrics (ICT/ECT 2012), July 9–12 in Aalborg, DK
<b>Joining Technologies and Corrosion</b>	<b>Jin, Shan</b>	Student Scholarship, CALPHAD XLI Conference, Berkeley, (USA), June 03 to June 08, 2012
<b>Joining Technologies and Corrosion</b>	<b>Leinenbach, Christian/Buhl, Sebastian</b>	Best Poster Award, CALPHAD XLI Conference, Berkeley, (USA), June 03 to June 08, 2012
<b>Joining Technologies and Corrosion</b>	<b>Leinenbach, Christian/Koster, Michael/Lis, Adrian</b>	Best Paper Award, 5 <sup>th</sup> International Brazing and Soldering Conference, Las Vegas, (USA), April, 22 to 25, 2012, ASM/AWS
<b>Joining Technologies and Corrosion</b>	<b>Ott, Noémie/Schmutz, Patrik/Ludwig, Christian/Ulrich, Andrea</b>	SCNAT/SCS Chemistry Travel Award 2012
<b>Mechanics for Modelling and Simulation</b>	<b>Holdsworth, Stuart Richard</b>	Grant Award
<b>Mechanics for Modelling and Simulation</b>	<b>Pham, Minh Son</b>	Grant Award
<b>Nanoscale Materials Science</b>	<b>Jaeger, Dominik</b>	E-MRS Graduate Student Award Symposium A
<b>Nanoscale Materials Science</b>	<b>Simon, Georg</b>	Otto-Hahn-Medal of the Max-Planck-Society
<b>Solid State Chemistry and Catalysis</b>	<b>Populoh, Sascha/Sagarna, Leyre/Beni, Alessandra/Schmutz, Patrik/Juerg Hulliger/Weidenkaff, Anke/Gałązka, Krzysztof</b>	The ICT Outstanding Scientific Poster, 2012 ICT/ECT conference in Aalborg, DK

# Empa Activities 2012

## Awards

<b>Solid State Chemistry and Catalysis</b>	<b>Sagarna Zudaire, Leyre</b>	DTG Nachwuchspreis 2012 (Deutsche Thermoelektrische Gesellschaft)
<b>Technology and Society</b>	<b>Simoni, Mark</b>	Willi-Studer-Preis für die besten Absolventinnen und Absolventen des Studienjahres 2012 der ETH Zürich
<b>Technology and Society</b>	<b>Wäger, Patrick/ Schluep, Mathias/ Müller, Esther</b>	«Top Paper» Award der Zeitschrift Environmental Science & Technology
<b>Thin Films and Photovoltaics</b>	<b>Chirila, Adrian</b>	SPG Preis 2012 in Angewandter Physik
<b>Thin Films and Photovoltaics</b>	<b>Kovalenko, Maksym</b>	MRC Sandpit award 2012

# Empa Activities 2012

## PhD Theses

<b>Acoustics/Noise Control</b>	<b>Churchill, Claire</b>	Direct and Flanking Transmission in Combined Heavyweight and Lightweight Structures Co-Supervisor Empa: Dr Lubos Krajci	2	University of Liverpool (UK)
<b>Advanced Fibers</b>	<b>Blanchard, Noémi</b>	Adsorption/Desorption an vertikalen Gradientenschichten (Vgrad) Supervisor Empa: Prof. Manfred Heuberger	2	ETH Zurich Dept. of Materials
	<b>Guex, Anne Géraldine</b>	Development and functionalisation of electrospun scaffolds for contractile artificial muscle constructs for cardiac repair Co-Supervisor Empa: Dr Giuseppino Fortunato	2	University of Bern
	<b>Kedronová, Eva</b>	Plasma Modification of Electrospun Polymer Micro and Nano Fibers (PlasmaESP) Co-Supervisor Empa: Dr Dirk Hegemann	2	Masaryk University Brno, Czech Republic
	<b>Kubincova, Jana</b>	Funktionalisierung von Textilien mittels Atmosphärenplasma Co-Supervisor Empa: Dr Dirk Hegemann	2	Cornelius University in Bratislava, Dept. of Experimental Physics (SK)
<b>Advanced Materials Processing</b>	<b>Schurtenberger, Erich</b>	Thermodynamics of Confined Fluids Co-Supervisor Empa: Dr Manfred Heuberger	1	ETH Zurich, Dept. of Materials
	<b>HAMMOUD, Hussein</b>	Sintering of Cerium Oxide based materials by Microwave heating Co-Supervisor Empa: Dr Sébastien Vaucher	2	Ecoles Nationale des Mines de St Etienne, France
	<b>Reinke, Michael</b>	BaTiO <sub>3</sub> deposition by HVCVD Supervisor Empa: Prof Patrik Hoffmann	2	EPF Lausanne Photonics
	<b>Rowthu, Sriharitha</b>	Porous wear resitant, tailored wetting materials Supervisor Empa: Prof Patrik Hoffmann	2	EPF Lausanne, Materials Science and Engineering
	<b>Saeidi, Fatemeh</b>	Laser structuring of tribo-pair surface Supervisor Empa: Prof Patrik Hoffmann	2	EPF Lausanne Materials Science and Engineering
<b>Air Pollution/ Environmental Technology</b>	<b>Eyer, Simon</b>	Development of a real-time quantum cascade laser spectrometer for methane isotopic species in ambient air Co-Supervisor: Dr Lukas Emmenegger	2	University of Bern
	<b>Gianini, Matthias</b>	Quellenzuordnungen von Aerosolen aus der Verbrennung von Biomasse (IMBALANCE) Co-Supervisor Empa: Dr Christoph Hügli	2	ETH Zurich Inst. for Atmospheric and Climate Science
	<b>Knote, Christoph</b>	Regional scale impacts of changing emissions on air quality and climate Co-Supervisor Empa: Dr Dominik Brunner	1	ETH Zurich Inst. for Atmospheric and Climate Science
<b>Analytical Chemistry</b>	<b>Oney Brian</b>	CarboCount CH: Quantifying CO <sub>2</sub> and CH <sub>4</sub> fluxes in Switzerland Co-Supervisor Empa: Dr Dominik Brunner	2	ETH Zurich Dept. of Environmental Systems Science
	<b>Schönenberger, Fabian</b>	Measurement-based verification of regional emissions of halogenated greenhouse gases Co-Supervisor: Dr Stefan Reimann	2	ETH Zurich Dept. of Environmental Systems Science
	<b>Bahk, Yeion Kyoung</b>	Characterization of airborne Carbon Nano Tubes and Filtration Supervisor Empa: Prof Jing Wang	2	ETH Zurich Inst. for Environmental Engineering
	<b>Diefenbacher, Pascal</b>	Investigations of emissions of POPs from buildings into air and modeling of environmental fate Co-Supervisor Empa: Dr Andreas C. Gerecke	2	ETH Zurich Dept. Umweltnaturwissenschaften
	<b>Durdina, Lukas</b>	Particulate Matter and Gas Phase Emission Measurement of Aircraft Engine Exhaust Supervisor Empa: Prof Jing Wang	2	ETH Zurich Inst. for Environmental Engineering
	<b>Hess, Adrian</b>	Online coupling of a scanning mobility particle sizer SMPS to an inductively coupled plasma mass spectrometer ICP-MS for size fractionated, elemental analysis of nanoparticles in aerosols Co-Supervisor Empa: Dr Andrea Ulrich	2	EPF Lausanne Materials Science and Engineering
	<b>Kammenou, Izoldi-Maria</b>	Study, Transport and Characterization of airborne Nanoparticles with the use of Empa Windtunnel Supervisor Empa: Prof Jing Wang	2	ETH Zurich Inst. for Environmental Engineering
	<b>Kuo, Yu-Ying</b>	Concurrence of nanoparticles and organic pollutants in atmosphere and photocatalytic removal of organic pollutants Supervisor Empa: Prof Jing Wang	2	ETH Zurich Inst. for Environmental Engineering

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<b>Analytical Chemistry</b>	<b>Losert, Sabrina</b>	Investigations of the release of nanoparticles from consumer spray products Co-Supervisor Empa: Dr Andrea Ulrich	2	ETH Zurich, Inst. for Chemical and Bioengineering ICB	
	<b>Ott, Naomi</b>	Development of a novel micro-analytical technique for elemental, locally and time resolved in-situ investigations of micro corrosion processes using a microflow capillary online coupled via flow injection to an inductively plasma mass spectrometry with potentiationstatic control Co-Supervisor Empa: Dr Andrea Ulrich	2	University of Bern	
	<b>Pavlova, Pavlina</b>	Accelerated release of persistent organic pollutants from Alpine glaciers Co-Supervisor Empa: Dr Peter Schmid	2	University of Berne	
	<b>Walaszak, Damian</b>	Minimal invasive investigations of corrosion products on ancient metal objects using LA-ICP-MS Co-Supervisor Empa: Dr Andrea Ulrich	2	University of Warsaw, Faculty of Chemistry (PL)	
<b>Applied Wood Materials</b>	<b>Aigner Nikita</b>	Modelling of cell wall components interaction Co-Supervisor Empa: Prof Ingo Burgert	2	ETH Zurich Inst. für Baustoffe	
	<b>Civardi Chiara</b>	Assessment of the effectiveness and environmental risk of copper particles based wood preservatives Co-Supervisor Empa: Prof Francis Schwarze	2	ETH Zurich Inst. für Integrative Biologie	
	<b>Gebald, Christoph</b>	Atmosphärische CO <sub>2</sub> Abscheidung Co-Supervisor Empa: Dr Tanja Zimmermann	2	ETH Zurich Energy Science Center ESC	
	<b>Grüneberger Franziska</b>	Modified Nanofibrillated Cellulose in Wood Coatings Supervisor Empa: Prof Ingo Burgert Co-Supervisor Empa: Martin Arnold	2	ETH Zurich Inst. für Baustoffe	
	<b>Ho, Thu Thao</b>	Development of barrier layers in packaging materials by using nanofibrillated cellulose Co-Supervisor Empa: Dr Tanja Zimmermann	1	ETH Zurich Material Sciences	
	<b>Keplinger Tobias</b>	Cell wall modification and characterization Supervisor Empa: Prof Ingo Burgert	2	ETH Zurich Inst. für Baustoffe	
	<b>Merk Viviane</b>	Chemical modification of spruce and beech wood Supervisor Empa: Prof Ingo Burgert	2	ETH Zurich Inst. für Baustoffe	
	<b>Orsolini Paola</b>	«Elaboration of functional materials using biobased waste resources as building blocks» Co-Supervisor Empa: Dr Philippe Tingaut / Dr Tanja Zimmermann	2	ETH Zurich	
	<b>Biomaterials</b>	<b>Razghandi Khashayar</b>	Bio-inspired honeycomb devices for movements Co-Supervisor Empa: Prof Ingo Burgert	2	Technische Universität Berlin (DE)
		<b>Stührk, Chris</b>	Creation of Physisporinus vitreus Laccase knockdown mutants for improvement of the bioincising process Co-Supervisor Empa: Prof Francis Schwarze	1	ETH Zurich Dept. Bau, Umwelt und Geomatik
<b>Zhang, Zheng</b>		Silylated Nanofibrillated Cellulose in Polymer Composites Co-Supervisor Empa: Dr Philippe Tingaut	2	Université Bordeaux (FR)	
<b>Ghazaryan, Gagik</b>		Biobased additives for the mechanical improvement of biopolymers Co-Supervisor Empa: Dr Matthijs de Geus	2	ETH Zurich Dept. of Materials	
<b>Ketikidis, Pantelis</b>		Interfacial behavior of biocompatible poly(hydroxyalkanoate)-based polymers for complex materials development. Co-Supervisor Empa: Dr Manfred Zinn	2	University of Basel Dept. of Chemistry	
<b>Lavielle, Nicolas</b>		Temporal and spatial controlled drug delivery from electrospun biopolyesters Co-Supervisor Empa: Dr Matthijs de Geus	2	Université de Strasbourg; LIPHT	
	<b>Le Meur, Sylvaine</b>	Production of polyhydroxyalkanoates (PHAs) from cheap waste resources Co-Supervisor Empa: Dr Qun Ren / Dr Manfred Zinn	2	ETH Zurich Dept. Umweltwissenschaften (UWIS)	

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Building Science & Technology	<b>Abbasion, Saeed</b>	Modeling of heat and mechanical effects during wood welding Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Prof Dominique Derome	2	ETH Zurich Dept. Architektur
	<b>Allegrini, Jonas</b>	Urban climate and energy demand of buildings Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Viktor Dorer	1	ETH Zurich Dept. Bau, Umwelt und Geomatik
	<b>Derluyn, Hannelore</b>	Salt cristalisation in porous media Supervisor Empa: Prof Jan Carmeliet	1	ETH Zurich Dept. Bau, Umwelt und Geomatik
	<b>Ferdowsi, Behrooz</b>	3D MD Modelling of slip triggering in granular media by means of boundary vibration: Implications for dynamic earthquake triggering Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Dr Michele Griffa	2	ETH Zurich Dept. Bau
	<b>Goto, Yutaka</b>	Sustainable building envelopes for Japan Co-Supervisor Empa: Dr Karim Ghazi Wakili	1	ETH Zurich Dept. Bau, Umwelt und Geomatik
	<b>Guizzardi, Michela</b>	Performance assessment of energy renovation strategies for old historical buildings Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Dr Dominique Derome/Mark Zimmermann	2	ETH Zurich Civil Engineering
	<b>Immer, Marc</b>	Mechanisms and scaling of turbulent transfer within the urban canopy layer Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Viktor Dorer	2	ETH Zurich Civil Engineering
	<b>Jae Bong Lee</b>	Wetting of building façadesby wind driven rain in the urban context Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Prof Dominique Derome	2	ETH Zurich Civil Engineering
	<b>Kubilay, Aytac</b>	Wetting of building façadesby wind driven rain in the urban context Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Prof Dominique Derome / Viktor Dorer	2	ETH Zurich Civil Engineering
	<b>Kulasinski, Karol</b>	Adsorption and swelling of complex porous media investigated with molecular dynamics simulation Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Prof Dominique Derome	2	ETH Zurich Civil Engineering
	<b>Patera, Alessandra</b>	3D experimental investigation of hygro-mechanical behaviour of wood at the cellular scale Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Dr Michele Griffa	2	ETH Zurich Dept. Bau, Umwelt und Geomatik
	<b>Paterna, Enrico</b>	Turbulent flow modelling of urban areas Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Viktor Dorer	2	ETH Zurich Civil Engineering
	<b>Rafsanjani Abbasi, Ahmad</b>	Cellular poroelastic model: Bridging the gap from cellular to macroscopic scale Co-Supervisor Empa: Prof Dominique Derome	2	ETH Zurich Dept. Bau, Umwelt und Geomatik
	Concrete/Construction Chemistry	<b>Saneinejad, Saba</b>	Urban climate Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Dr Peter Moonen	2
<b>Vonlanthen, Marcel</b>		Microscale climatic modeling Supervisor Empa: Prof Jan Carmeliet Co-Supervisor Empa: Viktor Dorer	2	ETH Zurich Civil Engineering
<b>Deschner, Florian</b>		Enhancing the reactivity of Portland fly ash cement Co-Supervisor Empa: Dr Frank Winnefeld, Dr Barbara Lothenbach	2	Universität Erlangen (DE)
<b>Dilnesa, Belay</b>		Fate of iron during hydration of cement Co-Supervisor Empa: Dr Barbara Lothenbach	1	EPF Lausanne

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## PhD Theses

<b>Concrete/Construction Chemistry</b>	<b>Hôpital, Emilie</b>	Al uptake in C-S-H and the influence of alkali Co-Supervisor Empa: Dr Barbara Lothenbach	2	EPF Lausanne
	<b>Kunther, Wolfgang</b>	Sulfatresistenz: Resistance against sulfate attack Co-Supervisor Empa: Dr Barbara Lothenbach, Dr Andreas Leemann	1	EPF Lausanne
	<b>Schöler Axel</b>	Hydration of multi-component cements containing cement clinker, slag, type-V fly ash, limestone: CEM X/A – M (S, V, LL, x) Co-Supervisor Empa: Dr Barbara Lothenbach / Dr Frank Winnefeld	2	Bauhaus, Universität Weimar, F.A. Fingerinstitut für Baustoffkunde
	<b>Xing Fang</b>	Cold mix asphalt concrete: combination of cementitious materials and asphalt emulsions Supervisor Empa: Prof Pietro Lura Co-Supervisor Empa: Dr Alvaro Garcia / Prof Manfred Partl	2	ETH Zurich
<b>Electron Microscopy Center Electronics/Metrology/ Reliability</b>	<b>Ilari, Gabriele</b>	Metal/CNT contacts Co-Supervisor Empa: Dr Rolf Erni	2	ETH Zurich, Dept. Materials
	<b>Butti, Pascal</b>	Graphene RGB Co-Supervisor Empa: Dr Urs Sennhauser	2	ETH Zurich, Dept. of Physics
	<b>Lotito, Valeria</b>	SNOM Supervisor Empa: Prof Gian-Luca Bona Co-Supervisor Empa: Dr Urs Sennhauser	1	ETH Zurich, Dept. of Information Technology and Electrical Engineering
	<b>Sanabria, Sergio</b>	US Glued Timber Co-Supervisor Empa: Dr Urs Sennhauser / Dr Jürg Neuenschwander	1	ETH Zurich, Inst. for Building Materials
	<b>Scholder, Olivier</b>	Platun Supervisor Empa: Prof Gian-Luca Bona Co-Supervisor Empa: Dr Urs Sennhauser	2	ETH Zurich, Dept. of Information Technology and Electrical Engineering
	<b>Zraggen, Eugen</b>	Photonik Projekt Supervisor Empa: Prof Gian-Luca Bona Co-Supervisor Empa: Dr Urs Sennhauser	2	ETH Zurich, Dept. of Information Technology and Electrical Engineering
<b>Functional Polymers</b>	<b>Chatterjee, Sanjukta</b>	Structural and mechanical effects of carbon nanotubes in high-tensile strength thermoplastic polymer fibers Co-Supervisor Empa: Dr Rudolf Hufenus, Dr Frank Nüesch		Uppsala University, (SE)
	<b>Quinsaat, Jose-Enrico</b>	Increasing the dielectric constant of dielectric elastomer actuators using silver nanoparticles Co-Supervisor Empa: Dr Frank Nüesch, Dr Dorina Opris	2	EPF Lausanne
	<b>Schlagenhauf, Lukas</b>	Evaluation platform for safety and environmental risks of carbon nanotube reinforced nanocomposites Supervisor Empa: Dr Frank Nüesch Co-Supervisor Empa: Prof Jing Wang	2	ETH Zurich
	<b>Shaw-Stewart, James</b>	Laser ablation forward transfer Co-Supervisor Empa: Dr Frank Nüesch	1	ETH Zurich
	<b>Tisserant, Jean-Nicolas</b>	Structured Templates of (6,6)-Phenyl C61-Butyric Acid Methyl Ester (PCBM) for Applications in Photovoltaics and Photonics Co-Supervisor Empa: Dr Jakob Heier, Dr Roland Hany	2	ETH Zurich
<b>High Performance Ceramics</b>	<b>Zhang, Hui</b>	NIR sensitive organic solar cells for tandem devices and transparent windows Supervisor Empa: Dr Frank Nüesch Co-Supervisor Empa: Dr Roland Hany	2	EPF Lausanne
	<b>Bora, Debajeet Kumar</b>	Synthesis and assessment of mixed metal-oxide nanoparticles and films for solar photo-electrochemical hydrogen fuel production - BASELPEC Co-Supervisor Empa: Dr Artur Braun	1	University of Basel
	<b>Boudoire, Florent</b>	Liesegang Co-Supervisor Empa: Dr Artur Braun	2	University of Basel

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## PhD Theses

High Performance Ceramics	<b>Chen, Qianli</b>	Effect of lattice volume and imperfections on the proton-photon coupling in proton conducting lanthanide transition metal oxides: High pressure and high temperature neutron and impedance studies Co-Supervisor Empa: Dr Artur Braun	1	ETH Zurich/ EPF Lausanne	
	<b>Dalcanale, Federico</b>	Ceramed Co-Supervisor Empa: Jakob Kübler / Prof Thomas Graule	2	ETH Zurich	
	<b>Flak, Dorota</b>	New metal oxide nanopowders for gas sensors Co-Supervisor Empa: Prof Thomas Graule	1	AGH University of Science and Technology, Cracow (PL)	
	<b>Fleischhauer, Felix</b>	Solid Oxide Fuel Cell Research Co-Supervisor Empa: Jakob Kübler	2	Montanuniversität Leoben, (AT)	
	<b>Hu, Yelin</b>	Fundamental spectroscopy studies on solar cell materials Co-Supervisor Empa: Dr Artur Braun	2	EPF Lausanne	
	<b>Märkl, Veronika</b>	Novel nanocomposite based filter media for adsorption based water treatment Co-Supervisor: Prof Thomas Graule	1	Technische Universität Freiberg (DE)	
	<b>Popelo, Anastasyia</b>	Fundamental spectroscopy studies on solar cell materials Co-Supervisor: Dr Artur Braun	1	EPF Lausanne	
	<b>Salehi, Mahdi</b>	Development of thin tubular dead-end membranes for oxygen separation and syngas production Co-Supervisor Empa: Dr Frank Clemens	1	University of Fribourg	
	<b>Schabikowski, Mateusz</b>	Novel nanocomposite based filter media for adsorption based water treatment Co-Supervisor: Prof Thomas Graule	2	AGH University of Science and Technology, Cracow, (PL)	
	<b>Schlenther, Evelyn</b>	Processing aspects for the toughening of infiltrated Al <sub>2</sub> O <sub>3</sub> / P / Steel Composites Co-Supervisor: Jakob Kübler	1	Technische Universität Freiberg (DE)	
	<b>Wilkens-Heinecke, Judit</b>	Novel shaping of polymer/ceramic nanocomposites Co-Supervisor Empa: Prof Thomas Graule	1	Technische Universität Bergakademie Freiberg, (DE)	
	Hydrogen and Energy	<b>Bliersbach, Andreas</b>	Hydrogen on metal doped carbon nanostructures Supervisor Empa: Prof Andreas Züttel Co-Supervisor Empa: Dr Arndt Remhof	2	Universität Fribourg, Dept. Physics
		<b>Bonk, Alexander</b>	Synthesis and characterization of thermal stable and highly porous doped CeO <sub>2</sub> structures for Thermochemical Redox Reactions Co-Supervisor Empa: Dr Ulrich Vogt / Prof Andreas Züttel	2	Universität im Breisgau Dept. Chemie, Philosophie und Geisteswissenschaften
<b>Gorbar, Michal</b>		Developments of new membranes based on inorganic materials for electrolyser cells Supervisor Empa: Prof Andreas Züttel Co-Supervisor Empa: Dr Ulrich Vogt	2	University of Fribourg Dept. Physics	
Internal Combustion Engines	<b>Kato, Shunsuke</b>	Physical Properties of Complex Hydrides e.g. Mx1[BH4]x, and Hydrogen Sorption Mechanism Supervisor Empa: Prof Andreas Züttel Co-Supervisor Empa: Dr Andreas Borgschulte	1	University of Fribourg, Dept. Physics	
	<b>Spiteri, Alexander Constantin</b>	Investigation of the phenomena in deNOx-SCR exhaust aftertreatment systems Co-Supervisor Empa: Dr Panayotis Dimopoulos Eggenschwiler	2	ETH Zurich, Lab. für Aerothermochemie und Verbrennungssysteme	
	Joining Technologies and Corrosion	<b>Breimesser, Matthias</b>	Elektrochemische Rauschanalyse von lokalen Korrosionsprozessen Co-Supervisor Empa: Dr Patrik Schmutz, Dr Thomas Suter	1	Universität Erlangen (DE)
<b>Buhl, Sebastian</b>		Interfaces of brazed diamonds Co-Supervisor Empa: Dr Christian Leinenbach	1	ETH Zurich, Institut for Machine Tools and Manufacturing	
<b>Izdebski Pawel</b>		Investigation of atmospheric local oxidation mechanisms for Al based ultra-fine grained alloys: influence on aqueous corrosion and surface properties Co-Supervisor Empa: Dr Patrik Schmutz	2	Warsaw University of Technology (PL)	

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## PhD Theses

<b>Joining Technologies and Corrosion</b>	<b>Jin Shan</b>	Experimental Study and Modeling of Au-Ge-based Alloy Systems for Novel High Temperature Lead Free Solders Co-Supervisor Empa: Dr Christian Leinenbach	2	EPF Lausanne, Computational Materials Laboratory
	<b>Lipecka, Joanna</b>	Development of novel joining technologies for nanostructured materials Supervisor Empa: Prof Jolanta Janczak-Rusch	2	Int. PhD School Switzerland-Poland
	<b>Lis, Adrian</b>	Transient Liquid Phase Bonding of Si and SiC dies in the packaging process of high power semiconductor modules Co-Supervisor Empa: Dr Christian Leinenbach	2	ETH Zurich, Dept. Maschinenbau
	<b>Sobol Sosnowska, Karolina</b>	Controlling diffusion processes for rapid formation of interconnects Co-Supervisor Empa: Prof Jolanta Janczak-Rusch	2	ETH Zurich, Dept. of Materials
	<b>Transchel, Robert</b>	Experimental study and modelling of the single diamond-work piece interaction using particle-reinforced filler alloys Co-Supervisor Empa: Dr Christian Leinenbach	2	ETH Zurich Institut for Machine Tools and Manufacturing
	<b>Weyrich, Nico</b>	Low melting Au-based solder alloys for highly loaded applications Co-Supervisor Empa: Dr Christian Leinenbach	2	ETH Zurich Institut for Machine Tools and Manufacturing
	<b>Materials-Biology Interactions</b>	<b>Civardi, Chiara</b>	Assessment of the effectiveness and environmental risk of copper particles based wood preservatives Co-Supervisor Empa: Dr Peter Wick / Dr Francis Schwarze	
<b>Gasser, Michael</b>		CNT Interaktionen mit Proteinen Supervisor Empa: Prof Harald Krug Co-Supervisor Empa: Dr Peter Wick	2	Universität Bern
<b>Grafmüller, Stefanie</b>		Nanoparticle transport across the human placenta Supervisor Empa: Prof Harald Krug Co-Supervisor Empa: Dr Peter Wick	2	Universität Bern Fakultät für Medizin
<b>Huber, Rebecca</b>		Morphological gradients for protein adsorption and cell studies Co-Supervisor Empa: Dr Katharina Maniura	2	ETH Zurich Dept. of Materials
<b>Mulky, Elias</b>		Bone Substitute Materials Reinforced with Nanofibres: Effect of Delayed Fibre Degradation on Cells an Tissues Co-Supervisor Empa: Dr Katharina Maniura	2	ETH Zurich Mechanical and Process Engineering
<b>Mechanical Systems Engineering</b>	<b>Studer, Deborah</b>	2D Patterned Co-Culture Systems for Investigating Stem Cell Differentiation Co-Supervisor Empa: Dr Katharina Maniura	2	ETH Zurich Dept. of Information Technology and Electrical Engineering
	<b>Dürager, Christian</b>	Development of a Structural Health Monitoring System for Aerospace Application Co-Supervisor Empa: Dr Andreas J. Brunner	2	ETH Zurich Institut für Automatik
	<b>Eleni, Toumpanaki</b>	Dauerhaftigkeit von mit nanomodifizierten CFK Drähten vorgespannten filigranen Hochleistungsbeton (HLB) Bauteilen Co-Supervisor Empa: Dr Gianni Terrasi	2	University of Cambridge (UK) Dept. Civil Engineering,
	<b>Haba, Dietmar</b>	Nanocomposites Based on Epoxy Co-Supervisor Empa: Dr Andreas J. Brunner	2	University of Fribourg
	<b>Maluk, Cristian</b>	Fire-safe performance, design, and application of high-performance carbon fibre prestressed concrete structural elements Co-Supervisor Empa: Dr Gianni Terrasi	2	University of Edinburgh (UK) Dept. Civil Engineering,
	<b>Przybilla, Constanze</b>	Mechanical characterization of materials in fracture and fatigue for transferability to real structures focused on the size effect. Co-Supervisor Empa: Roland Koller	2	University of Gijon

# Empa Activities 2012

## PhD Theses

<b>Mechanical Systems Engineering</b>	<b>Ritschel, Franziska</b>	Characterization of failure mechanisms of plywood and LVL from the macroscopic to the microscopic scale by combining optical methods, acoustic emission analysis, electron microscopy and X-ray tomography Co-Supervisor Empa: Dr Andreas Brunner	2	ETH Zurich Inst. for Building Materials
	<b>Senteler, Marco</b>	Rigid body simulation of the human musculoskeletal system - Influence of spinal fusion on the angular displacement of the adjacent vertebrae at activities of daily living Co-Supervisor Empa: Bernhard Weisse, Christian Affolter	2	ETH Zurich Inst. for Biomechanics
<b>Mechanics for Modelling and Simulation</b>	<b>Weiss, Florian</b>	Nanostructures for Artificial Muscles (NAM) Co-Supervisor Empa: Dr Gabor Kovacs	2	Universität Basel
	<b>Ehrhardt, Frank</b>	Lifetime assessment of 700°C steam turbine weldments Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	2	ETH Zurich
	<b>Frigerio, Marco</b>	Evaluation of the influence of time at temperature on the properties of Aldrey of overhead conductor wires Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	2	ETH Zurich
	<b>Hosseini, Ehsan</b>	Prediction of long time creep rupture properties of welded joints using the results of short duration creep crack incubation tests Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	2	ETH Zurich
	<b>Jähne, René</b>	Shape memory adaptive structures Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Flavio Campanile	1	ETH Zurich
	<b>Mayer, Thomas</b>	Microstructural evolution during fatigue (2CrMoNiWV) Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	1	ETH Zurich
	<b>Pham-Minh, Son</b>	Microstructural evolution during fatigue (17Cr12Ni2Mo) Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	1	ETH Zurich
<b>Mechanics of Materials and Nanostructures</b>	<b>Vacchieri, Erica</b>	Creep-fatigue Interaction and small size testing techniques Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	2	ETH Zurich
	<b>Yan, Wentao</b>	Creep-fatigue crack growth resistance of advanced 10%Cr rotor steels Supervisor Empa: Prof Edoardo Mazza Co-Supervisor Empa: Dr Stuart Holdsworth	2	ETH Zurich
	<b>Nowag, Kai</b>	Anisotropy in the deformation mechanisms of hard to machine metal alloys (preliminary) Co-Supervisor Empa: Dr Rudy Ghisleni	2	University of Technology Braunschweig (DE)
<b>Media Technology</b>	<b>Szkudlarek, Aleksandra</b>	Magneto- and piezoresistive properties of nanostructures created by Focused-Electron-Beam-Induced-Deposition Co-Supervisor Empa: Dr. Ivo Utke	2	AGH University of Science and Technology in Krakow (PL)
	<b>Scheller Lichtenauer, Matthias</b>	Measurement and Modeling of Multi-Attribute Psychometric Scales Co-Supervisor Empa: Dr Peter Zolliker	2	University of Jena (DE)
<b>Nanoscale Materials Science</b>	<b>Fontani, Giacomo</b>	Mechanisms of Aqueous Lubrication with Amphiphilic Polymers Co-Supervisor Empa: Dr Rowena Crockett	2	ETH Zurich Dept. Materials Science
	<b>Jaeger, Dominik A.</b>	Interfaces between Nanostructured metal nitrides and Si <sub>3</sub> N <sub>4</sub> Co-Supervisor Empa: Dr Jörg Patscheider	1	EPF Lausanne
	<b>Karageorgaki, Chrysanthi</b>	Chiral Molecules@surfaces Supervisor Empa: PD Dr Karl-Heinz Ernst	2	Universität Zürich Dept. Chemistry
	<b>Markovic, Marko</b>	CNT precursors@surfaces Supervisor Empa: PD Dr Karl-Heinz Ernst	2	Universität Zürich Dept. Chemistry

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2 = in progress

# Empa Activities 2012

## PhD Theses

Nanoscale Materials Science	<b>Özer, Sevil</b>	Exchange Bias Effect and Magnetic Memory Supervisor Empa: Prof Hans Josef Hug Co-Supervisor Empa: Dr Miguel Marioni	1	University of Basel
	<b>Reissner Patrick</b>	Friction across Phase Transitions Supervisor Empa: Prof Hans Josef Hug	2	Universität Basel
	<b>Schwenk Johannes</b>	Friction across Phase Transitions Supervisor Empa: Prof Hans Josef Hug Co-Supervisor Empa: Dr Miguel Marioni	2	Universität Basel
	<b>Seibel, Johannes</b>	Helical hydrocarbons at surfaces Supervisor Empa: Prof Hans Josef Hug	2	University of Zurich Dept. Chemistry
	<b>Stickar, Pablo Guillermo</b>	Versatile magnetic pathways for kinesin driven molecular shuttles Co-Supervisor Empa: Dr Miguel Marioni	1	ETH Zurich
	<b>Stoeckl, Quirin</b>	CNT precursors@surfaces Supervisor Empa: PD Dr Karl-Heinz Ernst	2	Universität Zürich Dept. Chemistry
nanotech@surfaces	<b>Tolga, Goren</b>	Understanding the role of sugar and glycan structure in natural lubrication mechanisms Co-Supervisor Empa: Dr Rowena Crockett	2	ETH Zurich Dept. Materials Science
	<b>Gaspari, Roberto</b>	Quasicrystal surfaces Co-Supervisor Empa: Dr Daniele Passerone	1	ETH Zurich Dept. of Chemistry and Applied Biosciences
	<b>Prinz, Jan</b>	Experimental surface science investigations of palladium-gallium intermetallics for heterogeneous catalysis Supervisor Empa: Dr Roland Widmer	2	EPF Lausanne Dept. of Physics
	<b>Shinde, Prashant</b>	Computational design of graphene based nanostructures Co-Supervisor Empa: Dr. Daniele Passerone / Carlo Pignedoli	2	ETH Zurich
	<b>Söde, Hajo</b>	Electronic structure of graphene nanoribbons Supervisor Empa: Prof Roman Fasel Co-Supervisor Empa: Dr Pascal Ruffieux	2	Universität Zürich Dept. Physik
	<b>Talirz, Leopold</b>	Organic nanowires with unusual transport properties: A theoretical study Co-Supervisor Empa: Prof Roman Fasel, Dr Carlo Pignedoli	2	Universität Zürich Dept. Physik
Protection and Physiology	<b>Baumann, Lukas</b>	Light-responsive Membrane for Controlled Material Transport Co-Supervisor Empa: Dr Lukas Scherer	2	University of Basel
	<b>Camerlo, Agathe</b>	Cold Electrospinning Co-Supervisor Empa: Dr Ana-Maria Popa	2	University of Geneva
	<b>Chatterjee, Sanjukta</b>	Structural and mechanical effects of carbon nanotubes in high-tensile strength thermoplastic polymer fibers Co-Supervisor Empa: Dr Rudolf Hufenus / Dr Frank Nüesch	1	Uppsala University, Sweden
	<b>Frackiewicz-Kaczmarek, Joanna</b>	Contact area and air gap thickness – characterisation under wearing conditions Co-Supervisor Empa: Dr Agnieszka Psikuta / Dr René Rossi	2	ENSISA, Mulhouse (FR)
	<b>Krehel, Marek</b>	Polymeric Optical Fibers for sensing applications Supervisor Empa: Prof Gian Luca Bona Co-Supervisor Empa: Dr Lukas Scherer	2	ETH Zurich
	<b>Martinez Natividad</b>	Prediction of wearing comfort of bicycle helmets Co-Supervisor Empa: Dr René Rossi	2	Universidad Politécnica de Valencia (ES)
	<b>Niedermann, Reto</b>	Modeling human heat stress to IR-radiation using a model of human physiology and the sweating agile manikin (SAM) Co-Supervisor Empa: Dr René Rossi	1	ETH Zurich Institut für Bewegungswissenschaften
	<b>Wettenschwiler Patrick</b>	Spinal load Co-Supervisor Empa: Dr René Rossi	2	ETH Zurich
	<b>Widmer Susanne</b>	Polymer Optical Fibre Sensor Co-Supervisor Empa: Dr Lukas Scherer	2	Universität Basel
	<b>Yazgan Gökçe</b>	Electrospinning for scaffolds Co-Supervisor Empa: Dr Ana-Maria Bühlmann / Dr Katharina Maniura	2	ETH Zurich Dept. Health Sciences and Technology
	<b>Zuber, Stefanie</b>	Intelligent responsive nanofibers Co-Supervisor Empa: Dr Ana-Maria Popa	2	Johannes Gutenberg Universität Mainz (DE)

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# Empa Activities 2012

## PhD Theses

Road Engineering/ Sealing Components	<b>Biruk Wobeshed, Hailesilassie</b>	Measurement of Short-Term Blistering Affecting Bridge Decks with Asphalt Pavements Supervisor Empa: Prof Manfred Partl	2	KTH, Väg-och-Banteknik (SE)
	<b>Ehsan Ghafoori Roozbahany</b>	Real-Time In-situ Quality Evaluation of Asphalt Pavements During Installation Supervisor Empa: Prof Manfred Partl	2	KTH, Väg-och-Banteknik (SE)
	<b>Kalogeropoulos, Alexis</b>	Effect of vehicle-road dynamic interaction on pavement structures Co-Supervisor Empa: Dr Johannes Hugenschmidt / Prof Manfred Partl	1	EPF Lausanne ETH Zurich
	<b>Xing Fang</b>	Cold mix asphalt concrete: combination of cementitious materials and asphalt emulsions Supervisor Empa: Prof Pietro Lura Co-Supervisor Empa: Dr Alvaro Garcia / Prof Manfred Partl	2	ETH Zurich
Solid State Chemistry and Catalysis	<b>Gałązka, Krzysztof</b>	Novel intermetallic thermoelectric materials, their synthesis and characterization Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Sascha Populoh	2	Universität Bern, Philosophisch-naturwissenschaftliche Fakultät Dept. Chemie und Biochemie
	<b>Kuc, Jagoda</b>	Investigation of well-defined intermetallic and perovskite based catalysts for steam reforming of methanol and of ethanol to selectively produce hydrogen for fuel cell applications Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Santhosh Kumar Matam / Dr. Davide Ferri	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Lu, Ye</b>	Perovskite-type exhaust gas catalysts for natural gas vehicles Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Santhosh Kumar Matam	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Mägli, Alexandra</b>	Perovskite-type oxynitrides as photoanode materials Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Simone Pokrant	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Sagarna, Zudaire Leyre</b>	Thermoelectric materials development Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Andrey Shkabko	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Saucke, Gesine</b>	Cost-efficient and reliable thermoelectric converters for industrial waste heat recovery Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Sascha Populoh	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Surace, Yuri</b>	Battery materials based on layered perovskites Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Simone Pokrant	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Thiel, Philipp</b>	High temperature thermoelectric converters for electricity generation in a solid oxide fuel cell system Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Sascha Populoh	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	<b>Vogel, Nina</b>	Nanoblock and nanostructured interface design for advanced thermoelectric materials Supervisor Empa: Prof Anke Weidenkaff Co-Supervisor Empa: Dr Myriam Aguirre	2	Universität Bern Philosophisch-naturwissenschaftliche Fakultät
	Structural Engineering	<b>Alves Martins, João</b>	Updated braking forces for the assessment of road bridges Co-Supervisor Empa: Dr Glauco Feltrin	2
<b>Czaderski, Christoph</b>		Post-Strengthening of RC and PC Members By Prestressed FRP Reinforcement Co-Supervisor Empa: Prof Masoud Motavalli	1	ETH Zurich Inst. für Baustatik und Konstruktion
<b>Ghafoori, Elyas</b>		Strengthening of steel structures using prestressed CFRP plates Co-Supervisor Empa: Prof Masoud Motavalli	2	ETH Zurich Inst. für Baustatik und Konstruktion
<b>Ginés, Rebekka</b>		Electrostatic modification of the bending stiffness of structural elements Co-Supervisor Empa: Prof Masoud Motavalli	2	ETH Zurich Inst. Science de Base

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# Empa Activities 2012

## PhD Theses

Structural Engineering	<b>Janke, Lars</b>	Anwendungen von Formgedächtnislegierungen im konstruktiven Ingenieurbau Co-Supervisor Empa: Christoph Czaderski	2	University of Weimar (DE)
	<b>Jockwer, Robert</b>	Structural behavior of glued-laminated timber beams with notches at the support or with holes Co-Supervisor: Dr René Steiger	2	ETH Zurich Inst. für Baustatik und Konstruktion
	<b>Khash-Erdene, Jalsan</b>	Network planning (prop) Co-Supervisor Empa: Dr Glauco Feltrin	2	EPF Lausanne ETH Zurich
	<b>Maria, Boberg</b>	Distributed Attenuation of Wind-Induced Vibration in Long-Span Bridges Co-Supervisor Empa: Dr Glauco Feltrin	2	EPF Lausanne School of Architecture, Civil and Environmental Engineering (ENAC)
	<b>Miah, Mohammad</b>	Semiactive Control for Magnetorheological (MR) dampers using Sliding Mode Control (SMC) & System Identification (SI) Methods Co-Supervisor Empa: Dr Felix Weber	2	ETH Zurich
	<b>Nerbano, Stella</b>	Earthquake resistant Timber Systems for Multi-Storey Buildings Co-Supervisor: Dr René Steiger	2	EPF Lausanne
	<b>Sadeghi, Marzaleh Abdola</b>	Prestressing of masonry walls to increase the inplane lateral load bearing capacity Supervisor Empa: Prof Masoud Motavalli Co-Supervisor: Dr K. Pfyl	2	ETH Zurich Inst. für Baustatik und Konstruktion
	<b>Subrata, Bhowmik</b>	Modeling and Control of Semi-active Dampers Co-Supervisor Empa: Dr Felix Weber	1	DTU, Mech. Engineering, Lyngby (DK)
	<b>Theiler, Matthias</b>	Structural behavior of glued-laminated timber members subjected to axial compression or combined compression and bending Co-Supervisor: Dr René Steiger	2	ETH Zurich Inst. für Baustatik und Konstruktion
	<b>Zemp, René</b>	Tall building vibration control using a TM-MR damper assembly Co-Supervisor Empa: Dr Felix Weber	2	PUC Pontificia Uni Catolica de Chile
Technology and Society	<b>Althaus, Hans-Jörg</b>	Impact Assessment Method for Traffic Noise in Generic LCA Co-Supervisor Empa: Prof Lorenz Hilty	1	ETH Zurich Human Environment Systems
	<b>Bornhöft, Nikolaus</b>	Ereignisdiskrete Modellierung von Stoffflüssen in der Umwelt unter Unsicherheit Co-Supervisor Empa: Prof Lorenz Hilty, PD Dr. Bernd Nowack	2	University of Zurich Dept. of Informatics
	<b>Caduff, Marloes</b>	Prospective Life Cycle Assessment (LCA) and Scale Up Effects Co-Supervisor Empa: Hans-Jörg Althaus	1	ETH Zurich, Earth Surface Dynamics
	<b>Hischier, Roland</b>	Prospective LCA of nanotechnology applications in the ICT industry Co-Supervisor Empa: Prof Lorenz Hilty	2	ETH Zurich
	<b>Knoeri, Christof</b>	Decision support and recommendations for a sustainable construction material management Co-Supervisor Empa: Hans-Jörg Althaus, Dr Patrick Wäger	1	University of Zurich
	<b>Müller, Esther</b>	A methodology to dynamically model the spatial distribution of anthropogenic critical metals stocks and flows Co-Supervisor Empa: Dr Mathias Schluemp	2	Technische Universität München, Inst. of Resource and Energy Technology
	<b>Piccinno, Fabiano</b>	Combined LCA and LCC method for the evaluation of nanocellulose bio-composites Co-Supervisor Empa: Claudia Som, Roland Hischier	2	Universität Zürich, Mathematisch-Naturwissenschaftliche Fakultät
	<b>Reinhard, Jürgen</b>	Regionalization in Life Cycle Inventory Modeling: A method for the integration and use of spatial data in Life Cycle Assessment Supervisor Empa: Prof Lorenz Hilty Co-Supervisor Empa: Dr Rainer Zah	2	University of Zurich Dept. of Informatics, Informatics and Sustainability Research
	<b>Schwab, Fabienne</b>	Ecotoxicology of Nanoparticles: Biota-Nanoparticle-Pollutant Interactions in aqueous systems – Comparison of Black Carbon and Carbon Nanotubes Co-Supervisor Empa: PD Dr Bernd Nowack	1	ETH Zürich Dept. Umweltwissenschaften

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# Empa Activities 2012

## PhD Theses

<b>Technology and Society</b>	<b>Sinha Khetriwal, Deepali</b>	Diffusion, Obsolescence and Disposal of Consumer Durables: Models for Forecasting Waste Flows of End-of-Life Consumer Durables Co-Supervisor Empa: Prof Lorenz Hilty / Rold Widmer	1	Universität SG. Gallen (HSG)
	<b>Stamp, Anna</b>	Anticipating environmental impacts of scarce metals supply Co-Supervisor Empa: Dr Patrick Wäger	2	ETH Zurich Natural and Social Science Interface
	<b>Sun, Tianyin</b>	Development and applications of dynamic probabilistic material flow modeling for estimation of quantity and property of engineered nanomaterials released to environmental compartments Co-Supervisor Empa: PD Dr Bernd Nowack	2	ETH Zurich Dept. of Environmental Systems Science
<b>Thin Films and Photovoltaics</b>	<b>Blösch, Patrick</b>	Advanced Contact Layers for Thin Film Solar Cells Co-Supervisor Empa: Prof Ayodhya N. Tiwari	1	ETH Zurich Dept. of Physics
	<b>Chirila, Adrian</b>	Properties of high growth rate deposited Cu(In,Ga)Se <sub>2</sub> layers and flexible solar cells Co-Supervisor Empa: Prof Ayodhya N. Tiwari	1	ETH Zurich Dept. of Physics
	<b>Fella, Carolin</b>	Kesterite absorber materials for thin film solar cells Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich Dept. of Information Technology and Electrical Engineering
	<b>Gretener, Christina</b>	Design and stability of backcontacts for CdTe thin film solar cells Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich Dept. of Information Technology and Electrical Engineering
	<b>He, Meng</b>	TBD Supervisor Empa: Prof Maksym Kovalenko	2	ETH Zurich Dept. of Chemistry and Applied Biosciences
	<b>Hosseini, Davood</b>	Role of nano-scale inhomogeneities in chalcogenide absorbers of thin film solar cells Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich, Dept. of Information Technology and Electrical Engineering
	<b>Jäger, Timo</b>	Magnetron sputtering of electrical contacts for thin film solar cells Supervisor Empa: Prof Ayodhya N. Tiwari Co-Supervisor Empa: Dr Yaroslav Romanyuk	2	ETH Zurich Department of Information Technology and Electrical Engineering
	<b>Keller, Debora</b>	Electron Microscopy Supervisor Empa: Prof Ayodhya N. Tiwari Co-Supervisor Empa: Dr Rolf Erni	2	ETH Zurich Department of Information Technology and Electrical Engineering
	<b>Kranz, Lukas</b>	Development of highly efficient CdTe solar cells with a low temperature process Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich Department of Information Technology and Electrical Engineering
	<b>Perrenoud, Julian</b>	Flexible CdTe solar cells Supervisor Empa: Prof Ayodhya N. Tiwari	1	ETH Zurich Dept. of Physics
	<b>Pianezzi, Fabian</b>	Influence of impurities on the performance of CIGS thin film solar cells Supervisor Empa: Prof Gian Luca Bona Co-Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich Dept. of Information Technology and Electrical Engineering
	<b>Protesescu, Loredana</b>	New synthesis of IR emitting Pb chalcogenide QDs and surface chemistry studies of inorganically capped nanomaterials Supervisor Empa: Prof Maksym Kovalenko	2	ETH Zurich Dept. of Chemistry and Applied Biosciences
	<b>Reinhard, Patrick</b>	Doping of CIGS for high-efficiency solar cells Supervisor Empa: Prof Ayodhya N. Tiwari Co-Supervisor Empa: Dr. Stephan Buecheler	2	ETH Zurich Dept. of Information Technology and Electrical Engineering
	<b>Sridham, Manasa</b>	TBD Supervisor Empa: Prof Maksym Kovalenko	2	ETH Zurich Dept. of Chemistry and Applied Biosciences
	<b>Uhl, Alex</b>	Low cost processing of Cu (In, Ga) Se <sub>2</sub> , solar cells Co-Supervisor Empa: Prof Ayodhya N. Tiwari	2	ETH Zurich Dept. Of Materials
<b>Werner, Melanie</b>	Kesterite solar cells by ultra sonic spray pyrolysis Supervisor Empa: Prof Ayodhya N. Tiwari Co-Supervisor Empa: Dr Yaroslav Romanyuk	2	ETH Zurich Department of Information Technology and Electrical Engineering	

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# Empa Activities 2012

## Patents

### Patents applied for

<b>Advanced Fibers</b>	<b>Hegemann, Dirk/Amberg, Martin</b>	Plasma coating of textile and threadlike structures on reel	CH02783/12
<b>Air Pollution/Environmental Technology</b>	<b>Emmenegger, Lukas/Tuzson, Bela/Jagerska, Jana</b>	Method of detecting a propellant gas	PCT/EP2012/058041
<b>Air Pollution/Environmental Technology</b>	<b>Mangold, Markus/Tuzson, Bela/Emmenegger, Lukas</b>	Method for reducing interference fringes in laser spectroscopy measurements using an absorption mask in combination with multi-pass optical cells	CH01884/12
<b>Biomaterials</b>	<b>Schubert, Mark/Ihssen, Julian</b>	Wood protection against microorganisms by laccase-catalysed iodination	12004058.9
<b>Building Science and Technology</b>	<b>Stahl, Thomas/Brunner, Samuel/Zimmermann, Mark/Koebel, Matthias</b>	Thermally insulating aerogel based rendering materials	EP12196505.7
<b>Center for Synergetic Structures</b>	<b>Luchsinger, Rolf /Verheul, Roland</b>	Tragflügel aus flexiblem Material	CH00233/12
<b>Concrete/Construction Chemistry</b>	<b>Terrasi, Giovanni/Lura, Pietro</b>	Fire resistant concrete	PCT/CH2012/000281
<b>Mechanical Systems Engineering</b>	<b>Affoltern, Christian/Altorfer, Heinz /Steger, Richard/Winkler, Roland</b>	Bodenplatte	CH02196/12
<b>Mechanical Systems Engineering</b>	<b>Kovacs, Gabor/Chu, Bryan</b>	Verfahren zur Herstellung eines dielektrischen Elastomerstapelaktors	CH01496/12
<b>Nanoscale Materials Science</b>	<b>Bernard, Laetitia/Hug, Hans J./ Möllers, Rudolf/Niehuis, Ewald</b>	Scanning Probe Microscope and Method For Operating Same	EP12183367.7
<b>Nanoscale Materials Science</b>	<b>Lewin, Erik/Patscheider, Jörg</b>	Scratch resistant UV-blocking filter coating structure	00555/12
<b>Nanoscale Materials Science</b>	<b>Patscheider, Jörg/Kovacs, Gabor</b>	Super-compliant metallic electrodes for Electroactive Polymer Actuators	00363/12
<b>Protection and Physiology</b>	<b>Bühler, Manuel/Rossi, René/Scherer, Lukas/Weder, Markus</b>	Heizpackung, insbesondere zur Wärmung von Körperteilen	EP12176779
<b>Protection and Physiology</b>	<b>Camenzind, Martin/Bachmann, Philipp/Fritzsche, Rolf</b>	Vorrichtung und Verfahren zum Erkennen und Melden eines Belastungszustandes einer Person	EP12188701
<b>Protection and Physiology</b>	<b>Weder, Markus</b>	Vorhang	CH01378/12
<b>Protection and Physiology</b>	<b>Weder, Markus/Luchsinger, Rolf</b>	Tremorlinderungsvorrichtung	CH02787/12
<b>Thin Films and Photovoltaics</b>	<b>Kranz, Lukas/Gretener, Christina/Perrennoud, Julian/Bücheler, Stephan/Tiwari, Ayodhya Nath</b>	Method for production of a photovoltaic device in substrate configuration	12170689.9
<b>Thin Films and Photovoltaics</b>	<b>Romanyuk, Yaroslav</b>	Formation of a doped transparent conductive oxide layer by solution deposition	02845/12

# Empa Activities 2012

## Teaching Activities

Swiss Federal Institute of Technology, Zürich (ETH)	Architecture	<b>Carmeliet, J.</b>	Building Physics 1
		<b>Carmeliet, J. with others</b>	Building Materials
		<b>Derluyn, H.</b>	Moisture and Durability
		<b>Derome, D.</b>	Moisture and Durability
		<b>Dorer, V.</b>	Building Physics 3 und 4
		<b>Eggenschwiler, K.</b>	Raumakustik
		<b>Ghazi Wakili, K.</b>	Daylight
		<b>Hugi, E.</b>	Fire Safety
		<b>Moonen, P.</b>	Building Physics 2 und 4
		<b>Richner, P./Zimmermann, T./Winnefeld, F./von Trzebiatowski, O.</b>	Baustoffkunde I
		<b>Winnefeld, F.</b>	Mineral building materials as part of the lecture «Baustoffe I», Bachelor Programme Architecture
		<b>Zimmermann, T.</b>	Baustoffkunde I und II
	Building Materials, Civil Engineering	<b>Lura, P.</b>	Shrinkage and Cracking of Concrete: Mechanisms and Impact on Durability, Civil Engineering Masters
	Chemistry and Applied Biosciences	<b>Ernst, K.-H.</b>	Surface Science of Catalysis
		<b>Kovalenko, M.V.</b>	Functional Inorganics
		<b>Perez-Ramirez, J./van Bokhoven, J./Ferri, D.</b>	Surface Science and methods in catalysis
	Civil and Environmental Engineering	<b>Burlando, P./Wang, J.</b>	Seminar Umweltingenieurwissenschaften
		<b>Grêt-Regamey, A./Wang, J.</b>	Environmental Impact Assessment
		<b>Wang, J.</b>	Air quality and aerosol mechanics
		<b>Wang, J.</b>	Environment and Computer Laboratory, ESD (Ecological System Design) 2: Introduction to Indoor Particle Measurements
	Civil, Environmental and Geomatic Engineering	<b>Brunner, A.J.</b>	Anwendung amorpher Materialien im Bauwesen
		<b>Brunner, A.J.</b>	Praktikum Werkstoffe III
		<b>Burgert, I.</b>	Holz und Holzwerkstoffe
		<b>Burgert, I.</b>	Holzphysik
		<b>Burgert, I.</b>	Werkstoffe 1
		<b>Eggenschwiler, K.</b>	Instrumente der Raumplanung
		<b>Eggenschwiler, K.</b>	Lärmbekämpfung
		<b>Müller, E.</b>	Prospective Environmental Assessments
		<b>Rossi, R.</b>	Thermoregulation and sportswear
		<b>Thöny-Meyer, L.</b>	Applied Microbial Biotechnology 551-1124-00L
		<b>Thöny-Meyer, L.</b>	Biologie I – Teil Genetik
	Environmental Engineering Sciences	<b>Tuchschnid, M.</b>	Mobile Röntgenfluoreszenz-Spektrometrie
	Environmental Sciences	<b>Brunner, D.</b>	Einführung in die Chemie und Physik der Atmosphäre
		<b>Buchmann, B.</b>	Luftreinhaltung 1
		<b>Hofer, P.</b>	Luftreinhaltung 2a und 2b
		<b>Liati, A.</b>	Advanced Geochronology
	<b>Nowack, B.</b>	Gesellschaftlicher Umgang mit aktuellen Umweltrisiken	
	<b>Som, C.</b>	Gesellschaftlicher Umgang mit aktuellen Umweltrisiken	
	<b>Zah, R.</b>	Energy & Mobility	
Geomatic Engineering	<b>Motavalli, M.</b>	Fibre composite material in structural Engineering	
	<b>Partl, M.</b>	Bituminous Materials	
	<b>Steiger, R.</b>	Holz und Holzwerkstoffe	
Humanities; Informatics	<b>Simon, K.</b>	Farbe im Digitalen Publizieren	
	<b>Simon, K.</b>	Technik des Digitalen Publizierens	
Information Technology	<b>Heutschi, K.</b>	Akustisches Kolloquium	
	<b>Sennhauser, U./Grossmann, G.</b>	Physik der Ausfälle und Ausfallanalyse elektronischer Schaltungen	
	<b>Sennhauser, U./Held, M.</b>	Zuverlässigkeit von Geräten u. Systemen	
	<b>Stämpfli, R.</b>	Biomechanik von Sportverletzungen und Rehabilitation: Mechanische Prüfung von Schutzausrüstung	



# Empa Activities 2012

## Teaching Activities

<b>Swiss Federal Institute of Technology, Zürich (ETH)</b>		<b>Tiwari, A.N./Romanyuk, Y.E./Buecheler, S.</b>	Solar Cells		
	Information Technology and Electrical Engineering	<b>Heutschi, K.</b>	Akustik 1 und 2		
	Materials Science		<b>Barbezat, M.</b>	Integrity of Materials and Structures	
			<b>Clemens, F.</b>	Advanced Composite and Adaptive Material Systems	
			<b>Clemens, F.</b>	Verbundwerkstoffe	
			<b>Ernst, K.-H.</b>	Biominalization	
			<b>Graule, T.</b>	Integrity of Materials and Structures	
			<b>Graule, T.</b>	Keramik I	
			<b>Heuberger, M.</b>	«Surfaces and Interfaces» im Masterstudiengang Materialwissenschaften	
			<b>Jaeger, D./Patscheider, J.</b>	Praktikum III	
			<b>Kübler, J.</b>	Mechanical Properties of Ceramics	
			<b>Maniura, K.</b>	Biocompatible Materials I / II	
			<b>Patscheider, J.</b>	Functional Surfaces	
			<b>Populoh, S./Saucke, G./Sagarna, L./Weidenkaff, A./Galazka, K./Thiel, P.</b>	Praktikum Materialsynthese und Charakterisierung	
			<b>Schmutz P. / Spencer N.</b>	Surfaces, Interfaces and their Applications II	
			<b>Terrasi, G.P./Clemens, F.</b>	Advanced Composite and Adaptive Material Systems	
		Mechanical and Process Engineering		<b>Bergamini, A.</b>	Adaptive Materials for Structural Applications (HS 2012), 151-0550-00L
				<b>Dimopoulos Eggenschwiler, P.</b>	Abgasnachbehandlung in modernen Dieselmotoren / Übung Abgasmesstechnik
			<b>Hack, E./Brönnimann, R.</b>	Optical Methods in Experimental Mechanics	
			<b>Koller, R./Guillaume, M.</b>	Betriebsfestigkeit	
			<b>Kovacs, G.</b>	Seilbahnen	
			<b>Mazza, E.</b>	Continuum Mechanics for Engineers	
			<b>Mazza, E.</b>	Introduction to non linear continuum mechanics	
			<b>Mazza, E.</b>	Mechanik I für Masching	
			<b>Mazza, E.</b>	Mechanik II für Baulng	
			<b>Mazza, E.</b>	Methoden der Strukturanalyse	
			<b>Spiteri, A.</b>	Experimental Methods for Engineers	
Physics		<b>Terrasi, G.P.</b>	GL zum Bemessen von Kunststoffbauteilen		
		<b>Weisse, B.</b>	Dimensionieren		
		<b>Populoh, S.</b>	Advanced Composite and Adaptive Material System		
		<b>Graule, T.</b>	Nanopowders and Nanoceramics		
		<b>Reimann, S.</b>	Measurements of air pollutants		
	<b>AGH Krakow, (PL)</b>	Atmospheric Chemistry Modelling Laboratory			
		Materials Science	<b>Michler J.</b>	Materials Selection	
			<b>Nüesch, F.</b>	Organic Semiconductors	
			<b>Vaucher, S.</b>	Materials Selection	
Mechanical Engineering Microtechnique (SMT)	<b>Hoffmann, P.</b>	Chimie des Surfaces			
	<b>Hoffmann, P.</b>	Micro-usinage Laser			
Science et Génie des Matériaux	<b>Lüthi, T.</b>	Non-destructive Evaluation Methods			
<b>Fachhochschule Nordwestschweiz</b>	Energie- und Umwelttechnik	<b>Gerecke, A.C.</b>	Umweltchemie		
<b>International Packaging Insitute (IPI) Schaffhausenn</b>	Master of Engineering in Packaging Technology	<b>Hischier, R.</b>	Sustainability in Packaging		
<b>Montan Universität, Leoben (AT)</b>	Dept. für allgemeine, analytische und physikalische Chemie	<b>Rösslein, M.</b>	Mess- und Ergebnisunsicherheit/ Prozessanalytik und Prozessfähigkeit		
<b>Nicolaus Copernicus University/NMR Torun (PL)</b>	Computational Chemistry Methods	<b>Antusek, A.</b>	Obliczenia Ab initio molekularnych waciwoci		
<b>Politecnico di Milano (IT)</b>	Dipartimento di Energia	<b>Dimopoulos Eggenschwiler, P.</b>	Exhaust aftertreatment in modern Diesels		

# Empa Activities 2012

## Teaching Activities

<b>Schweizerisches Verpackungsinstitut, SVI, Zürich</b>	Packaging Manager / Grundlagenseminar	<b>Hischier, R.</b>	Ökologie im Verpackungsbereich
<b>Technical College TSH Pfäffikon</b>		<b>Partl, M.</b>	Baustoffkunde
<b>Technische Universität Freiberg (DE)</b>	Verfahrens- und Umwelttechnik	<b>Graule, T.</b>	Nano- und Biokeramik
<b>Technische Universität Kaiserslautern (DE)</b>	Maschinenbau und Verfahrenstechnik	<b>Leinenbach, C.</b>	Metallische Hochleistungswerkstoffe
<b>Technische Universität München (DE)</b>	Wissenschaftszentrum Weihenstephan	<b>Jacob, P.</b>	Einführung in die Rasterelektronenmikroskopie
<b>The University Centre in Svalbard (UNIS) Longyearbyen, Spitzbergen (NO)</b>	Arctic Technology	<b>Reimann, S.</b>	Measurements of air pollutants within the Arctic environment
<b>United Nations University, Institute for Sustainability and Peace, Tokyo (JP)</b>	GeSI & StEP: e-Waste Academy	<b>Schluep, M.</b>	e-Waste recycling Chain, Conformity Assessment
<b>Università degli studi, Parma (IT)</b>	Ingegneria Industriale	<b>Dimopoulos Eggenschwiler, P.</b>	Tecnologie Innovative Di Post-Trattamento die Gas Scarico nei motori Diesel: ricerca e sperimentazione - Exhaust aftertreatment technologies in Diesel engines: Research and development
<b>Université Joseph Fourier, Grenoble (FR)</b>	ESONN'2012, Grenoble	<b>Hug, H.J.</b>	Scanning Probe Microscopy
<b>University of Applied Sciences for the graphic Industry, Wallisellen</b>		<b>Hischier, R.</b>	Ökologie
<b>University of Applied Sciences, Berne</b>	Mechanical engineering	<b>Wasmer, K.</b>	Chemistry and Materials 1
<b>University of Applied Sciences, Berne/Zollikofen</b>		<b>Hischier, R.</b>	Ökologie im Verpackungsbereich
<b>University of Applied Sciences, Horw</b>	Bautechnik	<b>Looser, R.</b>	Beton und Bindemittel
	Bautechnik	<b>Piskoty, G.</b>	Metallische Baustoffe
<b>University of Applied Sciences, Konstanz (DE)</b>	International Packaging Institute	<b>Faller, M.</b>	Module Corrosion
<b>University of Applied Sciences Rapperswil</b>		<b>Neuenschwander, J.</b>	Experte bei Bachelor-Arbeiten Einsichtnahme und Mündliche Prüfungen
<b>University of Applied Sciences, St. Gall</b>	Mechanical Engineering	<b>Weilenmann, M.</b>	Messtechnik/Messtechnik und Datenerfassung
	Business Administration & Engineering	<b>Hischier, R.</b>	Umwelt- und Ressourcenmanagement
	Business Administration & Engineering	<b>Wäger, P.</b>	Umwelt- und Ressourcenmanagement
<b>University of Applied Sciences, Wädenswil</b>	Biotechnology	<b>Hügli, C.</b>	Air Pollution
	Chemistry	<b>Gehrig, R.</b>	Luftschadstoffe in der Schweiz, eine Übersicht über Quellen, Messungen, Trends
	Institute of Chemistry and Biological Chemistry	<b>Heeb, N.</b>	Ökologie: Chemie und Umwelt
<b>University of Applied Sciences, Winterthur</b>		<b>Wunderli, J.M</b>	Elektrische und mechanisch Interaktion: Strassenlärm
	Chemie	<b>Faller, M.</b>	Modul Korrosion
	IBT Institut für Biotechnologie	<b>Gauch, M.</b>	Umweltauswirkungen von Biotreibstoffen
	Institut für Chemie und Biologische Chemie	<b>Wick, P.</b>	Biomaterialien
	Institut für Material- und Verfahrenstechnik	<b>Henes, B.</b>	Prozesstechnik für Material- und Verfahrenstechnik
	Institut of Materials and	<b>Hegemann, D.</b>	«Vakuum- und Plasmatechnologie»

# Empa Activities 2012

## Teaching Activities

	Process Engineering		
	Life Sciences und Facility Management	<b>Bach, C.</b>	Nachhaltige(re) verbrennungsmotorische Antriebe
	Verfahrenstechnik, Department of Industrial Technologies	<b>Clemens, F.</b>	Funktionsmaterialien
<b>University of Applied Sciences, Yverdon</b>	Nanopowders and Nanoceramics	<b>Graule, T.</b>	«Swiss» Nanomaster
<b>University of Applied Sciences, Zurich</b>		<b>Raab, C.</b>	Materialtechnologie A&B
	Architecture	<b>Losser, R.</b>	Bauchemie, Teil mineralische Baustoffe
	Architecture	<b>Zimmermann, T.</b>	Bauchemie Holz, Laborübungen
<b>University of Basel</b>	Institut für Physik	<b>Hug, H.J.</b>	Prüfungen
	Institut für Physik	<b>Hug, H.J./Marioni, M.</b>	Magnetismus und magnetische Mineralien 4 KP
	Umweltwissenschaften	<b>Reimann, S.</b>	Umweltsystem Atmosphäre: Luftverschmutzung und Klimaerwärmung/Aktuelle Umweltprobleme in den Geowissenschaften (Klima, Boden, Stoffkreisläufe) AC II Praktikum
<b>University of Berne</b>	Chemistry	<b>Populoh, S./Saucke, G./Sagarna, L./Weidenkaff, A./Galazka, K./ Ye, L./Thiel, P./Mägli, A.</b>	
	Chemistry	<b>Weidenkaff, A.</b>	Materials for Future Energy Technologies
	Chemistry and Biochemistry	<b>Fasel, R.</b>	Introduction to the Physics & Chemistry of Surfaces
	Chemistry and Biochemistry	<b>Meyer, V.</b>	Chromatographic Analysis
	Chemistry and Biochemistry	<b>Meyer, V.</b>	HPLC – From Theory to Instruments to Separations
	Chemistry and biochemistry	<b>Weber, R./Pavlova P.</b>	Chemie als Hauptfach, Praktikum
<b>University of Freiburg (DE)</b>	Fakultät für Chemie, Pharmazie und Geowissenschaften	<b>Vogt, U.</b>	Angewandte Mineralogie mit dem Schwerpunkt Keramik
	Fakultät für Chemie, Pharmazie und Geowissenschaften	<b>Vogt, U.</b>	Modern Ceramics, Cements and Glasses
	Forest Sciences	<b>Schubert, M.</b>	Dendrologie
	Forest Sciences	<b>Schwarze, F.</b>	Holzschutz I + II
	Forest Sciences	<b>Schwarze, F.</b>	Holzpathologie
	Physik	<b>Züttel, A.</b>	Umweltwissenschaften/ Physik im Alltag
<b>University of Teheran (IR)</b>	Faculty of Civil Engineering	<b>Motavalli, M.</b>	Fibre composite material in structural Engineering
<b>University of Zurich</b>	Chemie	<b>Ernst, K.-H.</b>	Chemical Processes at Solid Surfaces
	Historical seminary, Prehistory	<b>Senn, M. and guests</b>	Kolloquium «Einführung in die Archäometallurgie»
	Informatik	<b>Hilty, L.</b>	Informatik, Ethik und Gesellschaft (FS 2012), Informatik für Ökonomen (FS 2012), Informatik und nachhaltige Entwicklung (HS 2012)
	Physikalische Chemie	<b>Borgschulte, A.</b>	Chemical Energy Storage
<b>Zurich University of the Arts (ZHdK)</b>	Dept. of Music	<b>Heutschi, K.</b>	Audiotechnik

# Empa Activities 2012

## Publications

Empa staff publish in many national and international scientific and technical journals as well as in daily press and other special organs. Please note that the list below represents only the scientific and technical journals.

<b>General Management</b>	<b>Bona, G. L.</b>	Von der Vision zur Realität, von der Entdeckung zum innovativen Produkten. Wirtschaftsmagazin: für Menschen die etwas unternehmen 2012, 21, 32–35	
	<b>Edelmann, X./Welz, T./de Leeuw, B.</b>	World resources forum 2011: towards a resource efficient green economy. Bulletin SAGW: Schweizerische Akademie der Geistes- und Sozialwissenschaften 2012, 4, 52–53	
<b>Media Technology</b>	<b>Lissner, I./Preiss, J./Urban, P./Scheller Lichtenauer, M./Zolliker, P.</b>	Image-difference prediction: from grayscale to color. IEEE Transactions on Image Processing 2012, Article in press. *	
	<b>Misselwitz, B./Barrett, N./Kreibich, S./Vonaesch, P./Andritschke, D./Rout, S./Weidner, K./Sormaz, M./Songhet, P./Horvath, P./Chabria, M./Vogel, V./Spori, D. M./Jenny, P./Hardt, W. D</b>	Near surface swimming of salmonella Typhimurium explains target-site selection and cooperative invasion. PLoS Pathogens 2012, 8(7), e1002810 (19 pp.) *	
	<b>Preiss, J./Lissner, I./Urban, P./Scheller Lichtenauer, M./Zolliker, P.</b>	The impact of image-difference features on perceived image differences. Proceedings of the 6th European Conference on Colour in Graphics, Imaging and Vision (CGIV 2012), Amsterdam, Netherlands, May 6–9, 2012, 43–48	
	<b>Scheller Lichtenauer, M./Preiss, J./Urban, P./Zolliker, P.</b>	Image similarity for chromatic content. 18. Workshop Farbbildverarbeitung, Darmstadt, Germany, 27–28 September 2012, 110–117	
	<b>Scheller Lichtenauer, M./Zolliker, P./Lissner, I./Preiss, J./Urban, P./Urban, P. L.</b>	Learning image similarity measures from choice data. Proceedings of the 6th European Conference on Colour in Graphics, Imaging and Vision (CGIV 2012), Amsterdam, Netherlands, May 6–9, 2012, 24–30	
	<b>Scheller Lichtenauer, M./Zolliker, P./Spröw, I.</b>	Choice-based experiments in multiple dimensions. Color Research and Application 2012, Article in press. *	
	<b>Sormaz, M./Jenny, P.</b>	Empirical model for target depth estimation used in the time-domain subsurface imaging. Journal of the Optical Society of America A: Optics, Image Science, and Vision 2012, 29(10), 2174–2180 *	
<b>Advanced Materials Processing</b>		<b>Advanced Materials and Surfaces</b>	
	<b>Bret, T./Hoffmann, P.</b>	How to select compounds for focused charged particle beam assisted etching and deposition. In: Utke, I., Moshkalev, S., Russel, P. (Eds.), Nanofabrication using focused ion and electron beams: principles and applications, Oxford series in nanomanufacturing, Oxford University Press, New York, 2012, 108–125	
	<b>Cho, S./Kikuchi, K./Kawasaki, A./Kwon, H./Kim, Y.</b>	Effective load transfer by a chromium carbide nanostructure in a multi-walled carbon nanotube/copper matrix composite. Nanotechnology 2012, 23 (31) Article number 315705 (10 pp.) *	
	<b>Colombo, V./Deschenaux, C./Ghedini, E./Gherardi, M./Jaeggi, C./Leparoux, M./Mani, V./Sanibondi, P.</b>	Fluid-dynamic characterization of a radio-frequency induction thermal plasma system for nanoparticle synthesis. Plasma sources science and technology 2012, 21(4), 045010 (12pp.) *	
	<b>Graça, S./Hadad, M./Hoffmann, P.</b>	Challenges in the quantification of high temperature erosive wear. Materials Science and Technology 2012, 28(5), 532–535 *	
	<b>Ishizaki, K./Stir, M./Gozzo, F./Catala-Civera, J. M./Vaucher, S./Nicula, R.</b>	Magnetic microwave heating of magnetite–carbon black mixtures. Materials Chemistry and Physics 2012, 134(2–3), 1007–1012 *	
	<b>Jaeggi, C./Parlinska-Wojtan, M./Kern, P.</b>	Correlation of electrolyte-derived inclusions to crystallization in the early stage of anodic oxide film growth on titanium. Thin Solid Films 2012, 520(6), 1804–1808 (joint paper) *	
	<b>Kwon, H./Cho, S./Leparoux, M./Kawasaki, A.</b>	Dual-nanoparticulate-reinforced aluminum matrix composite materials. Nanotechnology 2012, 23(22), Article number 225704 (9 pp.) *	
	<b>Kwon, H./Leparoux, M.</b>	Hot extruded carbon nanotube reinforced aluminum matrix composite materials. Nanotechnology 2012, 23(41), Article number 415701 (10 pp.) *	

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## Publications

<b>Advanced Materials Processing</b>	Pathak, S./Michler, J./Wasmer, K./Kalidindi, S. R.	Studying grain boundary regions in polycrystalline materials using spherical nano-indentation and orientation imaging microscopy. <i>Journal of Materials Science</i> 2012, 47(2), 815–823 (joint paper) *
	Sriharitha, R/B.S. Murty/Ravi .S.Kottada	Phase formation in mechanically alloyed Al <sub>x</sub> CoCrCuFeNi (x = 0.45, 1, 2.5, 5 mol) high entropy alloys. <i>Intermetallics</i> 2013, 32, 119–126 *
	Wasmer, K./Gassilloud, R./Michler, J./Ballif, C.	Analysis of onset of dislocation nucleation during nanoindentation and nanoscratching of InP. <i>Journal of Materials Research</i> 2012, 27(1), 320–329 (joint paper) *
<b>Electron Microscopy Center</b>	Wellmann, R. G./Graça, S.	Chromite vs. magnetite as an erodent for coatings to be applied in steam turbines. <i>Wear</i> 2012, 296(1–2), 479–479 *
	Alem, N./Ramasse, Q. M./Yazyev, O. V./Seabourne, C. R./Kisielowski, C. K./Hartel, P./Jiang, B./Erni, R./Scott, A. J./Louie, S. G./Zettl, A.	Defects in Two Dimensional Crystals: An Ultra-high Resolution Aberration-corrected Electron Microscopy Study. <i>Microscopy and Microanalysis</i> 2012, 18 (Suppl. 2) 1516–1517. *
	Bakumov, V./Blugan, G./Roos, S./Graule, T./Fakhfour, V./Grossenbacher, J./Gullo, M./Kiefer, T./Brugger, J./Parlinska, M./Kuebler, J.	Mechanical and tribological properties of polymer-derived Si/C/N sub-millimetre thick miniaturized components fabricated by direct casting. <i>Journal of the European Ceramic Society</i> 2012, 32(8), 1759–1767 (joint paper) *
	Carriazo, D./Rossell, M. D./Zeng, G./Bilecka, I./Erni, R./Niederberger, M.	Formation mechanism of LiFePO <sub>4</sub> sticks grown by a microwave-assisted liquid-phase process. <i>Small: nano micro</i> 2012, 8(14), 2231–2238 *
	Elias, J./Bechelany, M./Utke, I./Erni, R./Hosseini, D./Michler, J./Philippe, L.	Urchin-inspired zinc oxide as building blocks for nanostructured solar cells. <i>Nano Energy</i> 2012, 1(5), 696–705 (joint paper)
	Elias, J./Parlinska-Wojtan, M./Erni, R./Niederberger, C./Sauvage, F./Thevenin, M./Michler, J./Philippe, L.	Passing the limit of electrodeposition: 'gas template' H <sub>2</sub> nanobubbles for growing highly crystalline nanoporous ZnO. <i>Nano Energy</i> 2012, 1(5), 742–750 (joint paper)
	Flaka, D./Braun, A./Michalow, K. A./Wyrwa, J./Parlinska-Wojtan, M./Graule, T./Rekas, M.	Differences in Electrophysical and Gas Sensing Properties of Flame Spray Synthesized Fe <sub>2</sub> O <sub>3</sub> (γ-Fe <sub>2</sub> O <sub>3</sub> and α-Fe <sub>2</sub> O <sub>3</sub> ). <i>Journal of Nanoscience and Nanotechnology</i> 2012, 12(8), 6401–6411 (joint paper) *
	Jaeggi, C./Parlinska-Wojtan, M./Kern, P.	Correlation of electrolyte-derived inclusions to crystallization in the early stage of anodic oxide film growth on titanium. <i>Thin Solid Films</i> 2012, 520(6), 1804–1808 (joint paper) *
	Kato, S./Borgschulte, A./Ferri, D./Bielmann, M./Crivello, J. C./Wiedenmann, D./Parlinska-Wojtan, M./Rosbach, P./Lu, Y./Remhof, A./Züttel, A.	CO <sub>2</sub> hydrogenation on a metal hydride surface. <i>Physical Chemistry Chemical Physics</i> 2012, 14(16), 5518–5526 (joint paper) *
	Kissel, P./Erni, R./Bernd Schweizer, W./Rossell, M. D./King, B. T./Bauer, T./Götzinger, S./Dieter Schlüter, A./Sakamoto, J.	A two-dimensional polymer prepared by organic synthesis. <i>Nature Chemistry</i> 2012, 4, 287–291 *
	Lubk, A./Rossell, M. D./Seidel, J./He, Q./Yang, S. Y./Chu, Y. H./Ramesh, R./Hýtch, M. J./Snoeck, E.	Evidence of sharp and diffuse domain walls in BiFeO <sub>3</sub> by means of Unit-Cell-Wise strain and polarization maps obtained with high resolution scanning transmission electron microscopy. <i>Physical Review Letters</i> 2012, 109(4), Article number 047601 (5 pp.) *
	Malik, S./Vijayaraghavan, A./Erni, R./Ariga, K./Khalakhan, I./ Hill, J. P.	A chemists method for making pure clean graphene. In: Ottaviano, L., Morandi, V. (Eds.), <i>Graphita 2011: selected papers from the workshop on fundamentals and applications of graphene</i> , Carbon Nanostructures, Springer, 2012, 129–136
Nguyen, M. -T/Erni, R./Passerone, D.	Two-dimensional nucleation and growth mechanism explaining graphene oxide structures. <i>Physical Review B</i> 2012, 86(11), Article number 115406 (6 pp.) (joint paper) *	
Nguyen, P. D./Kepaptsoglou, D. M./Erni, R./Ramasse, Q. M./Olsen, A.	Quantum confinement of volume plasmons and interband transitions in germanium nanocrystals. <i>Physical Review B</i> 2012, 86, Article number 245316. *	
Raghavan, R./Kombaiah, B./Döbeli, M./Erni, R./Ramamurty, U./Michler, J.	Nanoindentation response of an ion irradiated Zr-based bulk metallic glass. <i>Materials Science and Engineering A</i> 2012, 532, 407–413 (joint paper) *	

# Empa Activities 2012

## Publications

Electron Microscopy Center	Ray, S./Kolen'ko, Y. V./Kovnir, K. A./Lebedev, O. I./Turner, S./Chakraborty, T./Erni, R./Watanabe, T./Van Tendeloo, G./Yoshimura, M./Itoh, M.	Defect controlled room temperature ferromagnetism in Co-doped barium titanate nanocrystals . Nanotechnology 2012, 23(2), Article number 025702 (10 pp.) *
	Rossell, M. D./Erni, R./Prange, M. P./Idrobo, J. -C./Luo, W./Zeches, R. J./Pantelides, S. T./Ramesh, R.	Atomic Structure of Highly Strained BiFeO <sub>3</sub> Thin Films. Physical Review Letters 2012, 108(4), Article number 047601 (5 pp.) *
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Carmeliet, J./Derome, D.		Temperature driven inward vapor diffusion under constant and cyclic loading in small-scale wall assemblies: Part 2 heat-moisture transport simulations. <i>Building and Environment</i> 2012, 47, 161–169 ■
Defraeye, T./Blocken, B./Carmeliet, J.		Analysis of convective heat and mass transfer coefficients for convective drying of a porous flat plate by conjugate modelling. <i>International Journal of Heat and Mass Transfer</i> 2012, 55(1–3), 112–124 *
Defraeye, T./Blocken, B./Derome, D./Nicolai, B./Carmeliet, J.		Convective heat and mass transfer modelling at air-porous material interfaces: Overview of existing methods and relevance. <i>Chemical Engineering Science</i> 2012, 74(2), 49–58 *
Defraeye, T./Houvenaghel, G./Carmeliet, J./Derome, D.	Numerical analysis of convective drying of gypsum boards. <i>International Journal of Heat and Mass Transfer</i> 2012, 55(9–10), 2590–2600 (joint paper) *	
Derluyn, H./Derome, D./Carmeliet, J./Stora, E./Barbarulo, R.	Hysteretic moisture behavior of concrete: modeling and analysis. <i>Cement and Concrete Research</i> 2012, 42(10), 1379–1388 *	

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## Publications

<b>Building Science and Technology</b>	<b>Derluyn, H./Griffa, M./Mannes, D./Jerjen, I./Dewanckele, J./Vontobel, P./Sheppard, A./Boone, M. N./Derome, D./Cnudde, V./Lehmann, E./Carmeliet, J.</b>	Probing salt crystallization damage mechanisms in porous limestone with neutron radiography and X-ray tomography. Proceedings of the 5th IBPC, Kyoto, Japan, 28-31 May 2012, 95-102 (joint paper)
	<b>Derome, D./Rafsanjani, A./Patera, A./Guyer, R./Carmeliet, J.</b>	Hygromorphic behaviour of cellular material: hysteretic swelling and shrinkage of wood probed by phase contrast X-ray tomography. Philosophical Magazine 2012, 92(28-30), 3680-3698 *
	<b>Derome, D./Zillig, W./Carmeliet, J.</b>	Variation of measured cross-sectional cell dimensions and calculated water vapor permeability across a single growth ring of spruce wood. Wood Science and Technology 2012, 46(5), 827-840 (joint paper) *
	<b>Fanta, S. W./Vanderlinden, W./Abera, M. K./Verboven, P./Karki, R./Ho, Q./De Feyter, S./Carmeliet, J./Nicolai, B. M.</b>	Water transport properties of artificial cell walls. Journal of Food Engineering 2012, 108(3), 393-402 *
	<b>Frangi, A./Schleifer, V./Hugi, E.</b>	A new fire resistant light mineral wool. Fire Technology 2012, 48(3), 733-752 ■
	<b>Ghazi Wakili, K.</b>	Guest Editor's Introduction. Fire Technology 2012, 48(3), 677-678 ■
	<b>Giovanetti, L. J./Ramallo-López, J. M./Foxe, M./Jones, L. C./Koebel, M. M./Somorjai, G. A./Craievich, A. F./Salmeron, M. B./Requejo, F. G.</b>	Shape changes of Pt nanoparticles induced by deposition on mesoporous silica. Small 2012, 8(6), 468-473 *
	<b>Goto, Y./Ghazi Wakili, K./Frank, T./Stahl, T./Ostermeyer, Y./Ando, N./Wallbaum, H.</b>	Heat and moisture balance simulation of a building with vapor-open envelope system for subtropical regions. Building Simulation 2012, 5(4), 301-314 ■
	<b>Griffa, M./Ferdowsi, B./Daubb, E. G./Guyer, R. A./Johnson, P. A./Maronee, C./Carmeliet, J.</b>	Meso-mechanical analysis of deformation characteristics for dynamically triggered slip in a granular medium. Philosophical Magazine 2012, 92(28-30), 3520-3539 (joint paper) *
	<b>Hugi, E./Weber, R.</b>	Fire behaviour of tropical and European wood and fire resistance of fire doors made of this wood. Fire Technology 2012, 48(3), 679-698 ■
	<b>Janssen, H./Derluyn, H./Carmeliet, J.</b>	Moisture transfer through mortar joints: a sharp-front analysis. Cement and Concrete Research 2012, 42(8), 1105-1112 *
	<b>Koebel, M. M./Nadargi, D. Y./Jimenez-Cadena, G./Romanyuk, Y. E.</b>	Transparent, conducting ATO thin films by epoxide-initiated sol-gel chemistry: a highly versatile route to mixed-metal oxide films. ACS Applied Materials & Interfaces 2012, 4(5), 2464-2473 (joint paper) *
	<b>Koebel, M./Rigacci, A./Achard, P.</b>	Aerogel-based thermal superinsulation: an overview. Journal of sol-gel science and technology 2012, 63(3), 315-339 *
	<b>Kontogeorgos, D./Ghazi Wakili, K./Hugi, E./Founti, M.</b>	Heat and moisture transfer through a steel stud gypsum board assembly exposed to fire. Construction and Building Materials 2012, 26(1), 746-754 ■
	<b>Magnier, L./Zmeureanu, R./Derome, D.</b>	Experimental assessment of the velocity and temperature distribution in an indoor displacement ventilation jet. Building and Environment 2012, 47, 150-160 (joint paper) ■
	<b>Moonen, P./Defraeye, T./Dorer, V./Blocken, B./Carmeliet, J.</b>	Effect of the micro-climate on comfort, health and energy demand. Frontiers of Architectural Research 2012, 1(3), 197-228
	<b>Moonen, P./Dorer, V./Carmeliet, J.</b>	Effect of flow unsteadiness on the mean wind flow pattern in an idealized urban environment. Journal of Wind Engineering and Industrial Aerodynamics 2012, 104-106, 389-396 *
	<b>Oldewurtel, F./Parisio, A./Jones, C. N./Gyalistras, D./Gwerder, M./Stauch, V./Lehmann, B./Morari, M.</b>	Use of model predictive control and weather forecasts for energy efficient building climate control. Energy and Buildings 2012, 45, 15-27 ■
	<b>Rafsanjani, A./Derome, D./Carmeliet, J.</b>	The role of geometrical disorder on swelling anisotropy of cellular solids. Mechanics of Materials 2012, 55, 49-59 *
	<b>Rafsanjani, A./Derome, D./Wittel, F. K./Carmeliet, J.</b>	Computational up-scaling of anisotropic swelling and mechanical behavior of hierarchical cellular materials. Composites Science and Technology 2012, 72(6), 744-751 *
	<b>Saneinejad, S./Moonen, P./Defraeye, T./Derome, D./Carmeliet, J.</b>	Coupled CFD, radiation and porous media transport model for evaluating evaporative cooling in an urban environment. Journal of Wind Engineering and Industrial Aerodynamics 2012, 104-106, 455-463 *
	<b>Sedighi-Gilani, M./Griffa, M./Mannes, D./Lehmann, E./Carmeliet, J./Derome, D.</b>	Visualization and quantification of liquid water transport in softwood by means of neutron radiography. International Journal of Heat and Mass Transfer 2012, 55(21-22), 6211-6221 (joint paper) *
	<b>Shepel, S. V./Ghazi Wakili, K./Hugi, E.</b>	Investigation of heat transfer in gypsum plasterboard exposed to fire for three nominal fire scenarios. Journal of Fire Sciences 2012, 30(3), 240-255 *

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<b>Building Science and Technology</b>	<b>Stahl, T./Brunner, S./Zimmermann, M./Ghazi Wakili, K.</b>	Thermo-hygric properties of a newly developed aerogel based insulation rendering for both exterior and interior applications. <i>Energy and Buildings</i> 2012, 44, 114–117 ■
	<b>Tanner, Ch./Lehmann, B./Frank Th./Ghazi Wakili, K.</b>	Vorschlag zur standardisierten Darstellung von Wärmebildern mit QualiThermo, <i>Bauphysik</i> , 2011, 33, 345–356 ■
	<b>Terrasi, G./Bisby, L./Barbezat, M./Affolter, C./Hugi, E.</b>	Fire behavior of thin CFRP pretensioned high-strength concrete slabs. <i>Journal of Composites for Construction</i> 2012, 16(4), 381–394 (joint paper) ■
	<b>Wangler, T. P./Zuleeg, S./Vonbank, R./Bester, K./Boller, M./Carmeliet, J./Burkhardt, M./Burkhardt, M.</b>	Laboratory scale studies of biocide leaching from façade coatings. <i>Building and Environment</i> 2012, 54, 168–173 ■
	<b>Wong, J. C./Tervoort, E./Busato, S./Ermanni, P./Gauckler, L. J.</b>	Engineering macroporous composite materials using competitive adsorption in particle-stabilized foams. <i>Journal of colloid and interface science</i> 2012, 383(1), 1–12 *
<b>Center for Synergetic Structures</b>	<b>Galliot, C./Rousseau, J./Verchery, G.</b>	Drop weight tensile impact testing of adhesively bonded carbon/epoxy laminate joints. <i>International Journal of Adhesion and Adhesives</i> 2012, 35, 68–75 ■
	<b>Masselter, T./Bauer, G./Gallenmüller, F./Haushahn, T./Poppinga, S./Schmitt, C./Seidel, R./Speck, O./Thielen, M./Speck, T./Barthlott, W./Ditsche-Kuru, P./Immink, H./Bertling, J./Mölders, N./Nellesen, A./Rechberger, M./Cichy, F./Gude, M./Hermann, M./Lunz, K./Knippers, J./Lienhard, J./Schleicher, S./Luchsinger, R./Mattheck, C./Tesari, I./Milwich, M./Stegmaier, T./Neinhuis, C./Schwager, H.</b>	Biomimetic products. In: Bar-Cohen, Y. (Ed.), <i>Biomimetics: nature-based innovation</i> , CRC Press, Boca Raton, 2012, 377–429
<b>Concrete/ Construction Chemistry</b>	<b>Rampf, M./Speck, O./Speck, T./Luchsinger, R. H.</b>	Structural and mechanical properties of flexible polyurethane foams cured under pressure. <i>Journal of Cellular Plastics</i> 2012, 48, 53–69 ■
	<b>Abou Najm, M./Jesiek, J./Mohtar, R. H./Lura, P./Sant, G.</b>	Assessing the role of the pore solution concentration on horizontal deformations in an unsaturated soil specimen during drying. <i>Geoderma</i> 2012, 187–188, 31–40 *
	<b>Aimoz, L./Kulik, D./Wieland, E./Curti, E./Lothenbach, B./Mäder, U.</b>	Thermodynamics of AFm-(12, S04) solid solution and of its end-members in aqueous media. <i>Applied Geochemistry</i> 2012, 27(10), 2117–2129 *
	<b>Bakandritsos, A./Papagiannopoulos, A./Anagnostou, E. N./Avgoustakis, K./Zboril, R./Pispas, S./Tucek, J./Ryukhtin, V./Bouropoulos, N./Kolokithas-Ntoukas, A./Steriotis, T. A./Keiderling, U./Winnefeld, F.</b>	Merging high doxorubicin loading with pronounced magnetic response and biorepellent properties in hybrid drug nanocarriers. <i>Small: nano micro</i> 2012, 8(15), 2381–2293 *
	<b>Ben Haha, M./Lothenbach, B./Le Saoût, G./Winnefeld, F.</b>	Influence of slag chemistry on the hydration of alkali-activated blast-furnace slag – Part II: Effect of Al <sub>2</sub> O <sub>3</sub> . <i>Cement and Concrete Research</i> 2012, 42(1), 74–83 *
<b>Chen, H./Wyrzykowski, M./Scrivener, K./Lura, P.</b>	Modeling of the internal relative humidity evolution in cement pastes at early-ages. 2nd International Conference on Microstructural-related Durability of Cementitious Composites, Amsterdam, The Netherlands, 11–13 April 2012, 140 (8 pp.)	
<b>Cusson, D./Mechtcherine, V./Lura, P.</b>	Practical applications of superabsorbent polymers in concrete and other building materials. In: Mechtcherine, V., Reinhardt, H.W. (Eds.), <i>Application of super absorbent polymers (SAP) in concrete construction: state-of-the-art report prepared by technical committee 225-SAP, RILEM state-of-the-art reports 2</i> , Springer, 2012, 137–148	
<b>De Weerd, K./Ben Haha, M./Le Saoût, G./Kjellsen, K. O./Justnes, H./Lothenbach, B.</b>	The effect of temperature on the hydration of composite cements containing limestone powder and fly ash <i>Materials and Structures</i> 2012, 45(7), 1101–1114 ■	
<b>Derluyn, H./Griffa, M./Mannes, D./Jerjen, I./Dewanckele, J./Vontobel, P./Sheppard, A./Boone, M. N./Derome, D./Cnudde, V./Lehmann, E./Carmeliet, J.</b>	Probing salt crystallization damage mechanisms in porous limestone with neutron radiography and X-ray tomography. <i>Proceedings of the 5th IBPC, Kyoto, Japan, 28–31 May 2012</i> , 95–102 (joint paper)	

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## Publications

Concrete/ Construction Chemistry	Deschner, F./Lothenbach, B./Winnefeld, F./Neubauer, J.	Change of cement chemistry and microstructure by replacing Portland cement by siliceous fly ash. International Congress on the Durability of Concrete, Trondheim, Norway, 18–21 June 2012, 12 pp.
	Deschner, F./Lothenbach, B./Winnefeld, F./Neubauer, J.	Einfluss unterschiedlicher Temperaturen auf die Hydratation eines flugaschereichen Zementes. 18. Int. Baustofftagung (IBAUSIL), Weimar, Germany, 12–15 September 2012, 8 pp.
	Deschner, F./Münc, B./Winnefeld, F./Lothenbach, B.	Quantifizierung des Flugaschegehaltes in Mischzementen mittels Bildanalyse von Rückstreuелектроненbildern. Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Deschner, F./Winnefeld, F./Lothenbach, B./Seufert, S./Schwesig, P./Dittrich, S./Goetz-Neunhoeffler, F./Neubauer, J.	Hydration of Portland cement with high replacement by siliceous fly ash. Cement and Concrete Research 2012, 42(10), 1389–1400 *
	Diaz, A./Trtik, P./Guizar-Sicairos, M./Menzel, A./Thibault, P./Bunk, O. Dilnesa, B. Z.	Quantitative x-ray phase nanotomography. Physical Review B 2012, 85(2), Article number 024104(R) (4 pp.) *
	Dilnesa, B. Z./Lothenbach, B./Renaudin, G./Wichser, A./Wieland, E.	Fe-containing hydrates and their fate during cement hydration: thermodynamic data and experimental. Dissertation, École Polytechnique Fédérale de Lausanne; Empa Dübendorf, 236 pp.
	Dilnesa, B. Z./Lothenbach, B./Renaudin, G./Wichser, A./Wieland, E.	Stability of monosulfate in the presence of iron. Journal of the American Ceramic Society 2012, 95(10), 3305–3316 *
	Ferrari, L./Bernard, L./Deschner, F./Kaufmann, J./Winnefeld, F./Plank, J.	Characterization of polycarboxylate-ether based superplasticizer on cement clinker surfaces. Journal of the American Ceramic Society 2012, 95(7), 2189–2195 (joint paper) *
	Ferrari, L./Kaufmann, J./Winnefeld, F./Plank, J.	Reaction of clinker surfaces investigated with atomic force microscopy. Construction and Building Materials 2012, 35, 92–96 ■
	Fontana, P./Pirskawetz, S./Lura, P.	Plastic shrinkage cracking risk of concrete – evaluation of test methods. 7th RILEM International Conference on Cracking in Pavements: Mechanisms, modeling, testing, detection and prevention case histories, Delft, The Netherlands, 20–22 June 2012, 591–600
	Fuhr, M. J./Stührk, C./Münc, B./Schwarze, F. W. M. R./Schubert, M.	Automated quantification of the impact of the wood-decay fungus <i>Physiporinus vitreus</i> on the cell wall structure of Norway spruce by tomographic microscopy. Wood Science and Technology 2012, 46(4), 769–779 (joint paper) *
	García, A./Lura, P./ Partl, M. N.	Influence of cement content and environmental humidity on cement-asphalt composites performance. In: Alexander, M.G., Beushausen, H.D., Dehn, F., Moyo, P. (Eds.), Concrete Repair, Rehabilitation and Retrofitting III: ICCRRR 2012, CRC Press, London, 2012, 247–253 (joint paper)
	García, A./Schlangen, E./van de Ven, M./Van Bochove, G.	Optimization of composition and mixing process of a self-healing porous asphalt. Construction and Building Materials 2012, 30, 59–65 (joint paper) ■
	Griffa, M./Ferdowski, B./Daubb, E. G./Guyerb, R. A./Johnson, P. A./Maronee, C./Carmeliet, J.	Meso-mechanical analysis of deformation characteristics for dynamically triggered slip in a granular medium. Philosophical Magazine 2012, 92(28–30), 3520–3539 (joint paper) *
	Hoffmann, C./Schubert, S./Leemann, A./Motavalli, M.	Recycled concrete and mixed rubble as aggregates: influence of variations in composition on the concrete properties and their use as structural material. Construction and Building Materials 2012, 35, 701–709 (joint paper) ■
	Idiart, A./Bisschop, J./Caballero, A./Lura, P.	A numerical and experimental study of aggregate-induced shrinkage cracking in cementitious composites. Cement and Concrete Research 2012, 42(2), 272–281 *
	Jansen, D./Neunhoeffler-Goetz, F./Lothenbach, B./Neubauer, J.	The early hydration of Ordinary Portland Cement (OPC): an approach comparing measured heat flow with calculated heat flow from QXRD. Cement and Concrete Research 2012, 42(1), 134–138 *
	Justs, J./Wyrzykowski, M./Deschner, F./Winnefeld, F./Bajare, D./Lura, P.	Influence of superabsorbent polymers on hydration of cement pastes with very low water-to-binder ratio. 14. GDCh-Tagung Bauchemie, Dübendorf, Switzerland, 11–12 Oktober 2012, 156–161
	Kaufmann, J./Winnefeld, F./Zurbriggen, R.	Untersuchung der Interaktion von Polymer-dispersionen mit Fliesenoberflächen mittels Rasterkraftmikroskopie und Zeta-Potential-messung. Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Kaufmann, J./Winnefeld, F./Zurbriggen, R.	Polymer dispersions and their interaction with mortar constituents and ceramic tile surfaces studied by zeta-potential measurements and atomic force microscopy. Cement & Concrete Composites 2012, 34(5), 604–611 ■
Kunther, W.	Investigation of sulfate attack by experimental and thermodynamic means. Dissertation, École Polytechnique Fédérale de Lausanne; Empa Dübendorf, 164 pp.	
Le Saoût, G./Lothenbach, B./Hori, A./Higuchi, T./Winnefeld, F.	Hydration mechanism of quick hardening cement based on OPC blended with an amorphous calcium aluminate. 18. Int. Baustofftagung (IBAUSIL), Weimar, Germany, 12–15 September 2012, 8 pp.	
Leemann, A./Loser, R.	Accelerated sulfate resistance test for concrete-chemical and microstructural aspects. 2nd International Conference on Microstructural-related Durability of Cementitious Composites, Amsterdam, The Netherlands, 11–13 April 2012, 8 pp.	

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## Publications

Concrete/ Construction Chemistry	Leisinger, S. M./Lothenbach, B./Le Saout, G./Johnson, C. A.	Thermodynamic modeling of solid solutions between monosulfate and monochromate $3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot \text{Ca}[(\text{CrO}_4)_x(\text{SO}_4)_{1-x}] \cdot n\text{H}_2\text{O}$ . Cement and Concrete Research 2012, 42(1), 158–165 *
	Losser, R./Winnefeld, F./Nygaard, P./Bäurle, L./Leemann, A.	Einfluss verschiedener Zusatzstoffe auf Hydratation, Festigkeitsentwicklung und Stabilität von Zementstein und Mörtel. Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Lothenbach, B./Dilnesa, B. Z./Wieland, E.	Fate of iron during the hydration of cements. 18. Int. Baustofftagung (IBAUSIL), Weimar, Germany, 12–15 September 2012, 12 pp.
	Lothenbach, B./Kunther, W./Idiart, A. E.	Thermodynamic modeling of sulfate interaction. In: Alexander, M.G., Beushausen, H.D., Dehn, F., Moyo, P. (Eds.), Concrete Repair, Rehabilitation and Retrofitting III: ICCRRR 2012, , CRC Press, London, 2012, 1444–1449
	Lothenbach, B./Le Saout, G.	Influence of temperature on the hydration of blended cements. In: Alexander, M.G., Beushausen, H.D., Dehn, F., Moyo, P. (Eds.), Concrete Repair, Rehabilitation and Retrofitting III: ICCRRR 2012, , CRC Press, London, 2012, 1438–1443
	Lothenbach, B./Le Saout, G.	Temperatureinfluss auf die Hydratation von Portlandzement mit hohen Gehalten an Microsilica. Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Lothenbach, B./Le Saout, G./Ben Haha, M./Figi, R./Wieland, E.	Hydration of a low-alkali CEM III/B-SiO <sub>2</sub> cement (LAC). Cement and Concrete Research 2012, 42(2), 410–423 (joint paper) *
	Lothenbach, B./Pelletier-Chaignat, L./Winnefeld, F.	Stability in the system CaO–Al <sub>2</sub> O <sub>3</sub> –H <sub>2</sub> O. Cement and Concrete Research 2012, 42(12), 1621–1634 *
	Lötscher, L.	Prevention of Alkali-Silica reaction using lithium nitrate. Master, ETH; Empa Dübendorf, 2012, 64 pp.
	Lötscher, L./Leemann, A./LeSaout, G./Lothenbach, B./Espinosa Marzal, R.	Verhinderung einer Alkali-Aggregat-Reaktion durch die Verwendung von LiNO <sub>3</sub> . Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Lura, P./Friedemann, K./Stallmach, F./Mönnig, S./Wyrzykowski, M./Esteves, L. P.	Kinetics of water migration in cement-based systems containing superabsorbent polymers. In: Mechtcherine, V., Reinhardt, H.W. (Eds.), Application of super absorbent polymers (SAP) in concrete construction: state-of-the-art report prepared by technical committee 225–SAP, RILEM state-of-the-art reports 2, Springer, 2012, 21–37
	Pelletier-Chaignat, L./Winnefeld, F./Lothenbach, B./Müller, C. J.	Beneficial use of limestone filler with calcium sulfoaluminate cement. Construction and Building Materials 2012, 26(1), 619–627 ■
	Peretti, C./Leemann, A./Losser, R./Lura, P.	Influence of different conditioning regimes on the oxygen diffusion and oxygen permeability of concrete. 2nd International Conference on Microstructural-related Durability of Cementitious Composites, Amsterdam, The Netherlands, 11–13 April 2012, 8 pp.
	Pesavento, F./Gawin, D./Wyrzykowski, M./Schrefler, B. A./Simoni, L.	Modeling alkali-silica reaction in non-isothermal, partially saturated cement based materials. Computer Methods in Applied Mechanics and Engineering 2012, 225–228(45–48), 95–115 *
	Pigino, B./Leemann, A./Franzoni, E./Lura, P.	Ethyl silicate for surface treatment of concrete – Part II: Characteristics and performance. Cement and Concrete Composites 2012, 34(3), 313–321 ■
	Ridi, F./Fratini, E./Luciani, P./Winnefeld, F./Baglioni, P.	Tricalcium silicate hydration reaction in the presence of comb-shaped superplasticizers: Boundary nucleation and growth model applied to polymer-modified pastes. Journal of Physical Chemistry C 2012, 116(20), 10887–10895 *
	Schöler, A./Winnefeld, F./Lothenbach, B./Zajac, M.	Effect of cubic C3A on the hydration kinetics of Portland fly ash cement. Tagung Bauchemie: GDCh-Fachtagung, Dübendorf, Switzerland, 11–12 Oktober 2012, 6 pp.
	Schubert, S./Hoffmann, C./Leemann, A./Moser, K./Motavalli, M.	Recycled aggregate concrete: experimental shear resistance of slabs without shear reinforcement. Engineering Structures 2012, 41, 490–497 (joint paper) *
	Trtik, P./Kaufmann, J./Volz, U.	On the use of peak-force tapping atomic force microscopy for quantification of the local elastic modulus in hardened cement paste. Cement and Concrete Research 2012, 42(1), 215–221 *
	Van Garderen, N./Clemens, F. J./Kaufmann, J./Urbaneck, M./Binkowski, M./Graule, T./Aneziris, C. G.	Pore analyses of highly porous diatomite and clay based materials for fluidized bed reactors. Microporous and Mesoporous Materials 2012, 151, 255–263 (joint paper) *
Weiss, J./Bentz, D./Schindler, A./Lura, P.	Internal curing: constructing more robust concrete. Structure magazine 2012, 19(1), 10–14	
Wetzel, A./Herwegh, M./Zurbriggen, R./Winnefeld, F.	Influence of shrinkage and water transport mechanisms on microstructure and crack formation of tile adhesive mortars. Cement and Concrete Research 2012, 42(1), 39–50 *	
Wetzel, A./Zurbriggen, R./Herwegh, M./Greminger, A./Kaufmann, J. Winnefeld, F.	Long-term study on failure mechanisms of exterior applied tilings. Construction and Building Materials 2012, 37(1), 335–348 ■	
	Interaction of superplasticizers with calcium sulfoaluminate cements. Tenth ACI International Conference on Superplasticizers and Other Chemical Admixtures in Concrete, Prague, Czech Republic, 28–31 October 2012, 17 pp.	

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Concrete/ Construction Chemistry	Winnefeld, F.	Wechselwirkungen zwischen Calciumsulfoaluminatzementen und Fließmitteln. 14. GDCh-Tagung Bauchemie, Dübendorf, Switzerland, 11–12 Oktober 2012, 138–142
	Winnefeld, F./Kaufmann, J./Hack, E./Harzer, S./Wetzel, A./Zurbriggen, R.	Moisture induced length changes of tile adhesive mortars and their impact on adhesion strength. Construction and Building Materials 2012, 30, 426–438 (joint paper) ■
	Winnefeld, F./Pelletier-Chaignat, L./Lothenbach, B./Le Saoût, G./Plusquellec, G./Müller, C./Famy, C.	Hydration of ternary binders based on Portland cement – calcium sulfoaluminate cement – calcium sulfate: influence of binder composition and water/cement ratio. 18. Int. Baustofftagung (IBAUSIL), Weimar, Germany, 12–15 September 2012, 8 pp.
	Wyrzykowski, M./Lura, P.	Early-age thermal deformations of cement paste and mortars. 2nd International Conference on Microstructural-related Durability of Cementitious Composites, Amsterdam, The Netherlands, 11–13 April 2012, 154 (8 pp.)
	Wyrzykowski, M./Lura, P.	Thermal expansion of high-performance cement paste and mortar at early age. In: Alexander, M.G., Beushausen, H.D., Dehn, F., Moyo, P. (Eds.), Concrete Repair, Rehabilitation and Retrofitting III: ICCRRR 2012, CRC Press, London, 2012, 1392–1397
	Wyrzykowski, M./Lura, P./Gawin, D.	Modeling of Internal Curing with SAP at Meso- and Macro-Level. In: Schindler, A.K., Grygar, J.G., Weiss, W.J. (Eds.), The Economics, Performance, and Sustainability of Internally Cured Concrete, SP-290, ACI, 2012, 12 pp.
	Wyrzykowski, M./Lura, P./Gawin, D.	Modelling internal curing in concrete. 4th International Workshop of Young Doctors in Geomechanics: W(H)YDOC 12, Paris, France, 21–23 November 2012, 4 pp.
	Wyrzykowski, M./Lura, P./Pesavento, F./Gawin, D.	Modeling of water migration during internal curing with superabsorbent polymers. Journal of Materials in Civil Engineering 2012, 24(8), 1006–1016 ■
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	Mechanical Systems Engineering	Abouhossein, A./Weisse, B./Ferguson, S. J.
Brunner, A. J./Bachmann, F.		Acoustic emission monitoring of tensile tests on packaged piezoceramic wafer transducers. 30th European Conference on Acoustic Emission Testing (EWGAE 2012) & 7th International Conference on Acoustic Emission, Granada, Spain, 12–15 September 2012, 11 pp.
Brunner, A. J./Flüeler, P./Hack, E./Mastrangelo, R./Stimolo, M.		Entwicklung eines zerstörungsfreien Prüfverfahrens für Schweißnähte von KDB = Développement d'une méthode d'essais non-déstructif pour des soudures de membranes polymères d'étanchéité = Development of a nondestructive test method for welded seams of polymeric sealing membranes. Forschungsauftrag FGU 2004/003 auf Antrag der Fachgruppe Untertagbau (FGU); 1374, 2012, 75 pp.
Di Lillo, L./Schmidt, A./Carnelli, D. A./Ermanni, P./Kovacs, G./Mazza, E./Bergamini, A.		Measurement of insulating and dielectric properties of acrylic elastomer membranes at high fields. Journal of Applied Physics 2012, 111(2), Article number 024904 (8 pp.) (joint paper) *
Hauert, R./Falub, C. V./Thorwarth, G./Thorwarth, K./Affolter, C./Stiefel, M./Podleska, L. E./Taeger, G.		Retrospective lifetime estimation of failed and explanted diamond-like carbon coated hip joint balls. Acta Biomaterialia 2012, 8(8), 3170–3176 (joint paper) ■
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<b>Mechanical Systems Engineering</b>	Stelzer, S./Brunner, A. J./Argüelles, A./Murphy, N./Pinter, G.	Mode I delamination fatigue crack growth in unidirectional fiber reinforced composites: Development of a standardized test procedure. <i>Composites Science and Technology</i> 2012, 72(10), 1102–1107 *
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<b>Mechanics for Modelling and Simulation</b>	Weisse, B./Aiyangar, A. K./Affolter, C./Gander, R./Terrasi, G. P./Ploeg, H.	Determination of the translational and rotational stiffnesses of an L4–L5 functional spinal unit using a specimen-specific finite element model. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> 2012, 13, 45–61 ■
	Bachmann, F./Bergamini, A. E./Ermanni, P.	Optimum piezoelectric patch positioning: a strain energy-based finite element approach. <i>Journal of Intelligent Material Systems and Structures</i> 2012, 23(14), 1575–1591 ■
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	Casadei, F./Delpero, T./Bergamini, A./Ermanni, P./Ruzzene, M.	Piezoelectric resonator arrays for tunable acoustic waveguides and metamaterials, <i>Journal of Applied Physics</i> , 112, 2012 (5 pp.) *
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Thwapih, G. Y./Campanile, L. F.	Experimental and numerical investigations on nonlinear aeroelasticity of forward-swept, compliant wings. <i>Journal of Mechanical Design</i> 2012, 134(1), 011009–1–011009–9 ■	

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<b>Mechanics for Modelling and Simulation</b>	<b>Weber, B./ Emmert, M./ Behr, L./ Mazza, E. et al.</b>	Prenatally engineered autologous amniotic fluid stem cell-based heart valves in the fetal circulation, <i>Biomaterials</i> , Vol. 33, Issue 16, pp 4031...4043 * *
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<b>Road Engineering/ Sealing Components</b>	<b>Arraigada, M./Partl, M. N./ Pugliesi, A.</b>	Initial tests results from the MLS10 mobile load simulator in Switzerland. In: Jones, D., Harvey, J., Mateos, A., Al-qadi, I. (Eds.), <i>Advances in pavement design through full-scale accelerated pavement testing: proceedings of the 4th international conference on accelerated pavement testing</i> , Taylor & Francis Group, London, 2012, 277-285
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	<b>Chailleux, E./Scholten, E./Blomberg, T./Hugener, M. et al.</b>	Round Robin Test of the Fracture Toughness for the Low Temperature Properties of Bituminous Binders
	<b>García, A.</b>	Self-healing of open cracks in asphalt mastic. <i>Fuel</i> 2012, 93, 264-272 * *
	<b>García, A./Lura, P./ Partl, M. N.</b>	Influence of cement content and environmental humidity on cement-asphalt composites performance. In: Alexander, M.G., Beushausen, H.D., Dehn, F., Moyo, P. (Eds.), <i>Concrete Repair, Rehabilitation and Retrofitting III: ICCRRR 2012</i> , CRC Press, London, 2012, 247-253 (joint paper)
	<b>García, A./Schlangen, E./van de Ven, M./Liu, Q.</b>	A simple model to define induction heating in asphalt mastic. <i>Construction and Building Materials</i> 2012, 31, 38-46 ■
	<b>García, A./Schlangen, E./van de Ven, M./Van Bochove, G.</b>	Optimization of composition and mixing process of a self-healing porous asphalt. <i>Construction and Building Materials</i> 2012, 30, 59-65 (joint paper) ■
	<b>Gruber, I./Zinovik, I./Holzer, L./Flisch, A./Poulikakos, L. D.</b>	A computational study of the effect of structural anisotropy of porous asphalt on hydraulic conductivity. <i>Construction and Building Materials</i> 2012, 36, 66-77 (joint paper) ■
	<b>Hailesilassie, B. W./Partl, M. N.</b>	Mechanisms of asphalt blistering on concrete bridges. <i>Journal of ASTM International</i> 2012, 9(3), Paper ID JA1104135 (16 pp.)
	<b>Heutschi, K./Poulikakos, L.</b>	Noise monitoring of trucks. <i>EURONOISE 2012</i> , Prague, Czech Republic, 10-13 June 2012, 677-681 (joint paper)
	<b>Hugener, M./Beltzung, ./Angst, C.</b>	Affinity Between Bitumen and Aggregates: Improvement of the EN static test Method
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	<b>Hugo, F./Arraigada, M./Shu-ming, L./Zefeng, T./ Kim, R. Y.</b>	International case studies in support of successful applications of accelerated pavement testing in pavement engineering. In: Jones, D., Harvey, J., Mateos, A., Al-qadi, I. (Eds.), <i>Advances in Pavement Design through Full-scale Accelerated Pavement Testing: proceedings of the 4th international conference on accelerated pavement testing</i> , Taylor & Francis Group, London, 2012, 93-104
	<b>Kalogeropoulos, A.</b>	Non-Destructive Determination of Chloride and Water Content in Concrete Using Ground Penetrating Radar
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	<b>Karcher, C./Partl, M. N./Plachkova, P./Arraigada, M./Umminger, M.</b>	Untersuchungen zur Strukturellen Substanz von Asphaltbefestigungen. <i>Strasse und Autobahn</i> 2012, 63(1), 5-11
	<b>Kim, H./Partl, M. N.</b>	Development of a double-torsion fracture test to predict channelized crack behaviors of asphalt concrete. <i>Construction and Building Materials</i> 2012, 26(1), 694-700 ■
	<b>Mayer, R. M./Poulikakos, L. D./Lees, A. R./Heutschi, K./Kalivoda, M. T./Soltic, P.</b>	Reducing the environmental impact of road and rail vehicles. <i>Environmental Impact Assessment Review</i> 2012, 32(1), 25-32 (joint paper) ▲

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	Poulikakos, L. D./Partl, M. N.	A multi-scale fundamental investigation of moisture induced deterioration of porous asphalt concrete. Construction and Building Materials 2012, 36, 1025–1035 ■
	Poulikakos, L./Heutschi, K./Soltic, P.	Environmental impact of heavy vehicles based on noise, axle load and gaseous emissions. 6 <sup>th</sup> International Conference on Weigh-In-Motion: ICWIM6, Dallas, Texas, USA, 4–7 June 2012, 9 pp. (joint paper)
	Raab, C./Partl, M. N.	Stripping of Low Noise Surface Courses during Laboratory Scaled Wheel Tracking
	Raab, C./Partl, M. N./Abd El Halim, A. O.	Developing a Framework for Standardization of Interlayer Bond of Asphalt Pavements
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	Tebaldi, G./Dave, E./Marsac, P./Muraya, P./Hugener, M. et al.	Classification of Recycled Asphalt (RA) Material
	Tebaldi, G./Dave, E./Marsac, P./Muraya, P./Hugener, M. et al.	Synthesis of Specimen Preparation and Curing Processes for Cold Recycled Asphalt Mixes
	Structural Engineering	Abdollahi, B./Bakhshi, M./Mirzaee, Z./Shekarchi, M./Motavalli, M.
Czaderski, C./Martinelli, E./Michels, J./Motavalli, M.		Effect of curing conditions on strength development in an epoxy resin for structural strengthening. Composites Part B: Engineering 2012, 43(2), 398–410 *
Czaderski, C./Olia, S.		EN-Core round robin testing program: contribution of Empa. Advances in FRP Composites in Civil Engineering: proceedings of the 6th International Conference on FRP Composites in Civil Engineering (CICE 2012), Rome, Italy, 12–15 June 2012, 8 pp.
Czaderski-Forchmann, C.		Strengthening of reinforced concrete members by prestressed, externally bonded reinforcement with gradient anchorage. Dissertation, ETHZ; Empa Dübendorf, 458 pp.
Feltrin, G.		Einfluss eines bituminösen Belags auf die Schwingungseigenschaften von Fussgängerbrücken. 2. Internationale Holzbrückentage IHB 2012, Bad Wörishofen, Deutschland, 19.–20. April 2012, 10 pp.
Feltrin, G.		Monitoring bridges with Wireless Sensor Networks: a critical assessment. Bridge maintenance, safety, management, resilience and sustainability: proceedings of the sixth international conference, Stresa, Lake Maggiore, Italy, 8–12 July 2010, 2551–2552
Feltrin, G.		Temperaturinduzierte Veränderung der Schwingungseigenschaften einer Fussgängerbrücke aus Holz mit Gussasphaltbelag. 15. Symposium Bauwerksdynamik und Erschütterungsmessungen, Dübendorf, Schweiz, 15. Juni 2012, 10 S.
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Fernandez-Cabo, J. L./Bona-Gallego, E./Bona-Gallego, M./Avila-Nieto, M./Avila-Jalvo, J. M./Widmann, R./Fernandez-Lavandera, J./Diez-Barra, R.		Timber composite structures: literature review and new proposals in the analysis, design and construction. Enhance mechanical properties of timber, engineered wood products and timber structures: COST Action FP1004 Early Stage Researchers Conference, Zagreb, Croatia, 19–20 April, 2012, 118–125
Flouri, K./Saukh, O./Sauter, R./Jalsan, K. E./Bischoff, R./Meyer, J./Feltrin, G.		A versatile software architecture for civil structure monitoring with wireless sensor networks. Smart Structures and Systems 2012, 10(3), 209–228 ■
Franke, B./Widmann, R.		Zustandserfassung und Verstärkung von Brettschichtholz. Verbindungsmittel im mehrgeschossigen Holzbau – 44. Fortbildungskurs Tagungsband SAH Schweizerische Arbeitsgemeinschaft für Holzforschung, Weinfelden, Schweiz, 23–24 Oktober 2012, 193–202
Ghafoori, E./Asghari, M.		Three-dimensional elasticity analysis of functionally graded rotating cylinders with variable thickness profile. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science 2012, 226(3), 585–594 *
Ghafoori, E./Motavalli, M.		Prestressed FRP for fatigue crack arrest in structures. ACUN6: Composites and Nanocomposites in civil, offshore and mining infrastructure, Melbourne, Australia, 14–16 November 2012, 6 pp.
Ghafoori, E./Motavalli, M./Botsis, J./Herwig, A./Galli, M.		Fatigue strengthening of damaged metallic beams using prestressed unbonded and bonded CFRP plates. International Journal of Fatigue 2012, 44, 303–315 *
Ghafoori, E./Schumacherb, A./Motavalli, M.		Fatigue behavior of notched steel beams reinforced with bonded CFRP plates: determination of prestressing level for crack arrest. Engineering Structures 2012, 45, 270–283 *

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<b>Structural Engineering</b>	<b>Guadagnini, M./Serbescu, A./Palmieri, A./Matthys, S./Bilotta, A./Nigro, E./Ceroni, F./Czaderski, C./Olia, S./Szabo, Z./Balazs, G./Mazzoti, C.</b>	Round robin test on the bond behaviour of externally bonded FRP systems to concrete. <i>Advances in FRP Composites in Civil Engineering: proceedings of the 6th International Conference on FRP Composites in Civil Engineering (CICE 2012)</i> , Rome, Italy, 12–15 June 2012, 8 pp.
	<b>Herwig, A./Motavalli, M.</b>	Axial Behavior of Square Reinforced Concrete Columns Strengthened with Lightweight Concrete Elements and Unbonded GFRP Wrapping. <i>Journal of Composites for Construction</i> , Vol. 16, No. 6, December 2012: 747–752. ■
	<b>Hoffmann, C./Schubert, S./Leemann, A./Motavalli, M.</b>	Recycled concrete and mixed rubble as aggregates: influence of variations in composition on the concrete properties and their use as structural material. <i>Construction and Building Materials</i> 2012, 35, 701–709 (joint paper) ■
	<b>Jalsan, K./Flouri, K./Feltrin, G.</b>	Bi-Objective layout optimization of a Wireless Sensor Network for footbridge monitoring. <i>Bridge maintenance, safety, management, resilience and sustainability: proceedings of the sixth international conference</i> , Stresa, Lake Maggiore, Italy, 8–12 July 2010, 261–268
	<b>Jockwer, R./Steiger, R./Frangi, A.</b>	Design of glulam beams with notches at the support. Enhance mechanical properties of timber, engineered wood products and timber structures: COST Action FP1004 Early Stage Researchers Conference, Zagreb, Croatia, 19–20 April, 2012, 69–74
	<b>Köhler, J./Steiger, R./Fink, G./Jockwer, R.</b>	Assessment of selected Eurocode based design equations in regard to structural reliability. <i>International Council for Research and Innovation in Building and Construction, Working Commission W18 – Timber Structures, Meeting 45</i> , Växjö, Sweden, 27–30 August 2012, Paper no. CIB-W18/45-102-2 (10 pp.)
	<b>Kutnar, A./Widmann, R./Kamke, F.A.</b>	Density, Mechanical Properties, and Morphology of Densified Wood in Relation to Compression Temperature and Steam Environments, <i>The Sixth European Conference on Wood Modification</i> , Ljubljana, Slovenia, 17–18.09.2013, pp 167–174
	<b>Másłanka, M./Weber, F.</b>	Nowy adaptacyjny dynamiczny tłumik drgań = New adaptive tuned mass damper. 65th Anniversary Jubilee Conference of the Faculty of Mechanical Engineering and Robotics, Krakow, Poland, 13 September 2012,
	<b>Michels, J./Czaderski, C./Brönnimann, R./Motavalli, M.</b>	Gradient anchorage method for prestressed CFRP strips: principle and application. <i>Bridge maintenance, safety, management, resilience and sustainability: proceedings of the sixth international conference</i> , Stresa, Lake Maggiore, Italy, 8–12 July 2010, 1981–1986 (joint paper)
	<b>Michels, J./Czaderski, C./El-Hacha, R./Brönnimann, R./Motavalli, M.</b>	Temporary bond strength of partly cured epoxy adhesive for anchoring prestressed CFRP strips on concrete. <i>Composite Structures</i> 2012, 94(9), 2667–2676 (joint paper) ■
	<b>Michels, J./Czaderski, C./El-Hacha, R./Motavalli, M.</b>	Partially cured epoxy adhesive for anchoring prestressed CFRP strips on concrete. <i>The third Asia-Pacific Conference on FRP in Structures: APFIS 2012</i> , Sapporo, Japan, 2–4 February 2012, 8 pp.
	<b>Michels, J./Waldmann, D./Maas, S./Zürbes, A.</b>	Steel fibers as only reinforcement for flat slab construction: experimental investigation and design. <i>Construction and Building Materials</i> 2012, 26(1), 145–155 ■
	<b>Schubert, S./Hoffmann, C./Leemann, A./Moser, K./Motavalli, M.</b>	Recycled aggregate concrete: experimental shear resistance of slabs without shear reinforcement. <i>Engineering Structures</i> 2012, 41, 490–497 (joint paper) *
	<b>Steiger, R.</b>	Ein Überblick zur Revision der Holzbaunorm SIA 265. Verbindungsmittel im mehrgeschossigen Holzbau – 44. Fortbildungskurs Tagungsband SAH Schweizerische Arbeitsgemeinschaft für Holzforschung, Weinfelden, Schweiz, 23–24 Oktober 2012, 9–15
	<b>Steiger, R.</b>	In Brettschichtholz eingeklebte Gewindestangen – Stand des Wissens zu einer leistungsfähigen Verbindungstechnik, 18. Int. Holzbau-Forum 2012
	<b>Steiger, R./Gülzow, A./Czaderski, C./Howald, M. T./Niemz, P.</b>	Comparison of bending stiffness of cross-laminated solid timber derived by modal analysis of full panels and by bending tests of strip-shaped specimens. <i>European Journal of Wood and Wood Products</i> 2012, 70(1–3), 141–153 ■
	<b>Theiler, M./Frangi, A./Steiger, R.</b>	Design of timber columns based on 2nd order structural analysis. <i>International Council for Research and Innovation in Building and Construction, Working Commission W18 – Timber Structures, Meeting 45</i> , Växjö, Sweden, 27–30 August 2012, Paper no. CIB-W18/45-2-1 (15 pp.)
	<b>Weber, B.</b>	Heat transfer mechanisms and models for a gypsum board exposed to fire. <i>International Journal of Heat and Mass Transfer</i> 2012, 55(5–6), 1661–1678 *
	<b>Weber, B./Feltrin, G.</b>	Modelling the temperature-dependent dynamic behaviour of a timber bridge with asphalt pavement. <i>COMSOL Conference 2012</i> , Milan, Italy, 10.–12. October 2012, 5 pp.
	<b>Weber, F./Maśłanka, M.</b>	Frequency and damping adaptation of a TMD with controlled MR damper. <i>Smart Materials and Structures</i> 2012, 21(5), Article number 055011 (18 pp.) *
<b>Weber, F./Maśłanka, M./Distl, H./Paroli, L./Mangerik, I.</b>	Semi-active tuned mass damper with MR damper for Volgograd Bridge, Russia. 15. Symposium Bauwerksdynamik und Erschütterungsmessungen, Dübendorf, Schweiz, 15. Juni 2012, 27 S.	
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<b>Advanced Fibers</b>	Amberg, M./Klaus, M./Fortunato, P./Ritter, A./Hegemann, D.	Möglichkeiten und Hochskalierung Plasma beschichteter Fäden. 51st Man-Made Fibers Congress: MFC, Dornbirn, Austria, 19 – 21 September 2012, 21 pp.
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	Espinosa-Marzal, R. M./Drobek, T./Balmer, T./Heuberger, M. P.	Hydrated-ion ordering in electrical double layers . Physical Chemistry Chemical Physics 2012, 14(17), 6085–6093 *
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	Gaan, S./Neisius, N. M./Ritter, A./Hufenus, R.	Flame retardant PLA fibers derived from bio-based additives. IV. International R&D Project Brokerage Event= V. Uluslararası AR-GE Proje Pazarı, Bursa, Turkey, 02–03 February 2012, 145–146
	Ganu, S./Ritter, H./Rupper, P./Reifler, F. A./Faller, M./Roth, C./Gaan, S.	Protective and insulative coatings for e-fibers. The Fiber Society Spring 2012 Conference, St. Gallen, Switzerland, 23–25 May 2012, 117–118
	Giraud, M. N./Géraldine Guex, A./Tevearai, H. T.	Cell therapies for heart function recovery: focus on myocardial tissue engineering and nanotechnologies. Cardiology Research and Practice 2012, 2012, Article number 971614 (10 pp.)
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	<b>Hegemann, D./Drabik, M./Hanselmann, B./Amberg, M.</b>	Plasma coating of fibers: specifics and opportunities. The Fiber Society Spring 2012 Conference, St. Gallen, Switzerland, 23–25 May 2012, 123–124
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	<b>Hufenus, R./Affolter, C./Camenzind, M./Reifler, F. A.</b>	Design and characterization of a bicomponent Melt-Spun Fiber Optimized for Artificial Turf Applications. <i>Macromolecular Materials and Engineering</i> 2012, Article in press, (joint paper) *
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	<b>Hufenus, R./Hegemann, D./Gaan, S./Reifler, F. A./Scherer, L. J.</b>	Base fiber technologies for smart textiles. The Fiber Society 2012 Fall Meeting and Technical Conference: Rediscovering Fibers in the 21st Century, Boston, Massachusetts, USA, 7–9 November 2012, 2 pp. (joint paper)
	<b>Hufenus, R./Reifler, F. A./Maniura-Weber, K./Spierings, A. B./Zinn, M.</b>	Biodegradable bicomponent fibers from renewable sources: melt-spinning of poly(lactic acid) and poly[(3-hydroxybutyrate)-co-(3-hydroxyvalerate)]. <i>Macromolecular Materials and Engineering</i> 2012, 297(1), 75–84 (joint paper) *
	<b>Hufenus, R./Rossi, R.</b>	The Fiber Society 2012 Spring Conference: Fiber Research for Tomorrow's Applications. In: Anonymous, Empa, 2012, 320 pp.
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	<b>Langecker, J./Fejfarová, K./Dušek, M./Rentsch, D./Baše, T.</b>	Carbon-substituted 9,12-dimercapto-1,2-dicarba-closo-dodecaboranes via a 9,12-bis(methoxy-methylthio)-1,2-dicarba-closo-dodecaborane precursor. <i>Polyhedron</i> 2012, 45(1), 144–151 (joint paper) *
	<b>Langecker, J./Ritter, H./Fichini, A./Rupper, P./Faller, M./Hanselmann, B.</b>	Ultrathin, flexible, and transparent polymer multilayer composites for the protection of silver surfaces. <i>ACS Applied Materials &amp; Interfaces</i> 2012, 4(2), 619–627 (joint paper) *
	<b>Lawes, S./Schoeller, K./Gaan, S.</b>	Stable conductive pedot: PSS coatings on single polymer fibers for use as smart textiles. Magic world of textiles: 6th International Textile, Clothing & Design conference (ITC&DC 2012), Dubrovnik, Croatia, 07–10 October 2012, 6 pp.
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	<b>Lorenz, C./Windler, L./von Goetz, N./Lehmann, R. P./Schuppler, M./Hungerbühler, K./Heuberger, M./Nowack, B./Nowack, B.</b>	Characterization of silver release from commercially available functional (nano)textiles. <i>Chemosphere</i> 2012, 89(7), 817–824 (joint paper) *
	<b>Lübben, J. F./Crespy, D./De Geus, M./Heuberger, M.</b>	Monitoring the hygrothermal response of poly(vinyl methyl ether) submicron films using AFM. <i>European Polymer Journal</i> 2012, 48(1), 209–216 (joint paper) *
	<b>Michalow, K./Otal, E./Burnat, D./Fortunato, G./Emerich, H./Ferri, D./Heel, A./Graule, T.</b>	Flame-made Visible Light Active TiO <sub>2</sub> :Cr Photocatalyst: Correlation between Structural, Optical and Photocatalytic Properties. <i>Catalysis Today</i> (accepted). (joint paper) *
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	<b>Reifler, F. A.</b>	Innovation through bicomponent melt spinning and fiber micro- and nanomodification. <i>Polyester &amp; PET Chain</i> 2012: 16th Annual World Congress: The Way Ahead: Markets, Technologies, Applications, Zürich, Switzerland, 14–16 February 2012, 44 p.
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<b>Scherer, L. J./Krehel, M./Schyrr, B./Pasche, S./Hufenus, R./Rossi, R. M.</b>	Polymeric optical fiber fabrics for medical applications. The Fiber Society Spring 2012 Conference, St. Gallen, Switzerland, 23–25 May 2012, 127–128 (joint paper)	

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	<b>Vetter, R./Halbeisen, M./Hufenus, R.</b>	Bicomponent fibers with color shimmer effect. IV. International R&D Project Brokerage Event= V. Uluslararası AR-GE Proje Pazarı, Bursa, Turkey, 02-03 February 2012, 343-344
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<b>Biomaterials</b>	<b>Windler, L./Lorenz, C./Von Goetz, N./Hungerbühler, K./Amberg, M./Heuberger, M./Nowack, B.</b>	Release of titanium dioxide from textiles during washing. <i>Environmental Science &amp; Technology</i> 2012, 46, 8181-8188 *
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	<b>Follonier, S./Henes, B./Panke, S./Zinn, M.</b>	Putting cells under pressure: a simple and efficient way to enhance the productivity of medium-chain-length polyhydroxyalkanoate in processes with <i>Pseudomonas putida</i> KT2440. <i>Biotechnology and Bioengineering</i> 2012, Vol. 109, 2, 451-461 *
	<b>Follonier, S./Panke, S./Zinn, M.</b>	Pressure to kill or pressure to boost: a review on the various effects and applications of hydrostatic pressure in bacterial biotechnology. <i>Applied Microbiology and Biotechnology</i> 2012, 93(1), 1805-1815 *
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	<b>Heck, T., Faccio, G., Richter, M., Thöny-Meyer, L.</b>	Enzyme-catalyzed protein crosslinking, <i>J. Applied Microbiology and Biotechnology</i> *
	<b>Heck, T./Geueke, B./Kohler, H. -P E.</b>	Bacterial $\beta$ -Aminopeptidases: structural insights and applications for biocatalysis. <i>Chemistry &amp; biodiversity</i> 2012, 9(11), 2388-2409 ■
	<b>Hufenus, R./Reifler, F. A./Maniura-Weber, K./Spierings, A. B./Zinn, M.</b>	Biodegradable bicomponent fibers from renewable sources: melt-spinning of poly(lactic acid) and poly[(3-hydroxybutyrate)-co-(3-hydroxyvalerate)]. <i>Macromolecular Materials and Engineering</i> 2012, 297(1), 75-84 (joint paper) *
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	<b>Ihssen, J./Kowarik, M./Wiesli, L./Reiss, R./Wacker, M./Thöny-Meyer, L.</b>	Structural insights from random mutagenesis of <i>Campylobacter jejuni</i> oligosaccharyltransferase PglB. <i>BMC Biotechnology</i> 2012, 12(67), Article number 53 (22 pp.) ■
	<b>Jus, S./Stachel, I./Fairhead, M./Meyer, M./Thöny-Meyer, L./Guebitz, G. M.</b>	Enzymatic cross-linking of gelatine with laccase and tyrosinase. <i>Biocatalysis and biotransformation</i> 2012, 30(1), 86-95 *
<b>Le Meur, S./Egli, T./Thöny-Meyer, L./Ren, Q.</b>	Production of medium-chain-length polyhydroxyalkanoates by sequential feeding of xylose and octanoic acid in engineered <i>Pseudomonas putida</i> KT2440. <i>BMC Biotechnology</i> 2012, Article number 53 (22 pp.) ■	
<b>Lübben, J. F./Crespy, D./De Geus, M./Heuberger, M.</b>	Monitoring the hygrothermal response of poly(vinyl methyl ether) submicron films using AFM. <i>European Polymer Journal</i> 2012, 48(1), 209-216 (joint paper) *	
<b>Schätzle, M. A./Flemming, S./Husain, S. M./Richter, M./Günther, S./Müller, M.</b>	Tetrahydroxynaphthalene Reductase: Catalytic Properties of an Enzyme Involved in Reductive Asymmetric Naphthol Dearomatization. <i>Angewandte Chemie</i> 2012, 124(11), 2697-2700	
<b>Schubert, M./Engel, J./Thöny-Meyer, L./Schwarze, F. W. M. R./Ihssen, J.</b>	Protection of wood from microorganisms by laccase-catalyzed Iodination. <i>Applied and Environmental Microbiology</i> 2012, 78(20), 7267-7275 (joint paper) *	
<b>Electronics/ Metrology/Reliability</b>	<b>Derluyn, H./Griffa, M./Mannes, D./Jerjen, I./Dewanckele, J./Vontobel, P./Sheppard, A./Boone, M. N./Derome, D./Cnudde, V./Lehmann, E./Carmeliet, J.</b>	Probing salt crystallization damage mechanisms in porous limestone with neutron radiography and X-ray tomography. <i>Proceedings of the 5th IBPC, Kyoto, Japan, 28-31 May 2012</i> , 95-102 (joint paper)
	<b>Gruber, I./Zinovic, I./Holzer, L./Flisch, A./Poulikakos, L. D.</b>	A computational study of the effect of structural anisotropy of porous asphalt on hydraulic conductivity. <i>Construction and Building Materials</i> 2012, 36, 66-77 (joint paper) ■
	<b>Hack, E.</b>	Measurement uncertainty of Carré-type phase-stepping algorithms. <i>Optics and Lasers in Engineering</i> 2012, 50(8), 1023-1025 *
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<b>Electronics/ Metrology/Reliability</b>	<b>Hauert, R./Falub, C. V./Thorwarth, G./Thorwarth, K./Affolter, C./Stiefel, M./Podleska, L. E./Taeger, G.</b>	Retrospective lifetime estimation of failed and explanted diamond-like carbon coated hip joint balls. <i>Acta Biomaterialia</i> 2012, 8(8), 3170–3176 (joint paper) ■
	<b>Haussener, S./Jerjen, I./Wyss, P./Steinfeld, A.</b>	Tomography-based determination of effective transport properties for reacting porous media. <i>Journal of Heat Transfer</i> 2012, 134(1), Article number 012601 (8 pp.) *
	<b>Helfenstein, P./Jefimovs, J./Kirk, E./Escher, C./Fink, H. -W/Tsujino, S.</b>	Fabrication of metallic double-gate field emitter arrays and their electron beam collimation characteristics. <i>Journal of Applied Physics</i> 2012, 112(9), Article number 093307 (9 pp.) *
	<b>Hilbers, U./Neuenschwander, J./Hasener, J./Sanabria, S. J./Niemz, P./Thoemen, H.</b>	Observation of interference effects in air-coupled ultrasonic inspection of wood-based panels. <i>Wood Science and Technology</i> 2012, 46(5), 979–990 *
	<b>Ismael, M. R./Clemens, F./Wyss, P./Graule, T./Hoffmann, M. J.</b>	Processing and properties of co-extruded lead zirconate titanate fibers. <i>Journal of the American Ceramic Society</i> 2012, 95(1), 108–116 (joint paper) *
	<b>Jacob, P.</b>	Device analysis: a system-related topic? <i>Electronic Device Failure Analysis</i> 2012, 14(2), 45–46
	<b>Klug, C./Jerjen, I.</b>	The buccal apparatus with radula of a ceratitic ammonoid from the German Middle Triassic. <i>Geobios</i> 2012, 45(1), 57–65 *
	<b>Krauss Juillerat, F./Engeli, R./Jerjen, I./Sturzenegger, P. N./Borcard, F./Juillerat-Jeaneret, L./Gerber-Lemaire, S./Gauckler, L. J./Gonzenbach, U. T.</b>	Synthesis of bone-like structured foams. <i>Journal of the European Ceramic Society</i> 2012, Article in press, *
	<b>Longtin, R./Hack, E./Neuenschwander, J./Janczak-Rusch, J.</b>	Benign joining of ultrafine grained aerospace aluminium alloys using nanotechnology <i>Advanced Materials</i> ; DOI: 10.1002/adma.2011103275 *
	<b>Lotito, V./Hafner, C./Sennhauser, U./Bona, G.L.</b>	Novel SNOM probes based on nanofocusing in asymmetric structures, in K. Y. Kim Ed. "Plasmonics – Principles and applications", InTech Rijeka Croatia, Ch 5, 99–134, 2012, ISBN 978-953-51-0797-2
	<b>Lotito, V./Hafner, C./Sennhauser, U./Bona, G.L.</b>	A novel nanostructured scanning near field optical microscopy probe based on nanofocusing in an asymmetric structure <i>J. Comput. Theor. Nanosci.</i> 9, 3, 486–494, 2012 ■
	<b>Meier, U./Brönnimann, R./Anderegg, P.</b>	Long-term behavior of carbon fiber reinforced polymers recorded with SHM 5th Int. Conference on Structural Health Monitoring of Intelligent Infrastructure (SHMII-5) 011, 11–15 December 2011, Cancún, México"
	<b>Meier, U./Brönnimann, R./Anderegg, P./Terrasi, G.P.</b>	20 Years of Experience with Structural Health Monitoring of Objects with CFRP Components <i>Nondestructive Testing of Materials and Structures</i> , Springer, 2012, S. 959–976
	<b>Michels, J./Czaderski, C./Brönnimann, R./Motavalli, M.</b>	Gradient anchorage method for prestressed CFRP strips: principle and application. <i>Bridge maintenance, safety, management, resilience and sustainability: proceedings of the sixth international conference</i> , Stresa, Lake Maggiore, Italy, 8–12 July 2010, 1981–1986 (joint paper)
	<b>Michels, J./Czaderski, C./El-Hacha, R./Brönnimann, R./Motavalli, M.</b>	Temporary bond strength of partly cured epoxy adhesive for anchoring prestressed CFRP strips on concrete. <i>Composite Structures</i> 2012, 94(9), 2667–2676 (joint paper) ■
	<b>Neuenschwander, U./Neuenschwander, J./Hermans, I.</b>	Cavitation-induced radical-chain oxidation of valeric aldehyde. <i>Ultrasonics Sonochemistry</i> 2012, 19(5), 1011–1014 ■
	<b>Ozyhar, T./Hering, S./Sanabria, S. J. Niemz, P.</b>	Determining moisture-dependent elastic characteristics of beech wood by means of ultrasonic waves. <i>Wood Science and Technology</i> 2012, Article in press, *
	<b>Rastogi, P. K./Hack, E.</b>	Optical methods for solid mechanics: a full-field approach. In: <i>Anonymous Physics Textbook</i> , Wiley-VCH, Weinheim, 2012, 433 pp.
	<b>Sanabria Martín, S. J.</b>	Air-coupled ultrasound propagation and novel non-destructive bonding quality assessment of timber composites. <i>Dissertation</i> , ETH Zurich, Switzerland; Empa Dübendorf, 256 pp.
	<b>Sanabria, S./Hilbers, U./Neuenschwander, J./Niemz, P./Sennhauser, U./Thoemen, H./Wenker, J.</b>	Modeling and prediction of density distribution and microstructure in particleboards from acoustic properties by correlation of non-contact high resolution pulsed air-coupled ultrasound and X-ray images" <i>Ultrasonics</i> 53 (2013) 157–170 *
	<b>Stampanoni, M./Marone, F./Vila-Comamala J./Gorelick, S./David, C./Trtik, P./Jefimovs, K./Mokso, R.</b>	Hard X-ray Phase Contrast Tomographic Nanoimaging <i>AIP Conf Proc</i> 1365, 239–242 (2011)
	<b>Winnefeld, F./Kaufmann, J./Hack, E./Harzer, S./Wetzel, A./Zurbriggen, R.</b>	Moisture induced length changes of tile adhesive mortars and their impact on adhesion strength. <i>Construction and Building Materials</i> 2012, 30, 426–438 (joint paper) ■



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<b>Materials-Biology Interactions</b>	<b>Andersson-Willman, B./Gehrmann, U./Cansu, Z./Buerki-Thurnherr, T./Krug, H. F./Gabrielsson, S./Scheynius, A.</b>	Effects of subtoxic concentrations of TiO <sub>2</sub> and ZnO nanoparticles on human lymphocytes, dendritic cells and exosome production. <i>Toxicology and Applied Pharmacology</i> 2012, 264(1), 94–103 *
	<b>Bitar, M./Friederici, V./Imgrund, P./Brose, C./Bruinink, A.</b>	<i>In vitro</i> bioactivity of micro metal injection moulded stainless steel with defined surface features. <i>European Cells and Materials</i> 2012, 23, 333–347 ■
	<b>Born, A. K./Lischer, S./Maniura-Weber, K.</b>	Watching osteogenesis: life monitoring of osteogenic differentiation using an osteocalcin reporter. <i>Journal of cellular biochemistry</i> 2012, 113(1), 313–321 *
	<b>Bruinink, A./Luginbuehl, R.</b>	Evaluation of biocompatibility using <i>in vitro</i> methods: interpretation and limitations. <i>Advances in Biochemical Engineering/Biotechnology</i> 126, Springer, 2012, 117–152 ■
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	<b>Buerki-Thurnherr, T./Xiao, L./Diener, L./Arslan, O./Hirsch, C./Maeder-Althaus, X./Grieder, K./Wampfler, B./Mathur, S./Wick, P./Krug, H.</b>	<i>In vitro</i> mechanistic study towards a better understanding of ZnO nanoparticle toxicity. <i>Nanotoxicology</i> 2012; Early Online, 1–15, doi:10.3109/17435390.2012.666575 ■
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<p><b>Air Pollution/ Environmental Technology</b></p>	<p>Piters, A. J. M./Boersma, K. F./Kroon, M./Hains, J. C./Van Roozendaal, M./Wittrock, F./Abuhassan, N./Adams, C./Akrami, M./Allaart, M. A. F./Apituley, A./Beirle, S./Bergwerff, J. B./Berkhout, A. J. C./Brunner, D./Cede, A./Chong, J./Clémer, K./Fayt, C./Frieß, U./Gast, L. F. L./Gil-Ojeda, M./Goutail, F./Graves, R./Griesfeller, A./Großmann, K./Hemerijckx, G./Hendrick, F./Henzing, B./Herman, J./Hermans, C./Hoexum, M./van der Hoff, G. R./Irie, H./Johnston, P. V./Kanaya, Y./Kim, Y. J./Klein Baltink, H./Kreher, K./de Leeuw, G./Leigh, R./Merlaud, A./Moerman, M. M./Monks, P. S./Mount, G. H./Navarro-Comas, M./Oetjen, H./Pazmino, A./Perez-Camacho, M./Peters, E./du Piesanie, A./Pinardi, G./Puentedura, O./Richter, A./Roscoe, H. K./Schönhardt, A./Schwarzenbach, B./Shaiganfar, R./Sluis, W./Spinei, E./Stolk, A. P./Strong, K./Swart, D. P. J./Takashima, H./Vlemmix, T./Vrekoussis, M./Wagner, T./Whyte, C./Wilson, K. M./Yela, M./Yilmaz, S./Zieger, P./Zhou, Y.</p>	<p>The Cabauw Intercomparison campaign for Nitrogen Dioxide measuring Instruments (CINDI): design, execution, and early results. <i>Atmospheric Measurement Techniques</i> 2012, 5(2), 457–485 ■</p>
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	<p>Popp, C./Brunner, D./Damm, A./van Roozendaal, M./Fayt, C./Buchmann, B.</p>	<p>High-resolution NO<sub>2</sub> remote sensing from the Airborne Prism EXperiment (APEX) imaging spectrometer. <i>Atmospheric Measurement Techniques</i> 2012, 5(9), 2211–225 ■</p>
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	<p>Saikawa, E./Rigby, M./Prinn, R. G./Montzka, S. A./Miller, B. R./Kuijpers, L. J. M./Fraser, P. J. B./Vollmer, M. K./Saito, T./Yokouchi, Y./Harth, C. M./Mühle, J./Weiss, R. F./Salameh, P. K./Kim, J./Li, S./Park, S./Kim, K. -R./Young, D./O'Doherty, S./Simmonds, P. G./McCulloch, A./Krummel, P. B./Steele, L. P./Lunder, C./Hermansen, O./Maione, M./Arduini, J./Yao, B./Zhou, L. X./Wang, H. J./Elkins, J. W./Hall, B.</p>	<p>Global and regional emission estimates for HCFC-22. <i>Atmospheric Chemistry and Physics</i> 2012, 12(21), 10033–10050 *</p>
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Air Pollution/ Environmental Technology	Velders, G. J. M./Ravishankara, A. R./Miller, M. K./Molina, M. J./Alcamo, J./Daniel, J. S./Fahey, D. W./Montzka, S. A./Reimann, S./Reimann, S.	Preserving montreal protocol climate benefits by limiting HFCs. <i>Science</i> 2012, 335(6071), 922–923 *
	Viallon, J./Moussay, P./Idrees, F./Wielgosz, R./Zellweger, C.	Final report, ongoing key comparison BIPM.QM-K1: Ozone at ambient level, comparison with EMPA (June 2012). <i>Metrologia</i> 2012, 49(1A), 08011 (17 pp.) *
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	Matam, S. K./Otal, E. H./Aguirre, M. H./Winkler, A./Ulrich, A./Rentsch, D./Weidenkaff, A./Ferri, D.	Thermal and chemical aging of model three-way catalyst Pd/Al <sub>2</sub> O <sub>3</sub> and its impact on the conversion of CNG vehicle exhaust. Catalysis Today 2012, 184(1), 237–244 (joint paper) *
	Michalow, K./Otal, E./Burnat, D./Fortunat, G./Emerich, H./Ferri, D./Heel, A./Graule, T.	Flame-made Visible Light Active TiO <sub>2</sub> :Cr Photocatalyst: Correlation between Structural, Optical and Photocatalytic Properties. Catalysis Today (accepted). (joint paper) *
	Moser, D./Garnier, M.G./Karvonen, L./Shkabko, A./Aebi, P./Weidenkaff, A.	Reversible control of the electronic density of states at the Fermi level of Ca <sub>3</sub> Co <sub>4</sub> O <sub>9+d</sub> misfit-layered oxide single crystals through O <sup>+</sup> /H <sup>+</sup> plasma exposure. Journal of Materials Science 2012, Article in press. *
	Ota, A./Kunkes, E. L./Kasatkin, I./Grosso, E./Ferri, D./Poceiro, B./Navarro Yerga, R. M./Behrens, M.	Comparative study of hydrotalcite-derived supported Pd <sub>2</sub> Ga and PdZn intermetallic nanoparticles as methanol synthesis and methanol steam reforming catalysts. Journal of Catalysis 2012, 293, 27–38 *
	Otal, E. H./Maegli, A. E./Vogel-Schäuble, N./Walfort, B./Hagemann, H./Yoon, S./Zeller, A./Weidenkaff, A.	The influence of defects formed by Ca excess and thermal post-treatments on the persistent luminescence of CaTiO <sub>3</sub> :Pr. Optical Materials Express 2012, 2(4), 405–412 ■
	Populoh, S./Aguirre, M. H./Brunko, O. C./Galazka, K./Lu, Y./Weidenkaff, A.	High figure of merit in (Ti,Zr,Hf)NiSn half-Heusler alloys. Scripta Materialia 2012, 66(12), 1073–1076 *
Sagarna, L./Shkabko, A./Populoh, S./Karvonen, L./Weidenkaff, A.	Electronic structure and thermoelectric properties of nanostructured Eu-Ti <sub>1-x</sub> Nb <sub>x</sub> O <sub>3-δ</sub> (x = 0.00; 0.02). Applied Physics Letters 2012, 101(3), Article number 033908 (5 pp.) *	

# Empa Activities 2012

## Publications

Solid State Chemistry and Catalysis	Saucke, G./Norpoth, J./Su, D. /Zhu, Y./Jooss, C.	Polaron absorption for photovoltaic energy conversion in a manganite-titanate pn heterojunction. Phys. Rev. B 2012, 85 (16), Article number: 165315 (9pp.) *
	Scagnoli, V./Allieta, M./Walker, H./Scavini, M./Katsufuji, T./Sagarna, L./Zaharko, O./Mazzoli, C.	EuTiO <sub>3</sub> magnetic structure studied by neutron powder diffraction and resonant x-ray scattering. Physical Review B 2012, 86(9), Article number 094432 (7 pp.) *
	Schäuble, N./Süess, B. E./Populoh, S./Weidenkaff, A./Aguirre, M. H.	A morphology study on thermoelectric Al-Substituted ZnO. 9th European Conference on Thermoelectrics: ECT2011, Thessaloniki, Greece, September 28–30, 2011, 421–429
	Shafeie, S./Grins, J./Istomin, S. Y./Gippius, A. A./Karvonen, L./Populoh, S./Weidenkaff, A./Köhler, J./Svensson, G.	Tracking of high-temperature thermal expansion and transport properties vs. oxidation state of cobalt between +2 and +3 in the La <sub>2</sub> Co <sub>1-z</sub> (Ti <sub>1-x</sub> Mg <sub>x</sub> ) <sub>1-z</sub> O <sub>6</sub> -system. Journal of Materials Chemistry 2012, 22(32), 16269–16276 *
	Uhl, A. R./Fella, C./Chirilă, A./Kaelin, M. R./Karvonen, L./Weidenkaff, A./Borca, C. N./Grolimund, D./Romanyuk, Y. E./Tiwari, A. N.	Non-vacuum deposition of Cu(In,Ga)Se <sub>2</sub> absorber layers from binder free, alcohol solutions. Progress in Photovoltaics 2012, 20(5), 526–533 (joint paper) *
	Veziridis, A./Cabalar, U./Trottmann, M./Weidenkaff, A.	Aus Abgasen Energie gewinnen. E-&-E-Kompodium : Elektronik & Entwicklung ; die wichtigsten Technologie-Trends, die wichtigsten Anbieter 2012, 100–102
	Veziridis, A./Tomeš, P./Brunko, O./Weidenkaff, A.	Mit Toms Wärmeenergie umwandeln. E-&-E-Kompodium : Elektronik & Entwicklung ; die wichtigsten Technologie-Trends, die wichtigsten Anbieter 2012, 89–92
	Vogel-Schäuble, N./Dujardin, R./Weidenkaff, A./Aguirre, M. H.	Influence of thermal aging phenomena on thermoelectric properties of Al-Substituted ZnO. Journal of Electronic Materials 2012, 41(6), 1606–1614 *
	Vogel-Schäuble, N./Romanyuk, Y. E./Yoon, S./Saji, K. J./Populoh, S./Pokrant, S./Aguirre, M. H./Weidenkaff, A.	Thermoelectric properties of nanostructured Al-substituted ZnO thin films. Thin Solid Films 2012, 520(23), 6869–6875 (joint paper) *
	Wilkens-Heinecke, J./de Hazan, Y./Populoh, S./Aneziris, C. G./Graule, T.	Fabrication and characterisation of cellular alumina articles produced via radiation curable dispersions. Journal of the European Ceramic Society 2012, 32(10), 2173–2185 (joint paper) *
Xie, W./Wang, S./Zhu, S./He, J./Tang, X./Zhang, Q./Tritt, T. M.	High performance Bi <sub>2</sub> Te <sub>3</sub> nanocomposites prepared by single-element-melt-spinning spark-plasma sintering. Journal of Materials Science 2012, Article in press *	
Xie, W./Weidenkaff, A./Tang, X./Zhang, Q./Poon, J./Tritt, T. M.	Recent advances in nanostructured thermoelectric half-Heusler compounds. Nanomaterials 2012, 2(4), 379–412	
Yoon, S./Maegli, A. E./Eyssler, A./Trottmann, M./Hisatomi, T./Leroy, C. M./Grätzel, M./Weidenkaff, A.	Synthesis and Characterization of La (Ti,Nb)(O,N) <sub>3</sub> for Photocatalytic Water Oxidation. EMRS Symposium T: Materials for solar hydrogen via photo-electrochemical production, Nice, France, May 9–13, 2011, 41–47	
Technology and Society	Althaus, H. J.	Modern individual mobility. International Journal of Life Cycle Assessment 2012, 17(3), 267–269 ■
	Blaser, F./Wäger, P./Böni, P.	Indikatoren zur Beurteilung der Nutzung natürlicher Ressourcen: Beispiele und Anwendungen. 2012, 20 pp.
	Böni, H.	Fachbericht SENS, SWICO Recycling, SLRS 2011. 2012, 31 pp.
	Böni, H. W.	Conformity assessment of WEEE take-back schemes: the case of Switzerland. In: Goodship, V., Stevels, A. (Eds.), Waste electrical and electronic equipment (WEEE) handbook, Woodhead publishing series in electronic and optical materials 30, Woodhead Publishing, 2012, 78–92
	Caduff, M./Huijbregts, M. A. J./Althaus, H. J./Koehler, A./Hellweg, S.	Wind power electricity: the bigger the turbine, the greener the electricity? Environmental Science & Technology 2012, 46(9), 4725–4733 *
	Clark, K./van Tongeren, M./Christensen, F. M./Brouwer, D./Nowack, B./Gottschalk, F./Micheletti, C./Schmid, K./Gerritsen, R./Aitken, R./Vaquero, C./Gkanis, V./Housiadas, C./López de Ipiña, J. M./Riediker, M.	Limitations and information needs for engineered nanomaterial-specific exposure estimation and scenarios: recommendations for improved reporting practices. Journal of Nanoparticle Research 2012, 14(9), 970 (14 pp.) ■
	Coroama, V. C./Hilty, L. M./Birtel, M.	Effects of internet-based multiple-site conferences on greenhouse gas emissions. Telematics and Informatics 2012, 29(4), 362–374

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## Publications

Technology and Society	Dauber, J./Brown, Ch./Fernando, A.L./Finnan, J./Krasuska, E./Ponitka, J./Styles, D./Thrän, D./Van Groenigen, K.J./Weih, M./Zah, R.	Bioenergy from "surplus" land: environmental and socio-economic implications. <i>BioRisk</i> 7, 5–50. *
	Faist, M.; Gmünder, S.; Reinhard, J.; Zah, R.; Nemecek, Th.; Schnetzer, J.; Bauer, Ch.; Simons, A.; Doka, G.	Harmonisation and extension of the bioenergy inventories and assessment End report, Bundesamt für Energie (BFE), 113 p.
	Faist, M.; Stucki, M.; Hermle S.	LCA of energetic biomass utilisation: actual projects and new developments. <i>International Journal of Life Cycle Assessment</i> 2012, 17(9), 1142–1147 ■
	Gmuender, S./Singh, R./Pfister, S./Adhelaya, A./Zah, R.	Environmental Impacts of <i>Jatropha curcas</i> Biodiesel in India. <i>Journal of Biomedicine and Biotechnology</i> 2012, Article number 623070 (10 pp.) ■
	Gottschalk, F./Nowack, B.	Modeling the environmental release and exposure of engineered nanomaterials. In: Puzyn, T., Leszczynski, J. (Eds.), <i>Towards efficient designing of safe nanomaterials: innovative merge of computational approaches and experimental techniques</i> , RSC nanoscience and nanotechnology 25, RSC, Cambridge, 2012, 284–313
	Hendriks, A. J./Schipper, A. M./Caduff, M./Huijbregts, M. A. J.	Size relationships of water inflow into lakes: Empirical regressions suggest geometric scaling. <i>Journal of Hydrology</i> 2012, 414–415, 482–490 *
	Hennecke, A. M./Faist, M./Reinhardt, J./Junquera, V./Neef, J./Fehrenbach, H.	Biofuel greenhouse gas calculations under the European Renewable Energy Directive: a comparison of the BioGrace tool vs. the tool of the Roundtable on Sustainable Biofuels. <i>Applied Energy</i> 2012, Article in Press, (joint paper) *
	Hilty, L. M.	Why energy efficiency is not sufficient: some remarks on "Green by IT". <i>EnvirolInfo</i> 2012: Man • Environment • Bauhaus: Light up the Ideas of Environmental Informatics, 26th International Conference on Informatics for Environmental Protection, Dessau, Germany, 29–31 August 2012, 8 pp.
	Hilty, L. M./Oertel, B./Wölk, M./Pärli, K.	Lokalisiert und identifiziert: Wie Ortungstechnologien unser Leben verändern. VDF, Zürich, 2012, 294 pp.
	Hischier, R./Walser, T.	Life cycle assessment of engineered nanomaterials: State of the art and strategies to overcome existing gaps. <i>Science of the Total Environment</i> 2012, 425, 271–282 *
	Kissling, R./Fitzpatrick, C./Boeni, H./Luepschen, C./Andrew, S./Dickenson, J.	Definition of generic re-use operating models for electrical and electronic equipment. <i>Resources Conservation and Recycling</i> 2012, 65, 85–99 ■
	Klaine, S. J./Koelmans, A. A./Horne, N./Carley, S./Handy, R. D./Kapustka, L./Nowack, B./Von der Kammer, F.	Paradigms to assess the environmental impact of manufactured nanomaterials. <i>Environmental Toxicology and Chemistry</i> 2012, 31(1), 3–14 *
	Kumar, P./Mulheron, M./Som, C.	Release of ultrafine particles from three simulated building processes. <i>Journal of Nanoparticle Research</i> 2012, 14(4), 771 (14 pp.) ■
	Lombia, E./Nowack, B./Baun, B./McGrath, Steve, P.	Evidence for effects of manufactured nanomaterials on crops is inconclusive, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 2012, 109 (49) *
	Lorenz, C./Windler, L./von Goetz, N./Lehmann, R. P./Schuppler, M./Hungerbühler, K./Heuberger, M./Nowack, B./Nowack, B.	Characterization of silver release from commercially available functional (nano)textiles. <i>Chemosphere</i> 2012, 89(7), 817–824 (joint paper) *
	Mueller, N. C./Braun, J./Bruns, J./Černík, M./Rissing, P./Rickerby, D./Nowack, B.	Application of nanoscale zero valent iron (NZVI) for groundwater remediation in Europe. <i>Environmental Science and Pollution Research</i> 2012, 19(2), 550–558 *
Mueller, N. C./Van der Bruggen, B./Keuter, V./Luis, P./Melin, T./Pronk, W./Reisewitz, R./Rickerby, D./Rios, G. M./Wennekes, W./Nowack, B.	Nanofiltration and nanostructured membranes: should they be considered nanotechnology or not? <i>Journal of Hazardous Materials</i> 2012, 211-212(2-3), 275–280 *	
Nowack, B.	The occurrence, behavior, and effects of engineered nanomaterials in the environment. In: Kim, J. (Ed.), <i>Advances in nanotechnology and the environment</i> , Pan Stanford Pub, Singapore, 2012, 183–217	
Nowack, B./Gottschalk, F./Mueller, N. C./Som, C.	Life-Cycle concepts for sustainable use of engineered nanomaterials in nanoproducts. In: Boethling, R. (Ed.), <i>Designing safer chemicals</i> , Handbook of green chemistry 9, Wiley-VCH, Weinheim, 2012, 227–249	
Nowack, B./Ranville, J. F./Diamond, S./Gallego-Urrea, J. A./Metcalf, C./Rose, J./Horne, N./Koelmans, A. A./Klaine, S. J.	Potential scenarios for nanomaterial release and subsequent alteration in the environment. <i>Environmental Toxicology and Chemistry</i> 2012, 31(1), 50–59 *	

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## Publications

Technology and Society	Piccinno, F./Gottschalk, F./Seeger, S./Nowack, B.	Industrial production quantities and uses of ten engineered nanomaterials in Europe and the world. <i>Journal of Nanoparticle Research</i> 2012, 14(9), 1109 (11 pp.) ■
	Schluep, M.	WEEE management in Africa. In: Goodship, V., Stevels, A. (Eds.), <i>Waste electrical and electronic equipment (WEEE) handbook</i> , Woodhead publishing series in electronic and optical materials, Woodhead Publishing, 2012, 591–610
	Schwyzer, I./Kaegi, R./Sigg, L./Smajda, R./Magrez, A./Nowack, B.	Long-term colloidal stability of 10 carbon nanotube types in the absence/presence of humic acid and calcium. <i>Environmental Pollution</i> 2012, 169, 64–73 *
	Sinha-Khetriwal, D./Widmer, R./Schwaninger, M./Hilty, L.	Application of system dynamics to assess mass flows of waste electrical and electronic equipment (WEEE). The 30th International Conference of the System Dynamics Society, St. Gallen, Switzerland, 22–26 July 2012, 10 pp.
	Som, C./Nowack, B./Krug, A. K./Wick, P.	Toward the development of decision supporting tools that can be used for safe production and use of nanomaterials. <i>Accounts of Chemical Research</i> 2012, Article in press, (joint paper) *
	Stamp, A./Lang, D. J./Wäger, P. A.	Environmental impacts of a transition toward e-mobility: the present and future role of lithium carbonate production. <i>Journal of Cleaner Production</i> 2012, 23(1), 104–112 ■
	Steubing, B./Ballmer, I./Gassner, M./Gerber, L./Pampuri, L./Bischof, S./Thees, O./Zah, R.	Identifying environmentally and economically optimal bioenergy plant sizes and locations: A spatial model of wood-based SNG value chains. <i>Renewable Energy</i> 2012, Article in press, *
	Steubing, B./Zah, R./Ludwig, C.	Heat, electricity, or transportation? the optimal use of residual and waste biomass in Europe from an environmental perspective. <i>Environmental Science &amp; Technology</i> 2012, 46(1), 164–171 *
	Ulrich, A./Losert, S./Bendixen, N./Al-Kattan, A./Hagendorfer, H./Nowack, B./Adlhart, C./Ebert, J./Lattuada, M./Hungerbühler, K.	Critical aspects of sample handling for direct nanoparticle analysis and analytical challenges using asymmetric field flow fractionation in a multi-detector approach. <i>Journal of Analytical Atomic Spectrometry</i> 2012, 27(7), 1120–1130 (joint paper) *
	Wäger, P./Schluep, M./Müller, E./Gloor, R.	RoHS regulated substances in mixed plastics from waste electrical and electronic equipment. <i>Environmental Science and Technology</i> 2012, 46(2), 628–635 *
	Wang, F./Huisman, J./Meskers, C. E. M./Schluep, M./Stevens, A./Hagelüken, C.	The Best-of-2-Worlds philosophy: developing local dismantling and global infrastructure network for sustainable e-waste treatment in emerging economies. <i>Waste Management</i> 2012, 32(11), 2134–2146 ■
	Whitla, O./Kuehr, R./Wäger, P.	International policy supply and demand distortions of scarce metals. <i>Solving the E-Waste Problem (StEP) Green Paper</i> 2012, 41 pp.
	Windler, L./Lorenz, C./Von Goetz, N./Hungerbühler, K./Amberg, M./Heuberger, M./Nowack, B. Zah, R./Gmünder, S.	Release of titanium dioxide from textiles during washing. <i>Environmental Science &amp; Technology</i> 2012, 46, 8181–8188 *
		Biofuels from Developing Regions. <i>ChemViews Magazine</i> 2012, 2 pp.

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## Conferences

<b>General Management</b>	<b>Bona, G.-L.</b>	Keynote «Smart Systems start with innovations in materials», SMAR 2012, International Conference and Exhibition on Integration Issues of Miniaturized Systems, Zurich, 03-21 🍀 ○
	<b>Bona, G.-L.</b>	Referat «Lebenszyklus und graue Energie», Internationale Jahrestagung ETH Forum Wohnungsbau, Zurich, 04-20 🍀 ○
	<b>Bona, G.-L.</b>	Tutorial «Challenges and opportunities in pervasive optical communication», ICCNT India, Coimbatore, IN, 07-26 -28 🍀 ○
	<b>Bona, G.-L.</b>	Keynote «Material challenges and opportunities for sensor applications», IEEE Sensors 2012, Taipei, TW, 10 🍀 ○
	<b>Bona, G.-L.</b>	Keynote «Bio-Tech: Promises, Challenges and Opportunities», 13th Swiss Japanese Conference on Biotechnology, Walzenhausen, 11-04 🍀 ○
	<b>Edelmann X.</b>	Nachhaltiger Umgang mit Ressourcen – eine globale Herausforderung / Volkshochschule Zürich, Uni Zürich, 02-09 🍀 ○
	<b>Edelmann X.</b>	Nachhaltiger Umgang mit Ressourcen – eine globale Herausforderung und Weichenstellung für eine nachhaltige Rohstoffversorgung in Europa / cyclos focus congress, Berlin, DE, 04-18 thru 19 🍀 ○
	<b>Edelmann, X.</b>	Wieviel Erden braucht der Mensch? / Denkanstoss in der SCS. Supercomputing Systems AG, Zürich, 09-05 🍀 ○
	<b>Edelmann X.</b>	Innovation in an International Perspective – How Important is Sustainable Management for Natural Resources? / Indian National Academy of Engineering – Celebrating Silver Jubilee International Conference TOWARDS A BETTER INNOVATION ECOSYSTEM, Delhi, IN, 09-20 thru 21 🍀 ○
	<b>Edelmann X.</b>	Cities for Life Forum in the Framework of COP 11 «Biological Diversity» / Panel Contribution «Supporting Cities and subnational Governments», Hyderabad, IN, 10- 21 thru 22 🍀 ○
<b>Edelmann X.</b>	Opening Lecture «Resources and Green Economy» / World Resources Forum 2012 , Beijing, CN, 10-21 thru 23 ■ 🍀 ○	
<b>Media Technology</b>	<b>Edelmann X.</b>	Resource Efficiency – Awareness Raising and Communication Contribution of the World Resources Forum / 1st European Resources Forum, Berlin, DE, 11-12 thru 13 🍀 ○
	<b>Preiss J./ Lissner I./ Urban P./ Scheller-Lichtenauer M./ Zolliker P.</b>	The impact of image-difference features on perceived image differences / 6th European Conference on Colour in Graphics (CGIV 2012), Amsterdam, NL, 05-06 thru 09 🍀
	<b>Scheller-Lichtenauer M./ Zolliker, P./ Lissner, I./ Preiss J./ Urban P.</b>	Learning image similarity measures from choice data / 6th European Conference on Colour in Graphics (CGIV 2012), Amsterdam, NL, 05-06 thru 09 🍀
	<b>Scheller-Lichtenauer M./ Zolliker, P./ Preiss J./ Urban P.</b>	Image Similarity for chromatic content / 18. Workshop Farbbildverarbeitung 2012, Darmstadt, DE, 09-27 thru 28 🍀
	<b>Szakos, J. /Glavitsch, U.</b>	Speech Corpora in the Foreign Language Curriculum / 10th International Conference Teaching and Language Corpora (TaLC), Warsaw, PL, 07-11 thru 14 🍀
	<b>Zolliker, P.</b>	From colour management to image management. Where are we? / Colour Management Symposium, Munich, DE, 02-02 thru 03 🍀 ○
	<b>Zolliker P.</b>	Gamut and Tone-Mapping as an Optimization Problem., Bangor, GB, 07-18 🍀 ○
<b>Advanced Materials and Surfaces</b>		
<b>Advanced Materials Processing</b>	<b>Boselli, M./Colombo, V./Delval, Chr./Ghedini, E./Gherardi, M./Jaeggi, C./Leparoux, M./Nelis, D./Put, /Sanibondi, P.</b>	Influence of processing parameters on the properties of silicon nanoparticles synthesized by radio-frequency induction thermal plasma, HTPP 12, Bologna, IT, 06-24 thru 29 🍀
	<b>Cabanes-Sempere, M./Cozzo, C./Catala-Civera, J.M./Penaranda-Foix, F.L. /Ishizaki, K./Vaucher, S./Pouchon, M.A.</b>	Characterization of free falling drops inside a microwave cavity, International Microwave Symposium , 2012 IEEE MTT-S International, Montreal, CA, 06-17 thru 22 🍀

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## Conferences

<b>Advanced Materials Processing</b>	<b>Colombo, V./Boselli, M./Dallavalle, S./Delval, Chr./Ghedini, E./Gherardi, M./Leparoux, M./Nemchinsky, V./Sanibondi, P./Vancini, M.</b>	Design oriented modelling and diagnostics for thermal plasma assisted industrial processes, Colloque Plasma-Québec 2012, Montreal, CA, 05-29 thru 31 🍄 ○
	<b>Delval, Chr./Leparoux, M./Jaeggi, C./Deschenaux, C.</b>	Diagnostics of an inductively coupled thermal plasma reactor used for nanoparticle synthesis and in-flight functionalization, HTPP 12, Bologna, IT, 06-24 thru 29 🍄
	<b>Delval, Chr./Leparoux, M./Jaeggi, C./Deschenaux, C.</b>	Nanoparticle Synthesis and in-Flight Functionalization in an Inductively Coupled Thermal Plasma Reactor, Special Symposium on Synthesis of Functional Materials Using Flames, Plasmas and Other Aerosol Methods, Special Symposium on Synthesis of Functional Materials Using Flames, Plasmas and Other Aerosol Methods part of the 31st Annual Conference of the American Association for Aerosol Research, Minneapolis, USA, 10-08 thru 12 🍄
	<b>Hoffmann, P.</b>	Nanotechnology – Wetting, InnoBe, Wankdorf Stadion Bern, 01-25 🍄
	<b>Ishizaki, K./ Fahlbusch, S./ Catala-Civera, J.-M./ Vaucher S./ Utke, I.</b>	Development of Microwave Micro-Plasma Jet System for Removing Contamination in Scanning Electron Microscopes, SRI Satellite Workshop: Carbon contamination of optics: causes, characterization, and in-situ treatments, Soleil Synchrotron, St-Aubin, F, 07-16 thru 17 ♦
	<b>Jaeggi, C./ DeMeyer, C./ Wiedmer, F./ Stierli, R./ Simoncic, P./ Assi, F./ Wasmer, K.</b>	Effects of Wire Lifetime in Diamond Wire Wafering on the Wafer Roughness and Mechanical Strength – 27th European Photovoltaic Solar Energy Conference and Exhibition, Frankfurt, Germany, DE, 09-24 thru 28 ♦ 🍄 ○
	<b>Kuzminykh, Y.</b>	Epitaxial Lithium Niobate Thin Films Grown by Chemical Beam Epitaxy on Sapphire, European Material Research Society 2012 Spring Meeting, Strasbourg, FR, 05-14 thru 18 🍄
	<b>Kuzminykh, Y./Dabirian, A./Reinke, M./Hoffmann, P.</b>	Epitaxial Lithium Niobate Thin Films Grown by Chemical Beam Epitaxy on Sapphire, European Material Research Society 2012 Spring Meeting, Strasbourg, FR, 05-14 thru 18 🍄
	<b>Kwon, H./Kurita, H./Silvain, J.F./Leparoux, M./Kawasaki, A.</b>	Fabrication of Nanoparticulate Reinforced Aluminum Matrix Composite, PM 2012, Yokohama, JP, 10-14 thru 18 🍄 ○
	<b>Kwon, H./Leparoux, M.</b>	Functionally Graded Dual-Nanoparticulate-Reinforced Aluminum Matrix Composite Materials, FGM 2012, Beijing, CN, 10-22 thru 26 🍄 ○
	<b>Leparoux, M.</b>	Nanoparticle reinforced Aluminium Alloys, NanoEvent NanoCompetence, Basel, 03-22 🍄 ○
	<b>Leparoux, M./Delval C./Put S./Nelis D.</b>	Inductively coupled thermal plasma: a flexible tool for the synthesis and the in-flight functionalization of nanoparticles, I-SUP 2012, Bruges, BE, 05-07 thru 09 🍄 ○
	<b>Montagne A./ Pathak S./ Maeder X./ Wasmer K./ Michler J.</b>	Micro-compression de piliers de saphir à température ambiante, Plasticité 201, Metz, Université de Metz, FR, 04-11 thru 13 🍄
	<b>Nicula, R./Wurm, A./Schick, D./Ishizaki, K./Stir, M./Vaucher, S./Zhuravlev, E./Schick, C.</b>	Novel approach for the rapid thermal processing of polymer-metal composites using 2.45 GHz microwave radiation, 40th Annual Conference of the North American Thermal Analysis Society – NATAS 2012, Orlando, USA, 08-12 thru 15 ♦
	<b>Reinke, M./Dabirian, A./Kuzminykh, Y./Hoffmann, P.</b>	Deposition of Oxide Films by High Vacuum Chemical Vapor Deposition, Junior Euromat, Lausanne, 07-23 thru 27 ♦
	<b>Reinke, M./Dabirian, A./Multone, X./Kuzminykh, Y./Hoffmann, P.</b>	Deposition of Oxide Films by High Vacuum Chemical Vapor Deposition, EMRS Spring Meeting 2012, Strasbourg, FR, 05-15 ♦
	<b>Rowthu, S./Balic, E./Hoffmann, P.</b>	Wetting, Tribological and Mechanical Characterizations of Nanoporous Alumina, CCMX Annual meeting 2012, Bern, 04-25 ♦
	<b>Rowthu, S./Balic, E./Hoffmann, P.</b>	Biomimetic Liquid-Repellent and Wear-Resistant Material, Junior Euromat, Lausanne, 07-23 thru 27 ♦
	<b>Saeidi F./ Graça S./ Wasmer K./ Hoffmann P.</b>	Laser Surface Texturing for Improved Tribological Behaviour of Oil-Lubricated Sliding Surfaces: a Statistical Parameter Study – Junior Euromat 2012, Lausanne, EPFL, 07-23 thru 27 ♦

# Empa Activities 2012

## Conferences

<b>Advanced Materials Processing</b>	<b>Thompson, D./Wang, J./Buha, J./Jaeggi, Chr./Leparoux, M./Pui, D.</b>	Aerosol Emission Monitoring in the Production of Silicon Carbide Nanoparticles by Induction Plasma Synthesis, AAAR 31st Annual Conference, Minneapolis, USA, 10-08 thru 12 🍄
	<b>Vaucher, S.</b>	Microwave-induced materials dynamics, SwissFEL ARAMIS Instrumentation workshops, Villigen, 05-22 🍄 ○
<b>Electron Microscopy Center</b>	<b>Elias, J./Thevenin, M./Parlinska-Wojtan, M./Erni, R./Niederberger, C./Sauvage, F./Michler, J./Philippe, L.</b>	«Gas template» H2 nanobubbles for growing highly crystalline nanoporous ZnO. The 7th International Workshop on Zinc Oxide and Related Materials, Nice, France, 11-14 September 2012, Nizza, FR, 🍄
	<b>Erni, R.</b>	Towards a comprehensive understanding of nanomaterials on the atomic scale by chromatic and spherical aberration-corrected transmission electron microscopy / Asia-Pacific Microscopy Conference, Perth, AU, 05-02 🍄 ○
	<b>Erni, R.</b>	Real-space imaging approach to determine sub-unit-cell 3D density information in the complex metallic alloy Al4(Cr,Fe) / 15th European Microscopy Congress, Manchester, GB, 09-19 🍄
	<b>Erni, R.</b>	COST Workshop NanoTP, Dübendorf, 10-23 ■
	<b>Erni, R.</b>	Tackling the atomic structure of complex materials by electron microscopy and first-principles calculations, Forschungszentrum Jülich / Ernst Ruska-Centre, DE, 12-07 🍄 ○
	<b>Ilari, G.</b>	CNT-Ni and CNT-Cu interface formation and TEM analysis / GrapHel Conference, Mykonos, GR, 09-28 🍄
	<b>Rossell, M. D.</b>	Three-dimensional characterization of nanoparticles by electron tomography / NanoTP Scientific Meeting «Metal nanoparticles for advanced materials: From theory to practice», Heraklion / Crete, GR, 01-10 🍄 ○
	<b>Rossell, M. D.</b>	Applications of Aberration-Corrected Transmission Electron Microscopy with Focus on BiFeO3 Thin Films, IBM Rüschlikon, 06-03 🍄 ○
	<b>Rossell, M. D.</b>	Atomic structure of highly strained BiFeO3 / 15th European Microscopy Congress / 15th European Microscopy Congress, Manchester, GB, 09-20 🍄
	<b>Rossell, M. D.</b>	Applications of Aberration-Corrected Transmission Electron Microscopy / Inauguration of the Jeol ARM at the Universidad Complutense, Madrid, ES, 12-13 🍄 ○
<b>Functional Polymers</b>	<b>Chatterjee S./Chu B./Nüesch F.</b>	Size & synergy effects of graphene nanoplatelets and carbon nanotubes in mechanical properties of epoxy composites/MRS Spring Meeting, San Francisco, USA, 04-09 thru 13 🍄
	<b>Geiger T./Schoger I./Hochleitner S./Nüesch F./Meyer T.</b>	NIR sensitizers for dye sensitized solar cells -Heptamethine dyes with a great spectral diversity above 700 nm/27th European Photovoltaic Solar Energy Conference, Frankfurt, D, 08-24 thru 28 🍄
	<b>Hany R.</b>	Durability of Thin Film Solar Cells/Empa Akademie, Dübendorf, 04-04 ■
	<b>Hany R./Feurer P./Nüesch F.</b>	Ionic incorporation of a cyanine dye into a methyl methacrylate polymer for photovoltaic applications/Polycoll 2012 SCS, Fribourg, 04-20 🍄
	<b>Hany R./Feurer P./Nüesch F.</b>	Cyanine dye ionic junctions for organic electronics E-MRS, Strasbourg, F, 05-14 thru 18 🍄
	<b>Heier J./Zhang H./Nüesch F.</b>	Cyanine Dyes in Solid State Organic Heterojunction Solar Cells /MRS Fall Meeting, Boston, USA, 11-26 thru 30 🍄
	<b>Kuster S./Geiger T.</b>	Investigation on Multi Chromophoric Squaraines/Makromolekulares Kolloquium, Freiburg, D, 02-23 thru 25 🍄
	<b>Nüesch F.</b>	Photovoltaik: Spitzentechnologie aus der Schweiz/«Energie-Technik»: Ringvorlesung zum Unesco-Jahr der erneuerbaren Energie, Volkshochschule Zürich, Zürich, 01-19 🍄 ○
	<b>Nüesch F.</b>	Electronic processes at organic optoelectronic device interfaces/Central European Conference on Photochemistry CECP, Bad Hofgastein, A, 02-06 thru 09 🍄 ○
	<b>Nüesch F.</b>	Forschung für die Zukunft der Photovoltaik/Energie-Apéro 2012, energie-cluster.ch, Bern, 03-21 🍄 ○
	<b>Nüesch F.</b>	Neue Entwicklung im Bau von Solarzellen mit aktiven organischen Materialien/10. Nationale PV Tagung, BFE, Baden, 03-22 thru 23 🍄 ○
	<b>Nüesch F.</b>	New trends in organic materials based solar cells/4. Wädenswiler Chemie-Tag, «Solar Energy – Chemical Solutions», Wädenswil, 06-21 🍄 ○
	<b>Nüesch F.</b>	2. Global Organic Photovoltaics Conference (GOPV), Suzhou, CN, 09-09 thru 13 ■
	<b>Nüesch F.</b>	Printed Photovoltaics: the peculiarities of organic materials/Indo Swiss Symposium: Renewable Energies and Rational Energy End-Use, EPFL, Lausanne, 10-23 thru 24 🍄 ○
	<b>Nüesch F.</b>	Symposium H: Small-Molecule Organic Solar Cells, 2012 MRS Fall Meeting & Exhibit, Boston, USA, 11-25 thru 30 ■



# Empa Activities 2012

## Conferences

Functional Polymers	Opris D./Grimm S./Nüesch F./Molberg M./Kovacs G./Racles C./Cazacu M./Quinsa J./Hofmann H.	Self-reparable Dielectric Elastomer Actuators/Makromolekulares Kolloquium , Freiburg, D, 02-23 thru 25 🍀 ○
	Opris D./Nüesch F./Fischer B./Molberg M.	Functional dielectric elastomers put to work/Swiss Chemical Society, Zürich, 09-01 ♦
	Quinsa J./Nüesch F./Hofmann H./Michel S./Grimm S./Opris D.	Synthesis of dielectric and conductive materials for dielectric elastomer actuators/EuroEAP 2012, Potsdam, DE, 05-29 thru 30 ♦ 🍀
	Quinsa J./Nüesch F./Hofmann H./Opris D.	Silver Nanoparticles as filler in PDMS matrix/Swiss Chemical Society, Zürich, 09-01 ♦
	Quinsa J./Nüesch F./Hofmann H./Opris D.	Silver Nanoparticles as filler in PDMS matrix/Swiss Chemical Society/OMICS Group Conferences, Chicago, USA, 10-22 thru 24 ♦
	Schlagenhauf L./Chu B./Buha J./Nüesch F./Wang, J.	ABRASION BEHAVIOR OF AN EPOXY-BASED NANOCOMPOSITE WITH RAW- AND FUNCTIONALIZED CARBON NANOTUBES/Nanosafe, Grenoble, F, 11-13 thru 15 🍀
	Schlagenhauf L./Chu B./Buha J./Nüesch F./Wang J.	Release of carbon nanotubes from an epoxy-based nanocomposite during an abrasion process/European Aerosol Conference, Granada, E, 09-02 thru 07 ♦
	Shcherbakova I./Simeunovic M./Hochleitner S./Meyer T./Ostwald F./Geiger T.	Novel NIR sensitizers for Dye Sensitized Solar Cells/NanoGE, Uppsala, SE, 05-06 thru 09 ♦
	Sukarto A./Rentsch D./Alini M./Eglin D.E.	In situ Gelation of Acrylated Hyaluronic Acid as cell and Gene Delivery Vehicles for Osteochondral repair/9th World Biomaterials Congress, Chengdu, CN, 06-01 thru 05 🍀
	Tisserant J.-N./Hany R./Partel S./Bona G.-L./Mezzenga R./Heier J.	Dewetting-Driven Hierarchical Self-Assembly of Small Semiconductive Molecules/Swiss Chemical Society/E-MRS, Strasbourg, F, 05-14 thru 17 🍀
Tisserant J.-N./Hany R./Partel S./Bona G.-L./Mezzenga R./Heier J.	Dewetting-Driven Hierarchical Self-Assembly of Small Semiconductive Molecules/Swiss Chemical Society, Zürich, 09-01 ♦	
Yan Y./Remhof A./Mauron Ph./Züttel A./Rentsch D./Zbigniew L./Lee Y.-S./Lee H.-S./Young W.-C.	Decomposition and Reversibility of Combined LiBH <sub>4</sub> -Ca(BH <sub>4</sub> ) <sub>2</sub> Eutectic System/International Symposium on Metal-Hydrogen Systems MH2012, Kyoto, JP, 10-21 thru 26 ♦	
High Performance Ceramics	Zhang H./Wicht G./Nüesch F./Hany R.	Improving performance and stability of canine-based organic solar cells/World Materials Research Institutes Forum, Bangkok, TH, 08-28 thru 31 🍀
	Zhang H./Wicht G./Nüesch F./Hany R.	Semitransparent organic photovoltaics using a near-infrared absorbing cyanine dye/Global Organic Photovoltaic, Suzhou, CN, 09-09 thru 12 🍀
	Braun, A.	MRS Spring Meeting 2012: Conductivity and Electronic Structure in Iron and Tungsten Perovskites Films for Ceramic Fuel Cell and Solar Cell Electrodes, San Francisco, USA, 04-10 🍀 ○
	Braun, A.	Univ. of Warwick Chemistry Seminar, Warwick, UK, 05-24
	Braun, A.	EXRS: Application of x-ray spectroscopy to energy materials, European Conference on X-Ray Spectrometry, Vienna, AT, 06-18 thru 22 🍀 ○
	Braun, A.	ERTL: The role of defects in hematite for solar water splitting, and its experimental assessment, Int. 2nd Ertl Symposium 2012 on Electrochemistry and Catalysis, DLR, Stuttgart, DE, 06-24 thru 27 🍀 ○
	Braun, A.	Pressure modulated proton-phonon coupling and its relevance to ceramic fuel cell proton conductors, University of New England, Biddeford, ME, USA, 06-24 thru 29 🍀 ○
	Braun, A.	Recent Advances in Electrochemical Energy Materials and Devices, Indian Institute of Sciences, Bangalore, IN, 07-24 thru 27 🍀
Braun, A.	Int. Conference on the Conversion and Storage of Solar Energy: 3 presentations, Pasadena, USA, 07-29 thru 30 ♦ 🍀	
Braun, A.	SSPC16: How Protons Feel the Strain: Proton-Phonon Coupling in Ceramic Proton Conductors, Grenoble, FR, 09-12	

# Empa Activities 2012

## Conferences

High Performance Ceramics	Braun, A.	MSE 2012: One step forward towards artificial photosynthesis: functionalization of metal oxides with metalloproteins for solar hydrogen generation, Darmstadt, DE, 09-26 ♦
	Braun, A.	MSE2012: Operando analysis, diagnostics and characterization of lithium battery cathodes with x-ray scattering and spectroscopy, Darmstadt, DE, 09-26
	Braun, A.	MSE 2012: Correlation of electronic structure and transport properties in fuel cell and solar cell electrode layers probed operando with synchrotron spectroscopy, Darmstadt, DE, 09-27
	Braun, A.	BESSY-II CRG Review Meeting: «Spectroscopic studies on hematite – the prospective inorganic backbone for solar water splitting and artificial photosynthesis», Berlin, DE, 11-12 ♣ ○
	Braun, A.	MRS Fall Meeting 2012: Symposium PP: Frontiers of Chemical Imaging–Integrating Electrons, Photons, and Ions , Boston, USA, 11-25 thru 30 ■ ♣ ○
	Braun, A./Bora, D.K./Sivula, K./Graule, T./Grätzel, M./Constable, E.C./Zhang, L./Zhi Liu, J. Guo	Charge transfer by holes and electrons across the hematite-electrolyte interface 28th Annual SAOG Meeting, Fribourg, 01-27 ♦
	Braun, A./Chen, Q./Embs, J./Straessle, T./ Savaniu, C.D./Manghnani, M./Bagdassarov, N./Li-Wen Mao/Pomjakushin, V./Cervelino, A./Zhi, Liu	MRS Spring Meeting 2012: Ex-situ and In-situ Synchrotron, Neutron, Impedance and Raman Studies under High Hydrostatic Pressure and Water Vapor Pressure on the BZY and BCY , San Francisco, USA, 04-11 ♣
	Braun, A./Debajeet, K.B./Rozhkova, E./Gajda-Schranz, K./Wyss, P./Constable, E.C./Graule, T.	MRS Spring Meeting 2012: Bioinspired Hybrid Photoelectrode for Solar Water SplittingCell Electrodes, San Francisco, USA, 04-10 ♣
	Braun, A./Debajeet, K.B./Constable, E.C./Zhi, Liu, Jinghua/ Guo, K.S./Graule, T./Graetzel, M.	MRS Spring Meeting 2012: Photoelectrochemical Synchrotron Studies on Metal Oxides for Solar Hydrogen Applications , San Francisco, USA, 04-10 ♣
	Braun, A./Mao, S.S./Zhi, L./ Yun, S.	MRS Spring Meeting 2012: Ceramic Proton Conductors, San Francisco, USA, 04-11 ♦
Braun, A./Wyss, P.P./Debajeet, K.B./Gajda-Schranz, K./Ihssen, J./Pieles, U.	PSI Tagessymposium Elektrochemie: Protein-functionalized hematite photoelectrode for solar hydrogen generation by water splitting in a photoelectrochemical cell, Villigen PSI, 04-02 ♦	
CHEN, Q.	EHPRG Meeting, Thessaloniki, GR, 09-16 thru 22 ♣ ○	
Clemens, F.	CIMTEC: Development of piezoresistive fibre sensors based on carbon-thermoplastic elastomer compounds, for textile application, CIMTEC 2012, 4th Int.Conference «Smart Materials, Structures and Systems», Montecatini Terme, IT, 06-10 thru 14 ♣	
Clemens, F. / Kozielski, L. / Erhart, J.	Electroceraamics: Electro-optical piezoelectric fibres based on PLZT compositions. Synthesis and characterization,, Eschede, NL, 06-25 thru 29 ♦	
Cyro F. Rovath, Frank Clemens, Aloísio N. Klein, Thomas Graule	XI SBPMat: Short fiber reinforced porous CMCs and MMCs tubular structures by thermoplastic powder extrusion route based on polyethylene, Florianopolis, BR, 09-23 thru 27 ♦ ♣	
Dhavanesan, K./Kaiser, A./Glasscock, J.A./Clemens, F.	MS&T'12: Tailoring the porosity and shrinkage of extruded MgO support tubes for oxygen separation membranes by thermoplastic feedstock development, Pittsburgh, USA, 10-07 thru 11 ♦	
Dittmer, R./Clemens, F./Schönecker, A./Scheithauer, U./Rojas-Ismael, M./Graule, T.	MS&T'12: Fractographic Study of Lead-Zirconate-Titanate Fibers, Pittsburgh, USA, 10-07 thru 11 ♦	
Flak, D.	IMCS: Effect of the titania doping (5-10 mole %) on the electrical and optical properties of FSS-made Fe <sub>2</sub> O <sub>3</sub> nanopowders for hydrogen sensing, The 14th Int. Meeting on Chemical Sensors, IMCS 2012 , Nürnberg, DE, 05-20 thru 23 ♣	
Flak, D.	Euroensors: Electronic structure and surface properties of the non-stoichiometric FE <sub>2</sub> O <sub>3</sub> and application in gas sensing , Krakau, PL, 09-06 thru 08	

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## Conferences

High Performance Ceramics	<b>Frank Clemens, Markus Wegmann, Juliane Heiber, Thomas Graule, Francesca Bortolani</b>	IEEE-ROMSC Iasi Conference: Lead Free Ferroelectric Fibres Based on BaTiO <sub>3</sub> Ferroelectric Material , Iasi, RO, 09-24 thru 26 ♦ ♣
	<b>Graule, T.</b>	University of Mersin: Applied nanopowder technology in water filtration photocatalysis and full cell research, Mersin, TR, 02-01 ♣ ○
	<b>Graule, T.</b>	Oberflächenmodifizierte Nanofüllstoffe, Hannover, DE, 02-06 thru 07 ♣ ○
	<b>Graule, T.</b>	Application of fibers in filtration, fuel cell research, catalysis and photocatalysis, COST Workshop, Antalya, TR, 02-20 thru 27 ♣ ○
	<b>Graule, T.</b>	CMCEE: Nanopowder technology for fiber based nanomaterials – a challenge for the materials scientist, 10 CMCEE, Dresden, DE, 05-21 thru 26 ♣ ○
	<b>Graule, T.</b>	ICCCI: New concepts for the steric stabilization of aqueous and non aqueous dispersions , Kurashiki, JP, 09-01 thru 05 ♣
	<b>Graule, T.</b>	Baltic polymer conference, Liepaja, LV, 09-19 thru 21 ♣ ○
	<b>Graule, T.</b>	Nordic Conf. On ceramic and glass technology: Ceramic based water filters for bacteria and virus filtration, Riso, DK, 12- 6 thru 7 ♣ ○
	<b>Krisztina Schrantz</b>	Degradation of thiametoxam and metoprolol by UV, o <sub>3</sub> and UV/o <sub>3</sub> hybrid processes: Kinetics, degradation intermediates and toxicity , Jacksonville FL, USA, 11-12 thru 15 ♣
	<b>Kübler J.</b>	DKG: The material and processing of polymer-derived Al/C/N ceramics: from MEMS to medical components, Warsaw, PL, 09-16 thru 22 ♣ ○
	<b>Kübler J. /Blugan G.</b>	Failure Analysis on a De-NO <sub>x</sub> Catalyst of a Large Waste Burner, 36th Meeting of SVMT-group «Structural Integrity» (together with ESIS section of Switzerland) , Empa Dübendorf , 10-03
	<b>Kübler J. /Blugan G.</b>	DKG: Aktiv gelötete Komponenten aus SiN <sub>4</sub> /TiN-Keramik und Stahl , Erlangen, DE, 12 -03 thru 07
	<b>Kübler J./Bakumov, V./Dalcanele, F./Blugan, G./Fakhfour, V./Grossenbacher, J./Gullo, M./Brugger, M.</b>	The materials and processing of polymer-derived Si/C/N ceramics: From MEMS to medical components, E-MRS Fall Meeting , Warsaw, PL, 09-19 ♣
	<b>Kübler J./Blugan G. Martins, N./Clemens, F./Klein, A.N./Machado, R./Graule, T.</b>	DKG: Aktiv gelötete Komponenten au SiN <sub>4</sub> /TiN-Keramik und Stahl, Erlangen, DE, 12-03 thru 07 XI SBPMat: Rheological investigation of iron based feedstock for the metal injection molding process, Florianopolis, BR, 09-23 thru 27 ♦ ♣
	<b>Michalow-Mauke, K.</b>	SPEA 7: TiO <sub>2</sub> :Cr/Ag Flame-Spray Synthesised Nanopowders with Enhanced Visible Light Activity, SPEA7, Oporto, PT, 06-17 thru 20 ♦ ♣ ○
<b>Michalow-Mauke, K./Heel, A./Burnat, D. Schlenther, E.</b>	CAS fellow; Seminar of the Faculty of Chemistry and Faculty of Material Science, , , IRCC: Fracture Toughness and Corrosion behaviour of infiltrated Al <sub>2</sub> O <sub>3</sub> /P – Steel Composites, CIEC 13, 13th European Inter-Regional Conference on Ceramics, Barelona, ES, 09-12 thru 14 ♣	
<b>Teloeken, A. C./Alves, A.K./Berutti, F.A./Bergmann, C.P./Clemens, F./Graule, T.</b>	MSE: Development and characterization of nanostructures containing titanium oxide to hydrogen production by photoelectrolysis, MSE 2012 , Darmstadt, DE, 09-25 thru 27 ♦ ♣	
<b>V.Adamaki, P.Ragulis, F. Clemens, D. Regonini, S. Pennock, A. Dent, C. Bowen</b>	Electroceramics: Development and electrical characterization of conductive Ti – Magneli phases for sensing appl., Eschede, NL, 06-25 thru 29 ♦	
<b>van Garderen, N./Clemens, F./Graule, T.</b>	International Conference on Chemical Looping 2012: Development of Copper impregnated porous substrates for chemical looping combustion application, Darmstadt, DE, 09-26 thru 28 ♦ ♣	
Joining Technologies & Corrosion	<b>Antusek, A./Passerone, D./Pignedoli, C./Parlinska-Wojtan, M./Janczak-Rusch, J.</b>	Cu/AlN and Ag/AlN interfaces: DFT modeling and experiment, Brno, CZE , 04-02 ♦

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## Conferences

Joining Technologies & Corrosion	<b>Beni, A./ Ott, N./Pawelkiewicz, M./ Young, K./ Warde, M./ Bauer, B./ Gille, P./ McGrath, R./ Rajput, P./Detlefs, B./ Zegenhagen, J./ Barthes, M.G./ Schmutz P</b>	Characterization of the corrosion resistance of new Al-Cr-Fe complex metallic alloys, Aluminium Surface Science & Technology, Sorrento, ITA, 05-28 🍄
	<b>Bittner, R./Duarte, L.I./Leinenbach, C./Richter, K.W.</b>	Experimental study of the Al-Ge-Ti system, TOFA 2012, Pula, HRV, 09-23 thru 28 🍄
	<b>Brodacka, S./Kozubski, R./Janczak-Rusch, J.</b>	Eutectic decomposition and surface segregation in Cu-Ag nanolayers: Hybrid MC-MS simulations, Antalya, TUR, 11-19 thru 21 🍄
	<b>Delsante, S./Borzzone, G./Pigozzi, G./Janczak-Rusch, J.</b>	Metal nanoparticles: synthesis, morphology and thermal behaviour, TOFA 2012 Discussion Meeting on Thermodynamics of Alloys, Pula, HRV, 09-23 thru 28 ◆
	<b>DeRose, J.A./ Thorwarth, K./Falub, C.V., Müller, U/ Thorwarth, G/ Schmutz, P/ Stiefel, M/ Hauert, R</b>	Understanding Failure of Diamond-Like-Carbon (DLC) Coatings on Articulating Implants, 221th ECS meeting, Seattle, USA, 06-5 thru 11 🍄
	<b>Diebold, S./Barnstedt, J./Elsener, H.R./Ganz, P./Hermanutz, S./ Kalkuhl, C./Kappelmann, N./Pfeifer, M./Tanirah, O./Schaadt, D./Schanz, T./Werner, K.</b>	Development of advanced UV-MCP Detectors, UV Astronomy: HAST and Beyond 2012, Hawaii, USA, 06-18 thru 21 ◆
	<b>Duarte, L. I. (co-author)</b>	Influence of different synthesis methods on thermoelectric properties of (Ti <sub>0.33</sub> Zr <sub>0.33</sub> Hf <sub>0.33</sub> )NiSn Half-Heusler compound, Zurich, E, 06-21 thru 22 ◆
	<b>Duarte, L.I.</b>	Joining of Intermetallics: fundamentals and applications, Gesellschaft österreichischer Chemiker/Institute of Inorganic Chemistry / Materials Chemistry, Universität Wien, AUT, 05-25 🍄 ○
	<b>Duarte, L.I./Reichmann, T.L./Leinenbach, C./Richter, K.W./Leinenbach, C.</b>	Diffusion brazing of titanium- and nickel-aluminides using Ge-based filler alloys, MRS Fall Meeting 2012, Boston, USA, 11-25 thru 30 🍄
	<b>Duarte, L.I./Leinenbach, C./Jeurgens, L.P.H.</b>	Joining of advanced materials and components, 2nd Intermediate Meeting of Commission XVII-Brazing, Diffusion Bonding and Soldering, University of Coimbra, POR, 03-29 thru 30 🍄 ○
	<b>Faller, M.</b>	3-Länder-Korrosionstagung «Korrosion und Korrosionsschutzmassnahmen von Verkehrsinfrastrukturen», Dübendorf, E, 04-26 thru 27 ■
	<b>Faller, M.</b>	20 Jahre Korrosionsschäden an der Empa, AK Korrosion im Bauwesen der GfKORR, Helgoland, DEU, 06-05 🍄
	<b>Faller, M.</b>	Schäden durch Korrosion – die wahren Ursachen, GfKORR Jahrestagung, Frankfurt, DEU, 11-06 thru 07 🍄 ○
	<b>Faller, M./Tuchschnid, M.</b>	Korrosionsbelastung metallischer Bauteile in Bahntunneln, 3-Länder-Korrosionstagung, Dübendorf, E, 04-26 thru 27 🍄 ○
	<b>Garzel, G./Janczak-Rusch, J./Zabdyr, L.</b>	Reassessment of the Ag-Cu phase diagram for nanosystems including particle size and shape effect, COST MP0903, Working Group 1 Meeting, Brno, CZE, 04-02 ◆
	<b>Janczak-Rusch, J.</b>	Melting Point Depression of Nanostructured Filler Metals for Brazing Applications, 1st Int. Conf. on Nanoinforming and Microjoining (NMJ 2012), Peking, N, 12-2 thru 5 🍄 ○
<b>Janczak-Rusch, J./Bissig, V./Pigozzi, G./Parlinska-Wojtan, M.</b>	Nanoscale effect-based melting point reduction for brazing filler metals, 7th International Conference on High Temperature Capillarity (HTC2012), Eilat, ISR, 03-20 🍄	
<b>Janczak-Rusch, J./Garzel, G./Zabdyr, L.</b>	The effect of the phase size and shape on the Ag-Cu(nano)phase diagram, TOFA 2012 Discussion Meeting on Thermodynamics of Alloys, Pula, HRV, 09-23 thru 28 ◆	

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## Conferences

Joining Technologies & Corrosion	<b>Janczak-Rusch, J./Kaptay, G./Pigozzi, G./Antusek, A./Jeurgens, L.</b>	Melting behavior of nano-structured metallic thin films confined by inert reaction barriers: experiment and theory, Antalya, TUR, 11-19 thru 21 🍀
	<b>Janczak-Rusch, J./Pigozzi, G./Lehmert, B./Parlinska, M./Bissig, V./Tillmann, W./Wojarski, L./Hoffmann</b>	Deposition and utilization of nano-multilayered brazing filler systems designed for melting point depression, 5th International Brazing and Soldering Conference (IBSC 2012), Las Vegas, USA, 04-23 🍀
	<b>Jeurgens, L.</b>	In-situ, real-time investigations of the growth of ultrathin oxide films, Brussels, BEL, 03-21 🍀 ○
	<b>Jeurgens, L.</b>	Microstructural and interfacial design of nano-structured materials and their assemblies, KTH – Empa Workshop, Stockholm, Schweden (2012), Stockholm, SWE, 05-07 🍀 ○
	<b>Jin, S.</b>	Experimental study and thermodynamic modeling of Au-Ge based alloy systems for novel high temperature lead free solders / MSIT, Ringberg Schloss, DEU, 02-09 🍀
	<b>Jin, S./Duarte, L.I./Wang, J./Leinenbach, C.</b>	Development of Au-Ge based lead free solders via CALPHAD method, CALPHAD XLI, Berkeley, USA, 06-03 thru 08 🍀
	<b>Koster, M./Lis, A./Schindler, H.J./Leinenbach, C.</b>	Defect tolerance of brazed steel components under quasi-static and cyclic loading, 19th European Conference on Fracture, Kazan, RUS, 08-26 thru 31 🍀
	<b>Leinenbach, C./ Buhl, S./Pignedoli, C./ Wang, J./Passerone, D.</b>	Study and modelling of interface reactions during brazing of diamonds, CALPHAD XLI, Berkeley, USA, 06-03 thru 08 ◆
	<b>Leinenbach, C./Bo, H./ Duarte, L.I./ Wang, J./ Liu, L.B./ Jin, Z.P.</b>	The Cu-Fe-Ti system – experimental study and thermodynamic assessment, CALPHAD XLI, Berkeley, USA, 06-03 thru 08 🍀
	<b>Leinenbach, C./Duarte, L.I./Roth, M.</b>	Joining of Advanced Materials and Components, MTU Repair Colloquium 2012, MTU München, DEU, 02-09 thru 10 🍀 ○
	<b>Leinenbach, C./Jin, S./Wang, J./Elsener, H.R./Valenza, F./Giuranno, D./ Novakovic, R./Delasnte, S./Borzzone, G./Watson, A./Scott, A.</b>	Au-Ge Based Alloys for Novel High-T Lead Free Solder Materials Fundamentals and Applications, 5th International Brazing and Soldering Conference (IBSC12), Las Vegas, USA, 04-22 thru 25 🍀
	<b>Leinenbach, C./Koster, M./Lis, A./Schindler, H.J.</b>	Defect Assessment of Brazed Steel Components, 5th International Brazing and Soldering Conference (IBSC12), Las Vegas, USA, 04-22 thru 25 ■ 🍀
	<b>Lipecka, J./Janczak-Rusch, J./Lewandowska, M.</b>	Joining nanometals: challenges and opportunities, 33rd Risø International Symposium on Materials Science: Nanometals – Status and perspective, Risø, DEN, 09-03 thru 7 🍀
	<b>Lipecka, J./Janczak-Rusch, J./Lewandowska, M.</b>	Novel technologies for joining nanometals, EMRS Fall Meeting 2012, Warsaw, POL, 09-17 thru 21 🍀
	<b>Lis, A./ Koster, M./Leinenbach, C.</b>	Experimental and Numerical Investigations on the Defect Assessment of Brazed Steel Joints, MSE2012-Materials Science Engineering, Darmstadt, DEU, 09-25 thru 27 🍀
	<b>Pigozzi, G./Antušek, A./Janczak-Rusch, J./Parlinska-Wojtan, M./Passerone, D./Pignedoli, C./Bissig, V./Patscheider, J./Jeurgens, L.</b>	Microstructure of nano-sized Ag-Cu/AlN multilayers for low-temperature joining applications, 1st Int. Conf. on Nanojoining and Microjoining (NMJ 2012), Peking, N, 12-2 thru 5 🍀
	<b>Pigozzi, G./Mukherji, D./Schmutz, P.</b>	Magnetic characterization of intermetallic nanoparticles, Tirrenia, ITA, 05-21 ◆
	<b>Pigozzi, G./Mukherji, D./Schmutz, P.</b>	Electrochemical Selective Phase Dissolution for the Synthesis of Intermetallic Nanoparticles with Core-Shell Structure, Prague, CZE, 08-20 🍀
<b>Pigozzi, G./Mukherji, D./Schmutz, P.</b>	Synthesis of tailored Intermetallic Nanoparticles with Core-Shell Structure by Electrochemical Selective Phase Dissolution, Honolulu, USA, 10-08 🍀	

# Empa Activities 2012

## Conferences

Joining Technologies & Corrosion	<b>Pigozzi, G./Mukherji, D./Schmutz, P.</b>	Synthesis and characterization of Ni <sub>3</sub> Si and Co <sub>3</sub> (Al,W) core-shell nanoparticles by ESPD, Antalya, TUR, 11-19 thru 21 ◆
	<b>Schmutz, P.</b>	Meet the Expert Tagung: Materials and surface technology for implants , Interlaken, E, 04-23 thru 24 ■
	<b>Schmutz, P.</b>	Localized corrosion processes / corrosion probes, session chairman, Gordon research conference on aqueous corrosion, Colby Sawyer College, USA, 07-08 thru 13 ■
	<b>Schmutz, P.</b>	High resolution characterization of corrosion processes 3, D4 Symposium, 222th ECS meeting, Hawaii, USA, 10-07 thru 12 ■
	<b>Schmutz, P.</b>	World Congress Interfinish 2012: green emerging metal finishing technologies and new developments, Scientific committee and symposium organizer, Milano, ITA, 11-14 thru 16 ■
	<b>Schmutz, P./ Cardilli, E./ Berg, M</b>	Implant corrosion: from unwanted localized attacks to biodegradable metallic implants, OrthoTec Europe, Regensburg, E, 12-09 thru 13 ♣ ○
	<b>Schmutz, P./ Cardilli, E./ Cenezi.M/ Berg. M/</b>	Implant corrosion: from unwanted localized attacks to biodegradable metallic implants, World MedTech Forum, Lucerne, E, 09-25 thru 27 ♣ ○
	<b>Schmutz, P./ Ott, N./ Grisch, R./ Uggowitzer, P.J.</b>	Magnesium and Mg alloys «biocorrosion» in protein containing body fluids, 222th ECS meeting, Hawaii, USA, 07-10 thru 12 ♣
	<b>Schmutz, P./ Suter, T.</b>	Neue Mikro- und nanoskalige elektrochemische Methoden zur Korrosionsbeständigkeit Bestimmung von dünnen Schichten, NanoCluster Bodensee Tagung, Uzwil, E, 06-28 ♣ ○
	<b>Schmutz, P./Suter, T.</b>	Caractérisation macro- et microélectrochimique de la réactivité et de propriétés de surface, SurfTherm 2012 (Salon de l'horlogerie, microtechnique et technologies biomédicales), Geneva, E, 06-06 ♣ ○
	<b>Senn, M./Tuchschnid, M./Leber H.J./Rizvic, N. Suter, Th.</b>	Legierung und Material-eigenschaften von französischen Blechblasinstrumenten aus dem 19. Jhd., HKB Bern, E, 11-07 thru 10 ♣ ○
		Microcapillary Studies on Cathode Materials for Li-Ion Batteries, Seminar on electric batteries, Dübendorf, E, 05-07 ♣
		Approach for Al Brazing with Nano Filler Metals, 7th International Congress Aluminium Brazing , Düsseldorf, DEU, 05-24 ♣
	Mechanics of Materials and Nanostructures	<b>Weyrich, N./Leinenbach, C.</b>
<b>Alberts, D./Raisin, Ph./Frey, D./Gamez, G./Whitby, J./Michler, J.</b>		First attempt to quantify fluorine at EMPA, 6th GD day, Paris, FR, 09-21 ◆
<b>Alberts, D./Whitby, J./Östlund, F./Szkudlarek, A./Utke, I.</b>		Effects of residual gases on signals from a SEM/FIB-TOF-SIMS instrument, 8th European Workshop on Secondary Ion Mass Spectrometry , Münster, DE, 09-09 thru 11 ◆
<b>Elias, J./Thévenin, M./Parlinksa-Wojtan, M./Erni, R./Niederberger, Chr./Sauvage, F./Michler, J./Philippe, L.</b>		Gas template H <sub>2</sub> nanobubbles for growing highly crystalline nanoporous ZnO, The 7th International Workshop on Zinc Oxide and Related Materials, Nizza, FR, 09-11 thru 14 ◆
<b>Frantz, C./Elias, J./Hasegawa, M./Stein, N./Michler, J./Philippe, L.</b>		Growth mechanisms of functional nanowire based architectures, 9th International Workshop on Electrodeposited Nanostructures, 2012, Porto, Portugal, PT, 11-08 thru 10 ♣
<b>Gamez, G.(Limon-Petersen, J./Mohanty, G./Michler, J.</b>		Spatial Mapping with Glow Discharge Optical Emission Spectrometry, The Great Scientific Exchange (SCIX), Kansas City, USA, 09-30 thru 10-05 ♣
<b>Gamez, G./Le Nader, V./Bartenwerfer, M./Savenko, A./Brodard, P./Michler, J.</b>		Adding Tip-Enhanced Raman Spectroscopy Functionality to the «NanoBits» toolbox concept for Atomic Force Microscopy, The Great Scientific Exchange (SCIX), Kansas City, USA, 09-30 thru 10-05 ◆
<b>Gaurav, M./Wheeler, J.M./Michler, J.</b>		Development, optimization and first measurements with elevated temperature nanoindentation system, CSM Users meeting, Gruyeres, 10-24 thru 24 ♣
<b>Gaurav, M./Wheeler, J.M./Raghavan, R./Till, U./Philippe, L./Michler, J.</b>		Nanoindentation and micropillar compression creep of nanocrystalline Ni at elevated temperatures, Materials Research Society (MRS), Boston, USA, 11-26 thru 30 ♣

# Empa Activities 2012

## Conferences

<b>Mechanics of Materials and Nanostructures</b>	<b>Ishizaki, K./Fahlbusch, S./Catala-Civera, J.-M./Vaucher, S. /Utke, I.</b>	Development of Microwave Micro-Plasma Jet System for Removing Contamination in Scanning Electron Microscopes, SRI Satellite Workshop: Carbon contamination of optics: causes , characterization, and in-situ treatments, St. Aubin, FR, 07-16 thru 17 ◆
	<b>Le Nader, V./Gamez, G./Brodard, P./Michler, J.</b>	Tip preparation for TERS spectroscopy, 1st International Conference on Enhanced Spectroscopy, Porquerolles, FR, 10-03 thru 05 ♣
	<b>Michler, J.</b>	Nanomechanics in a Scanning Electron Microscope, International Conference on Plasticity, San Juan, USA, 01-03 thru 08 ♣ ○
	<b>Michler, J.</b>	In-situ SEM Micromechanics, Nanobrücken 2012, Saarbrücken, DE, 03-21 thru 23 ♣ ○
	<b>Michler, J.</b>	Anwendungspotential neuer Methoden der Mikroanalyse zur Bestimmung lokaler mechanischer Eigenschaften, der chemischen Zusammensetzung und der Mikrostruktur im Rasterelektronenmikroskop, Materials Valley 2012, Hanau, DE, 04-18 thru 20 ♣ ○
	<b>Michler, J.</b>	In-situ SEM high temperatures Micromechanics, Agilent European User Meeting 2012, Erlangen, DE, 05-15 thru 16 ♣ ○
	<b>Michler, J.</b>	In-situ SEM high temperatures Micromechanics, 8th European Solid Mechanics Conference, Graz, AT, 07- 09 thru 13 ♣ ○
	<b>Michler, J.</b>	In-situ SEM high temperatures Micromechanics, Gordon Conference on Thin Film and Small Scale Mechanics, Waterville, USA, 07- 22 thru 27 ♣ ○
	<b>Michler, J.</b>	In-situ SEM high temperatures 12th Annual Micro Materials European User Meeting, Malta, MT, 10- 24 thru 25 ♣ ○
	<b>Michler, J.</b>	Essai nanomécanique in-situ en température pour l'exploration des mécanismes de fissuration et de plasticité dans les semi-conducteurs et les métaux, Indentation 12, Lyon, F, 10- 29 thru 31 ♣ ○
	<b>Montagne, A./Pathak, S./Mäder, X./Wasmer, K./Michler, J.</b>	Micro-compression de piliers de saphir à température ambiante, Plasticité 2012, Metz, FR, 04-11 thru 13 ♣
	<b>Montagne, A./Rabier, R./Wheeler, J.M./Demenet, J.-L./Michler, J./Ghisleni, R.</b>	Plasticité dans les micro piliers de silicium: étude en température, Indentation 2012, Lyon, FR, 11-29 ◆
	<b>Niederberger, C./Gezat, M./Hasegawa, M./Philippe, L.</b>	Electroplating of stainless steel for coatings and micro-components, Interfinish 2012, Milano, IT, 11-14 thru 16 ♣
	<b>Philippe, L./Bechelany, M./Michler, J.</b>	Electrodeposition of a-Si, EMRS, Strasbourg, FR, 05-15 ♣
	<b>Philippe, L./Elias, J./Michler J.</b>	All inorganic ETA solar cell development, TNT 2012, Madrid, ES, 09-08 ♣
	<b>Szkudlarek, A./Gabureac, M./Utke, I.</b>	Effects of Adsorbate Surface Diffusion in Focused-Electron-Beam-Induced-Deposition, Pacific Rim Meeting on Electrochemical and Solid-State Science, Honolulu, Hawaii, USA, 10-07 thru 12 ♣
	<b>Utke, I.</b>	Free electrons for building nanodevices, German Physical Society Meeting, Berlin, DE, 03-25 thru 30 ♣ ○
	<b>Utke, I.</b>	Focused Electron Beam Induced Processing, COST0601 Conference, Stykkisholmur, IS, 05-19 thru 21 ♣ ○
	<b>Utke, I.</b>	Photonic & Plasmonic Applications with FEBIP, 4th FEBIP International Conference, Zaragoza, ES, 06-19 thru 20 ♣
	<b>Utke, I.</b>	Focused Free Electrons for Nanodevices, 13th DIET conference, Stratford upon Avon, UK, 07-02 thru 06 ♣
<b>Utke, I.</b>	Nanoscale Rapid Prototyping of nanodevices with focused electron and ion beam triggered chemistry, 12th IEEE Nanotechnology Conference, Birmingham, UK, 08-20 thru 23 ♣ ○	
<b>Utke, I.</b>	Focused Electron Beam Processing – Process Dynamics & Applications, EU-ENHANCE workshop, Wien, AT, 09-10 thru 12 ♣ ○	
<b>Utke, I./Elias, J./Bechelany, M./Michler, J./Philippe, L.</b>	ALD for 3D Nanostructured Building Blocks: Urchin-Inspired Architectures for Solar Cells, 12th Int. Conference on Atomic Layer Deposition, Dresden, DE, 06-17 thru 20 ♣	

# Empa Activities 2012

## Conferences

Mechanics of Materials and Nanostructures	Utke, I./Whitby, J./Gabureac, M./Alberts, D./Michler, J./Östlund, F./Gonin, M./Sedláček, L./Jiruse, J./Friedli, V./Fahlbusch, S.	Novel developments in FIBSEM add-on systems: in-situ TOF-SIMS, in-situ AFM, and gas injection, European Microscopy Conference, Manchester, UK, 09-16 thru 21 🍄 ○
	Walter, C./Raghavan, R./Wheeler, J.M./Stearn, R.J./Korte, S./Gille, P./Michler, J./Clegg, W.J.	Plastic Deformation of Al <sub>13</sub> Co <sub>4</sub> below the Brittle to Ductile Transition Temperature, MRS Fall Meeting, Boston, USA, 11-25 thru 30 🍄
	Wheeler, J.M./Brodard, P./Michler, J.	Elevated temperature, in situ indentation at calibrated contact temperatures, Nanobrücken II, Saarbrücken, DE, 03-23 ◆
	Wheeler, J.M./Maier, V./Durst, K./Goeken, M./Michler, J.	Nanomechanics of Ultra-fine-grained Aluminum as a Function of Strain Rate and Temperature, MRS Fall Meeting, Boston, USA, 11-25 thru 30 🍄
	Wheeler, J.M./Michler, J.	High Resolution Multiple Nano-Impact Testing and Elevated Temperature Strain Rate Jump Indentation, MicroMaterials European User Meeting 2012, Valetta, MT, 11-25 🍄
	Wheeler, J.M./Michler, J.	Nanomechanical Testing at Elevated Temperatures in situ in the SEM, MRS Fall Meeting, Boston, USA, 11-25 thru 30 🍄
	Wheeler, J.M./Niederberger, Chr./Tessarek, C./Christiansen, S./Michler, J.	Extraction of crystal plasticity parameters of GaN using high temperature, in situ micro-compression, Gordon Research Conference on Thin Film & Small Scale Mechanical Behavior, Waterville, Maine, USA, 07-23 ◆
	Wheeler, J.M./Raghavan, R./Michler, J.	Nanomechanics of a Zr-based Bulk Metallic Glass, MRS Fall Meeting, Boston, USA, 11-25 thru 30 🍄
	Whitby, J./Alberts, D./Michler, J.	FIBbing about nanomechanics and chemical analysis, European FIB Users Group Meeting, Cagliari, IT, 10-01 🍄 ○
	Whitby, J./Alberts, D./Michler, J.	SEM/FIB with TOF-SIMS: Introduction and Application Examples, Lehigh University Microscopy School course on «Scanning Electron Microscopy and X-ray Microanalysis», webinar (virtual presence), , 06-07 🍄 ○
	Whitby, J./Alberts, D./Utke, I./Michler, J.	Novel developments in FIBSEM add-on systems: in-situ TOF-SIMS with in-situ AFM and gas injection, Exploring materials in 3D down to the atomic scale, Bern, 06-28 🍄 ○
	Whitby, J./Gamez, G./Alberts, D./Raisin, Ph./Frey, D./Michler, J.	An overview of recent glow discharge work at Empa, European Working Group on Glow Discharge Spectroscopy, London, UK, 09-03 thru 04 🍄
	Whitby, J./Mushtaq, S./Horvath, P./Steers, E./Pickering, J./Michler, J.	The «Hydrogen effect» upon the analysis of copper, iron and titanium as observed by Glow Discharge Time-Of-Flight Mass Spectrometry (GD-TOFMS) , European Working Group on Glow Discharge Spectroscopy, London, UK, 09-03 thru 04 ◆
	Nanoscale Materials Science	Whitby, J./Utke, I./Baudot, J./Alberts, D./Michler, J.
Barker P. M., Lewin E., J. Patscheider J.		«HiPIMS Deposition rate Increase using non-standard pulse waveforms», PSE 2012, Garmisch-Partenkirchen, DE, 10-09 ■ ◆
Barker, P.M./Lewin, E./Patscheider, J.		«Metallic film modification through the use of non-standard HiPIMS waveforms», 59 <sup>th</sup> AVS Symposium, Tampa, FL, US, 10-30 ■ 🍄
Bernard, L.		SPS meeting 2012, ETH Zürich, 06-21 thru 06-22 🍄
Bernard, L.		SIMS Europe, University Münster, DE, 10-30 thru 11-03 🍄
Bernoulli, D., Schwarzenberger, M., Müller, U., Spolenak, R.		Phase and Compositional Analysis of Tantalum and Tantalum Nitride Thin Films, 13th International Conference on Plasma Surface Engineering, Garmisch-Partenkirchen, D, 09-10 to 14 ◆
Crockett R.		Adsorption behavior of Amphiphilic Polymers, Puntarenas, CR, 01-08 thru 13 🍄
Ernst, K.-H		Single molecule dynamics at surfaces: switching handedness and unidirectional motion, Physikerkolloquium Universität Innsbruck, Innsbruck, A, 04. 12. 🍄 ○
Ernst, K.-H		Hopping, turning and driving molecular nanomachines at surfaces, IBM Colloquium, Almaden Research Center, San José, CA, San Jose, USA, 05-01 🍄 ○
Ernst, K.-H		Hopping, turning and driving single molecules with inelastically tunnelling electrons, Center of Nanoscience Seminar, Univ. of Washington, Seattle, Seattle, USA, 05-01 🍄 ○



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## Conferences

Nanoscale Materials Science	Ernst, K.-H	Chiral symmetry breaking in flatland: From sergeants-and-soldiers to unidirectional movement, The Molecular Foundry Seminar, Berkeley, USA, 05-11 🍄 ○
	Ernst, K.-H	Driving molecular nanomachines at surfaces with electrons, Electron Controlled Chemical Lithography (ECCL 2012), Stykkishólmur, IS, 05-18 thru 22 🍄 ○
	Ernst, K.-H	Inelastic Electron Tunnelling: Single-molecule dynamics and unidirectional movement, International Conference of Nanoscience and Technology, ICN+T 2012, Paris, F, 07-23 thru 27 🍄 ○
	Ernst, K.-H	Chiral symmetry breaking and unidirectional motion at surfaces, 14 <sup>th</sup> Conf. on Vibrations at Surfaces VAS-2012, Kobe, JP, 09-24 thru 28 🍄 ○
	Ernst, K.-H	Molecular dynamics at surfaces induced by inelastically tunnelling electrons, SFB 659 Molekulare Schalter-Kolloquium, Fachbereich Physik FU Berlin, Berlin, D, 10-18 🍄 ○
	Ernst, K.-H	Chiral phenomena in flatland: from 2D crystallization to single molecule dynamics, Nanoscale Science Department Seminar, Max-Planck-Institute for Solid State Physics, Stuttgart, D, 11-14 🍄 ○
	Ernst, K.-H	Electron tunnelling-induced unidirectional motion of a molecule at a surface, Dynamical Phenomena at Surfaces: The Role of Complexity, Leiden, NL, 11-26 thru 30 🍄 ○
	Ernst, K.-H./Baumann, S./Lutz, C.P./Zoppi, L./Heinrich, A.	Enantioselective lateral interaction among helical molecules at surfaces revealed by STM manipulation, From Reciprocal Space to Real Space in Surface Science Symposium, Magnus Haus der DPG, Berlin, D, 09-12 🍄
	Ernst, K.-H./Baumann, S./Lutz, C.P./Zoppi, L./Heinrich, A.	Inelastic electron tunneling induced surface dynamics: switching handedness and unidirectional motion, Electronic and Magnetic Properties of Chiral Structures and their Assemblies workshop, Telluride, CO, USA, 06-27 🍄
	F. Habrard, J. Patscheider, G. Kovacs	«Compliant metallic electrodes for electroactive polymer actuators», ICMCTF 2012, San Diego, CA, US, 04-23 ■ 🍄
	F. Habrard, J. Patscheider, G. Kovacs	«Compliant metallic electrodes for electroactive polymer actuators», ICMCTF 2012, Garmisch-Partenkirchen, DE, 09-12 ◆
	Florek, M., Mroczka, R. Chrzanowska, A.	Determination of depth profile distribution Cl, C, S, and N incorporated and adsorbed into copper layer from additives during electrodeposition by SIMS and morphology studies by AFM and optical profilometry as a state-of-the-art method for better understanding, SIMS Europe 2012 Conference, University of Münster, DE, 09-10 ◆
	Hauert, R.	Failure mechanisms of DLC coated articulating implants, ICMCTF 2012, San Diego, USA, 04-23 🍄
	Hauert, R.	Failure mechanisms of DLC coated articulating implants, CBC Tagung, Leoben, A, 05-30 🍄 ○
	Hauert, R.	ICMCTF, Symposium D, Coatings for biomedical applications, San Diego, USA, 04-24 to 27 ■
	Hauert, R.,	Beschichtete bewegliche Implantate, MST-Regionalkonferenz NRW 2012, Medizintechnik, Dortmund, D, 06-27 🍄 ○
	Hauert, R.,	Diamond-like carbon coatings for articulating orthopedic implants, OrthoTec Europe Conference, 09-27 🍄 ○
	Hauert, R.,	State of the art and failure mechanisms of DLC coated articulating joint replacements, V International Conference on Surfaces, Materials and Vacuum, Tuxtla Gutiérrez, MX, 09-25 🍄 ○
	Hug, H. J.	LCN, London, UK, 03-06 thru 03-06 🍄 ○
	Hug, H. J.	IWF, Dresden, DE, 03-07 thru 03-07 🍄 ○
Hug, H. J.	DPG, Berlin, DE, 03-26 thru 03-29 🍄 ○	
Hug, H. J.	Nano MRI, Ascona, 07-22 thru 07-27 🍄 ○	
Hug, H. J.	JEMS, Parma, I, 09-09 thru 09-14 ◆	
Hug, H. J.	SIMS Europe, University Münster, DE, 10-30 thru 11-03 🍄	
Karageorgaki, C./ Ernst, K.-H.	Stereochemistry of C4 dicarboxylic acids on Cu(110), SAOG, Fribourg, 01-27 thru 27 ◆	
Karageorgaki, C./ Ernst, K.-H.	Stereochemistry of C4 dicarboxylic acids on Cu(110), SPS, Zürich, 06-21 thru 22 ◆	
Karageorgaki, C./ Ernst, K.-H.	Stereochemistry of C4 dicarboxylic acids on Cu(110), EMPA Phd Symposium, Dübendorf, 11-13 thru 13 🍄	
Keller, B.A.	Characterization of Biomaterials using Time-of-Flight Secondary Ion Mass Spectrometry, Zürcher Hochschule für Angewandte Wissenschaften ZHAW, 02-16 🍄 ○	
Keller, B.A.	Materials Characterization Using Time-of-Flight Secondary Ion Mass Spectrometry, John Paul II Catholic University of Lublin, PL, 09-19 🍄 ○	
Lewin E, Patscheider J.,	«Nanostrukturierte Hartstoff-Schichten», General assembly of the Swiss Vacuum Society. May 10 <sup>th</sup> 2012, Empa, Dübendorf, 05-09 ■ 🍄	
Lewin E, Patscheider J.,	«Reactively sputtered Al-Sn-N nanocomposite coatings», PSE 2012, Garmisch-Partenkirchen, DE, 9-13. 🍄	
Lewin, E./Patscheider, J./Parlinska-Wojtan, M. M. Parschau	«Nanocomposite coatings in the Al-Ge-N system: synthesis, structure and mechanical and optical properties», ICMCTF 2012, San Diego, CA, US, 04-26 🍄	
Lewin, E./Patscheider, J./Parlinska-Wojtan, M. M. Parschau	An electrically-driven molecular four-wheeler, German Physical Society Annual Meeting, Berlin, D, 03-29 🍄 ○	

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## Conferences

Nanoscale Materials Science	Marioni, M. A.	JEMS, Parma, I, 09-09 thru 09-14 ♣ ○
	Marioni, M. A.	JEMS, Parma, I, 09-09 thru 09-14 ■
	Milas, M./Keller, B./Hunziker, P./Maiztegui, I./Niehuis, E.	Microtome 4SIMS Prototype, CCMX Annual Meeting 2012, Bern, 04-25 ◆
	Milas, M./Keller, B./Hunziker, P./Maiztegui, I./Niehuis, E./Florek, M. Müller, U.	Precision segmenting stage constructed for SIMS. Its abilities and first results obtained for freshly prepared cross sections of biological samples and tissues, SIMS Europe 2012 Conference, Münster, DE, 09-10 ◆
	Parschau, M./Kudernac, T./Ruangsapichat, N./Macia, B./Katsonis, N./Haruty unyan, S./Feringa, B./Ernst, K.-H.	Failure mechanisms of DLC-coated articulating implants, Materials Science Engineering Konferenz, Darmstadt, D, 09-25 to 27 ♣
	Patscheider, J.	An electrically-driven molecular four-wheeler, SAOG-Meeting 2012, Fribourg, 01-25 ♣
	Patscheider, J.	«Towards understanding the role of ion energy for the formation of nanocomposite coatings», 67 <sup>th</sup> IUVSTA workshop, Daresbury, Cheshire, UK, 09-24 ♣ ○
	Patscheider J.	«Ternary AlN-based optically transparent hard nanocomposite coatings», 68 <sup>th</sup> IUVSTA workshop, City University of Hong Kong, HK, 11-12 ♣ ○
	Patscheider J.	«XPS – What Photoelectron Spectroscopy can tell us about chemistry at surfaces», ACI, University of Zürich, 11-17 ♣ ○
	Patscheider, J./Pélisson, A./Parlinska-Wojtan, M./Hug, H.-J. Seibel, J./ Ernst, K.-H.	«Excursions in the Al-Si-N system: Solid solutions, Nanocomposites and Nanomultilayers», Institute of Physics, Linköping University, SE, 08-17 ♣ ○
	Seibel, J./ Stoeckl, Q.	Differences in Chiral Expression: Racemic and Enantiopure Heptahelicenes on Various Metal Surfaces, SPS, Zürich, 06-21 thru 22 ◆
	Stüber, M./Fanneil, F./Rinke, M./Ulrich, S./Welle, A./Lewin, E./Jansson, U.	Phd Symposium organizing committee , EMPA Phd Symposium, Dübendorf, 11-13 thru 13 ■
	Thin Films and Photovoltaics	Thorwarth, K./Müller, U./Falub, C.V./Affolter, Ch./Stiefel, M./Weisse, B./Thorwarth, G./Hauert, R.
Thorwarth, K./Müller, U./Figi R./Weisse, B./Thorwarth, G./Hauert, R.		Corrosion based failure of silicon containing interfaces in diamond-like carbon coated Co-Cr-Mo joint implants, ICMCTF 2012, San Diego, USA, 04-23 ◆
Blösch, P./Nishiwaki, S./ Jäger, T./Kranz, L./Pianezzi, F./Chirila, A./Reinhard, P./Buecheler, S./ Tiwari, A.N.		101 million cycle simulator wear characterization of diamond like carbon coated CoCrMo articulating implants, 13th International Conference on Plasma Surface Engineering, Garmisch-Partenkirchen, D, 09-10 to 14 ◆
Blösch, P./Nishiwaki, S./Chirila, A./Kranz, L./Fella, C./Pianezzi, F./Adelhelm, E./Buecheler, S./Tiwari, A.N.		Alternative back contact designs for CIGS solar cells on polyimide foils/EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ◆
Bodnarchuk, M./Kovalenko, M.V.		Sodium-doped molybdenum back contacts for flexible CIGS solar cells/EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ◆
Buecheler S.		Novel Hybrid Materials by Combining Nanocrystals and Inorganic Clusters into Long-range Ordered Superlattices/MRS Fall Meeting 2012 , Boston, US, 11-26 ♣
Fella, C.		Nationale PV-Tagung, Baden, 03-22 thru 23 ♣ ○
		Growth mechanism of non-vacuum deposited Cu <sub>2</sub> ZnSnSe <sub>4</sub> absorber layers for thin film solar cells/ MRS 2012 Spring Meeting, San Francisco, US, 04-9 thru 13 ♣

# Empa Activities 2012

## Conferences

Thin Films and Photovoltaics	<b>Fella, C.</b>	Investigation of the growth mechanism of non-vacuum deposited Cu <sub>2</sub> ZnSnSe <sub>4</sub> absorber layers for thin film solar cells/2012 MRS Spring Meeting, Strassburg, FR, 05-14 thru 18 ♦
	<b>Fella, C.</b>	Cu <sub>2</sub> ZnSnS <sub>4</sub> absorbers processed from metal salt solutions in DMSO/ EU-PVSEC, Frankfurt, DE, 09-25 thru 28 ♦
	<b>Fella, C.</b>	Influence of surface (de)composition on CZTS absorbers for thin film solar cells/EMPA PhD symposium, Duebendorf, 11-13 ♣
	<b>Fella, C.</b>	Solution based preparation of kesterites/3rd International Workshop on Kesterites, Luxemburg, Luxembourg, LU, 11-22 thru 23 ♣ ○
	<b>Gretener, C./ Kranz, L./ Perrenoud, J./ Baechler, C./ Romanyuk, Y.E./ Buecheler, S./ Tiwari, A.N.</b>	CdTe Solar Cells in Substrate Configuration with MoO <sub>x</sub> Back Contact Buffer/EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ♦
	<b>Gretener, C./Dietrich, M./Perrenoud, J./Kranz, L./ Pianezzi, F./Buecheler, S./Tiwari, A.N.</b>	Development and Stability of CdTe Solar Cells in Substrate Configuration/ EUPVSEC 2012, Frankfurt, DE, 09-25 thru 28 ♣
	<b>Kovalenko, M.V.</b>	Novel Strategies for Combining Molecules, Clusters, and Nanocrystals into Functional Inorganic Solids, Florida State University, US, 03-12 ♣ ○
	<b>Kovalenko, M.V.</b>	Synthesis and applications of inorganic nanocrystals/3rd NSI Symposium, Linz, AT, 04-13 ♣ ○
	<b>Kovalenko, M.V.</b>	Novel Strategies for Combining Nanocrystals, Molecules and Clusters, into Functional Inorganic Solids/Conference Nanax6, «Nanoscience with nanocrystals», Fuengirola, ES, 04-13 thru 18 ♣
	<b>Kovalenko, M.V.</b>	All-Inorganic Design of Functional Nanomaterials Using Colloidal Nanocrystals/EPFL, Lausanne, 05-25 ♣ ○
	<b>Kovalenko, M.V.</b>	Recent trends in all-inorganic design of colloidal nanomaterials/1st Annual World Congress on Advanced Materials, Beijing, CN, 06-06 thru 08 ♣ ○
	<b>Kovalenko, M.V.</b>	All-Inorganic Design of Functional Nanomaterials Using Colloidal Nanocrystals/Albert-Ludwigs Universität, Freiburg, DE, 08-03 ♣ ○
	<b>Kovalenko, M.V.</b>	Novel Strategies for Combining Molecules, Clusters, and Nanocrystals into Functional Inorganic Solids, University of Cyprus , CY, 11-20 ♣ ○
	<b>Kranz, L./Gretener, C./Perrenoud, J./Buecheler, S./Tiwari, A.N.</b>	Investigation of recrystallization in low-temperature grown CdTe solar cells in substrate and superstrate configuration/AVS 59th Annual International Symposium, Tampa, US, 10-28 thru 11-02 ♣ ○
	<b>Kranz, L./Perrenoud, J./Gretener, C./Buecheler, S./Tiwari, A.N.</b>	Formation of CdS-CdTe heterojunction in CdTe solar cells in substrate configuration/ EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ♦
	<b>Kranz, L./Schmitt, R./Perrenoud, J./Gretener, C./ Pianezzi, F./Buecheler, S./Tiwari, A.N.</b>	CdTe solar cells in substrate configuration, Antalya, TR, 11-09 ♣ ○
	<b>Kravchyk, K./Kovalenko, M.V.</b>	Novel Cathode and Anode Materials for Li-ion Batteries Derived from Precisely Engineered Colloidal Nanocrystals/MRS Fall Meeting 2012, Boston, US, 11-30 ♣
	<b>Nishiwaki, S./Pianezzi, F./Fella, C.M./Kranz, L./Buecheler, S./Tiwari, A.N.</b>	Reduction of CIGS Deposition Temperature by Addition of an Sb Precursor/EU-PVSEC 2012, Frankfurt, DE, 09-25 thru 28 ♦
	<b>Pianezzi, F./Capelli, A./Nishiwaki, S./Chirilă, A./Seyrling, S./Buecheler, S./Tiwari A.N.</b>	Influence of the properties of n-type layers on the electronic transport in CIGS thin film solar cells/EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ♦
	<b>Pianezzi, F./Seyrling, S./Nishiwaki, S./Fella, C./Kranz, L./Buecheler, S./Tiwari A.N.</b>	Influence of Sb addition on the photovoltaic performance and transport properties of CIGS solar cells/EMRS 2012 Spring Meeting, Strassburg, FR, 05-14 thru 18 ♣
<b>Romanyuk, Y.E./Saji, K.J./Tiwari, A.N.</b>	Design of p-CuO/n-ZnO heterojunctions deposited by magnetron sputtering for solar cell applications/TCN Workshop 2012, Crete, GR, 10-22 thru 26 ♦	

# Empa Activities 2012

## Conferences

<b>Thin Films and Photovoltaics</b>	<b>Romanyuk, Y.E./Saji, K.J./Tiwari, A.N.</b>	Electrical properties of p-CuO/n-ZnO heterojunctions prepared by magnetron sputtering/E-MRS 2012 Spring Meeting, Strasbourg, FR, 05-14 thru 18 ♦
	<b>Uhl, A.</b>	2012 MRS Spring Meeting, San Francisco, US, 04-9 thru 13 ♣
	<b>Uhl, A.</b>	EMRS 2012 Spring Meeting, Strasbourg, FR, 05-14 thru 18 ♦
	<b>Uhl, A.</b>	European Photovoltaic Solar Energy Conference and Exhibition (EU-PVSEC), Frankfurt, DE, 09-25 thru 28 ♦
		<b>Civil and Mechanical Engineering</b>
	<b>Meier, U.</b>	CFRP Tendons: Quo vadis?/Future Infrastructure Forum 2, EPSRC Network for Resilient & Sustainable Infrastructure, Cambridge University, Cambridge, UK, 01-17 ♣ ○
	<b>Meier, U.</b>	How Can Carbon Fiber Tendons Make the Breakthrough in China?/Bridge Innovation Summit 2012, Beijing Marriott Hotel Northeast, Beijing, CN, 04-27 ♣ ○
	<b>Meier, U.</b>	R&D Needs for Advanced Fibrous Composites in Construction?/The Fiber Society, Spring 2012 Conference, Empa, St. Gallen, 05-24 ♣ ○
	<b>Meier, U.</b>	The Swiss Experience with Carbon Fiber Reinforced Polymers in Structural Engineering/, NIMS, National Institute for Materials Science, Tsukuba, JP, 05-31 ♣ ○
	<b>Meier, U.</b>	Monitoring the Reliability of Carbon Fiber Reinforced Polymer Components in Civil-structures with the Means of Structural Health Monitoring/BIT's 1st World Congress of Advanced Materials (WCAM-2012), Beijing International Convention Center (BICC), Beijing, CN, 06-06 ♣ ○
	<b>Meier, U.</b>	Carbon Fiber Reinforced Polymers in Bridge Engineering/Conference Innovative Infrastructures – Toward Human Urbanism of International Association for Bridge and Structural Engineering (IABSE), Sheraton Grande Walkerhill, Seoul, KR, 09-19 ♣ ○
	<b>Meier, U.</b>	The Swiss Experience with Carbon Fiber Reinforced Polymers in Bridge Engineering/Conference Bridges Europe 2012, NH Prague, CZ, 10-31 ♣ ○
	<b>Meier, U.</b>	Advanced Research Topics of FRP in Civil Engineering/International Workshop on Applications of FRP Composites in Civil Engineering, IWA-FRPCE 2012, National Center for Research on Earthquake Engineering, Taipei, TW, 11-05 ♣ ○
	<b>Meier, U.</b>	Overview, Trend and Perspective of FRP in Civil Engineering/International Workshop on Applications of FRP Composites in Civil Engineering, IWA-FRPCE 2012, National Center for Research on Earthquake Engineering, Taipei, TW, 11-05 ♣ ○
	<b>Meier, U.</b>	Long-Term Experience with Applications of CFRP Composites in Civil Engineering in Switzerland/International Workshop on Applications of FRP Composites in Civil Engineering, IWA-FRPCE 2012, National Center for Research on Earthquake Engineering, Taipei, TW, 11-06 ♣ ○
	<b>Meier, U.</b>	Examples of the Long-Term Reliability of Fiber Reinforced Polymers (FRP) in Civil Construction / International Conference on Civil Engineering Infrastructure Based on Polymer Composites, CECOM 2012, Galaxy Hotel, Krakow, PL, 11-23 ♣ ○
	<b>Richner, P.</b>	NEST – Ein Zukunftslabor für Forschung und Technologietransfer im Bau, Holcim Betontagung, Zürich, 08-30 ♣ ○
	<b>Richner, P.</b>	The transformation of the existing building stock: A precondition for a sustainable future, ICCRRR 2012, Cape Town, SA, 09-03 thru 05 ♣ ○
	<b>Richner, P.</b>	Forschung und Entwicklung für die Energiewende, Herbstseminar Bau-und Energiemesse, Bern, 11-08 ♣ ○
<b>Acoustics/ Noise Control</b>	<b>Bütikofer, R.</b>	Sekundär abgestrahlter Körpershall, 15. Symposium Bauwerksdynamik und Erschütterungsmessungen, Dübendorf, 06-15 ♣
	<b>Bütikofer, R.</b>	Abstrahlgrade von Wänden, SGA-SSA Herbsttagung, Dübendorf, 10-18 ♣
	<b>Churchill, C.</b>	Prediction of the dynamic properties of a cross laminated timber plate from an investigation of eigenmodes using a scanning laser vibrometer, Empa PhD Students' Symposium 2012, Dübendorf, 11-03 ♣
	<b>Eggenschwiler, K.</b>	Schallschutz im Holzbau, Holzforschung an der Empa, Symposium zum 75-Jahr-Jubiläum, Empa, Dübendorf, 03-05 ♣
	<b>Eggenschwiler, K.</b>	Leichte und lichtdurchlässige schallabsorbierende Vorhänge, DAGA 2012 German conference on acoustics, Darmstadt, DE, 03-19 thru 22 ♣
	<b>Eggenschwiler, K.</b>	ISO 3382-3: Neue raumakustische Parameter für Grossraumbüros für Messung und Prognose, SGA-SSA Herbsttagung, Dübendorf, 10-18
	<b>Geyer, C./Tröbs, H. M./Bütikofer, R./Krajčí, L.</b>	Measurements of flanking transmissions using a newly developed radiation efficiency/measurement method in a flanking transmission suite, Euronoise 2012, Prague, CZ, 06-10 thru 13 ♣
	<b>Heutschi, K./Poulikakos, L.</b>	Noise Monitoring of Trucks, Euronoise 2012, Prague, CZ, 06-10 thru 13 ♣ ○
	<b>Huwiler, M./Eggenschwiler K.</b>	Silence of Sound, Branchentrag Produkt- & Industriedesign HSLU, Luzern, 06-28 ♣

# Empa Activities 2012

## Conferences

<b>Acoustics/ Noise Control</b>	<b>Krajčí, L./Hopkins, C./Davy, J.L./Tröbs, H.M.</b>	Airborne sound transmission of a cross-laminated timber plate with orthotropic stiffness, Euronoise 2012, Prague, CZ, 06-10 thru 13 🌿
	<b>Manyoky, M./Wissen Hayek, U./Klein, T. M./Pieren, R./Heutschi, K./Grêt-Regamey, A.</b>	Concept for collaborative design of wind farms facilitated by an interactive GIS-based visual-acoustic 3D simulation. 13th International Conference on Information Technologies in Landscape Architecture: Digital Landscape architecture: DLA 2012, Bernburg, Dessau, DE, 05-31 thru 06-02 🌿
	<b>Müller, M./Pieren, R./Bitzer, J.</b>	Modell zur Synthese akustischer Emissionen von Windturbinen, DAGA 2012 German conference on acoustics, Darmstadt, DE, 03-19 thru 22 ♦
	<b>Pieren, R.</b>	Sound Absorption Modelling of Thin, Lightweight Curtains, Euronoise 2012, Prague, CZ, 06-10 thru 13 🌿
	<b>Poulikakos, L./Heutschi, K./Soltic, P.</b>	Environmental impact of heavy vehicles based on noise, axle load and gaseous emissions, ICWIM6, Dallas, USA, 06-04 thru 07 🌿
	<b>Schäffer, B./Zellmann, C./Krebs, W./Plüss, S./Eggenschwiler, K./Bütikofer, R./Wunderli, J. M.</b>	Sound source data for aircraft noise calculations – state of the art and future challenges, Euronoise 2012, Prague, CZ, 06-10 thru 13 🌿
<b>Applied Wood Materials</b>	<b>Tröbs, H.M./ Bütikofer, R./Geyer, C./Krajčí, L./Müller, A./Schuppisser, B.</b>	Akustische Einmessung des Leichtbauprüfstandes an der Empa in Dübendorf, DAGA 2012 German conference on acoustics, Darmstadt, DE, 03-19 thru 22 🌿
	<b>Wunderli, J.M.</b>	sonRAIL – From the scientific model to an application in practice, Euronoise 2012, Prague, CZ, 06-10 thru 13 🌿
	<b>Arnold, M.</b>	Options to tailor wood surface properties/COST FP1006 Workshop «Basics for Chemistry of Wood Surface Modification», Fachhochschule Salzburg, Kuchl/Salzburg, Austria, AT, 04-25 thru 27 🌿
	<b>Arnold, M.</b>	Effect of heat treatment on the variability of wood material properties/6th European Conference on Wood Modification , Ljubljana, SI, 09-16 thru 18 🌿
	<b>Burgert, I.</b>	Innovative Konzepte für das Biomaterial Holz/Montagskolloquien für die Praxis – Aktuelle Fragen zur Holzforschung, Institut für Baustoffe, ETH Zürich, 01-23 🌿
	<b>Burgert, I.</b>	Wood materials science for improved wood performance/Seminarvortrag, Berner Fachhochschule, Biel, 02-21 🌿 ○
	<b>Burgert, I.</b>	Forschungsschwerpunkte Holzwirtschaft – NFP66 & Wood Materials Science Lab, Holzbau Schweiz, Partner Tagung Markt, Bazenheid, 05-31 🌿
	<b>Burgert, I.</b>	Forschungsschwerpunkte Holzwirtschaft – NFP66 & Wood Materials Science Lab/Holzbau Schweiz, Partner Tagung, Bazenheid, 05-31 🌿
	<b>Burgert, I.</b>	Approaching plant cell walls from a materials science perspective/Kolloquium Univesität Freiburg, Deutschland, DE, 07-05 🌿
	<b>Burgert, I.</b>	Plant micromechanics/Franz-Volhard Symposium/Plant Biomechanics Conference, Clermont-Ferrand, France, FR, 08-23 🌿 ○
	<b>Burgert, I.</b>	Bio-inspirierte Materialien in der Holzforschung/2. Dresdner Holzanatomisches Kolloquium, Dresden, DE, 10-19 🌿 ○
	<b>Burgert, I./Harrington, M.J./Razghandi, K./Eder, M./Dunlop, J.W.C./Fratzl, P.</b>	Hydro-actuated plant organs as prototypes for convertible devices/The 4th International Conference Smart Materials, Structures and Systems, Montecatini Terme, IT, 06-12 🌿 ○
	<b>Cabane, E.</b>	Improving the dimensional stability of spruce wood by cell wall modification/SAH Statusseminar, Aula UVEK-Verwaltungsgebäude, Ittigen/Bern, 04-24 🌿 ○
	<b>Ho, T.T.T./Zimmermann, T./Caseri, W.</b>	Mechanical and Barrier Properties of Functional Nanofibrillated Cellulose/ Layered Silicate Composites/12th International Conference on Biocomposites, Marriott Gateway on the Falls, Niagara Falls, Canada, CA, 05-06 thru 08 🌿 ○
	<b>Ho, T.T.T./Zimmermann, T./Caseri, W.</b>	Mechanical and Barrier Properties of Functional Nanofibrillated Cellulose/ Layered Silicate Composites-12th International Conference on Biocomposites, Marriott Gateway on the Falls, Niagara Falls, Canada, CA, 05-06 thru 08 🌿 ○
<b>Ho, T.T.T./Zimmermann, T./Caseri, W.</b>	Nanocellulose for packaging – a material revolution?/IPI Event 2012, Schaffhausen, Schweiz, 06-06 🌿 ○	
<b>Ho, T.T.T./Zimmermann, T./Caseri, W.</b>	Nanofibrillated cellulose + Layered silicate composites for packaging applications/PTS Symposium Innovative Packaging, PTS The paper technology specialists, Munic, Germany, DE, 06-13 thru 14 🌿 ○	
<b>Künniger, T.</b>	Functionality and environmental impact of conventional biocides and nanosilver in wood coatings/ETCC/Fatipex, EPF Lausanne, 06-04 thru 06 🌿	

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## Conferences

Applied Wood Materials	<b>Schubert, M.</b>	Enzymatische Holz-Funktionalisierung mit bioaktiven Molekülen für einen effektiven Holzschutz/SAH Statusseminar, Aula UVEK-Verwaltungsgebäude, Ittigen/Bern, 04-24 🍄 ○
	<b>Schubert M.</b>	Laccase-catalysed iodination of wood for protection against microorganisms/II International Conference on Antimicrobial Research (ICAR 2012), Lisbon, PT, 11-21 thru 23 🍄 ○
	<b>Schwarze F.</b>	Holzersetzende Pilze und ihr Nutzungspotential in der Holztechnologie/Jahres HV Holzwerkstoffe Schweiz, Merlischachen, 06-15 🍄 ○
	<b>Schwarze F.</b>	Fungi go classic/ECRC «Franz-Volhard» Symposium im Max Delbrück Communications Center (MDC.C), Berlin, DE, 09-07 🍄 ○
	<b>Schwarze F.</b>	Fungus: parasites or friends for Veterans?/International Convention «I Monumentali, Varese, IT, 11-22 thru 23 🍄 ○
	<b>Tingaut, P./Zimmermann, T.</b>	Chemical modification of MFC for PLA composite applications/Event?, Stockholm, Se, 06-14 thru 15 🍄 ○
	<b>Widmann, R./Kutnar, A./Brémaud, I.</b>	Use of dynamic mechanical analyse (DMA) data for the adjustment of thermal modification processes/COST Action FP1004 Early Stage Researchers Conference, Zagreb, HR, 04-19 thru 20 🍄
	<b>Zhang, Z./Tingaut, P./Zimmermann, T./Sèbe, G.</b>	Silylated Cellulose Nanofibrils in Polymer Nanocomposites/2012 Tappi International Conference on Nanotechnology for Renewable Materials, Hyatt Regency Montreal, CA, 06-04 thru 07 🍄
	<b>Zimmermann, T.</b>	Nanocellulose von Holz für ein breites Spektrum technischer Anwendungen/Montagskolloquien für die Praxis – Aktuelle Fragen zur Holzforschung, Institut für Baustoffe, ETH Zürich, 01-23
	Building Science and Technology	<b>Zimmermann, T.</b>
<b>Zimmermann, T./Ho, T.T.T./Caseri, W.</b>		Functional nanofibrillated cellulose in barrier applications, Zellcheming, Wiesbaden/Cellulose symposium, new precursors and products, Wiesbaden, DE, 06-26 🍄 ○
<b>Allegrini, J./Dorer, V./Carmeliet, J.</b>		Impact of urban microclimate on building cooling demand predictions, ICUC 8, Dublin, IE, 08-06 thru 10 🍄
<b>Allegrini, J./Dorer, V./Carmeliet, J.</b>		Urban street canyon microclimate impact on energy demand of buildings, Status Seminar 2012, Zürich, 09-13 thru 14 🍄
<b>Brunner, S.</b>		Vakuumisolationspaneele VIP, WTA-Seminar 2012, Rapperswil, , 🍄 ○
<b>Brunner, S.</b>		VIP flat roof insulation, International Symposium on Superinsulating Materials, Brussels, BE, 04-26 🍄 ○
<b>Brunner, S.</b>		Vakuumisolationspaneele (VIP) und Qualitätssicherung, Statusseminar 2012, Zürich, 09-13 thru 14 ◆
<b>Brunner, S.</b>		Vacuum Insulation Panels for building applications, the situation in Europe (resp. Switzerland), Nanjing University of Aeronautics and Astronautics, CN, 10-11 🍄 ○
<b>Brunner, S./Stahl, T./Ghazi Wakili, K.</b>		Single and double layered vacuum insulation panels of the same thickness in comparison, BEST3, Atlanta, US, 04-02 🍄
<b>Carmeliet, J.</b>		Sorption and crystallization induced deformation: from molecular dynamics to macroscopic modeling/Cryspom Crystalization in Porous Media, Troia, PT, 09-04 thru 07 🍄 ○
<b>Carmeliet, J./Abbasion, S./Sedighi-Gilani, M./Moonen, P./Derome, D.</b>		Thermo-hygro-mechanical coupled modeling of wood /Mechanics of Nano, Micro and Macro Composite Structures, Torino, IT, 06-18 thru 20 🍄
<b>Carmeliet, J./Abbasion, S./Sedighi-Gilani, M./Moonen, P./Derome, D.</b>		THERMO-HYGRO-MECHANICAL COUPLED MODELLING OF WOOD/Mechanics of Nano, Micro and Macro Composite Structures, Torino, IT, 06-18 thru 20 🍄
<b>Carmeliet, J./Dorer, V./Allegrini, J./Saneinejad, S./Moonen, P.</b>		Building Energy Demand and Urban Microclimate including Heat Island Effects and Evaporative Cooling, IBPC 5, Kyoto, JP, 05-28 thru 31 🍄
<b>Carmeliet, J./Griffa, M./Ferdowsi B./Daub, E.G./Guyer, R.A./Johnson, P.A./Marone, C.</b>		Statistics and Mesoscale Mechanics of 2D Stick-Slipping, Sheared Granular Layers: Improving Our Understanding of Dynamic Earthquake Triggering Physical Controls / International Conference on Non-Linear Elasticity of Materials, Cefalu, IT, 07-01 thru 05 🍄
<b>Carmeliet, J./Moonen, P./Defraeye, T./Dorer, V./Blocken, B.</b>		Urban Physics: effects of wind on comfort, energy, health and driving rain; 15th Australasian Wind Engineering Society Workshop, Sydney, AU, 02-23 thru 24 🍄 ○

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## Conferences

Building Science and Technology	Derluyn H. / Griffa, M./ Mannes, D./ Jerjen, I./ Dewanckele, J./ Vontobel, P./ Sheppard, A./ Bonn, N./ Derome, D./ Cnudde, V./ Lehmann, E./ Carmeliet, J.	Probing salt crystallization damage mechanisms in porous limestone with neutron radiography and X-ray tomography / International Building Physics Conference, Kyoto, JP, 05-28 thru 31 🍀
	Derluyn, H./ Moonen, P./ Carmeliet, J.	Numerical modeling of crystallization induced damage processes / Workshop CRYSPOM III , Tróia, PT, 09-04 thru 07 🍀
	Derluyn, H./ Moonen, P./ Carmeliet, J.	Numerical modeling of crystallization induced damage processes/Cryspom Crystalization in Porous Media, Troia, PT, 09-04 thru 07 🍀
	Derome, D. / Derluyn, H./ Rafsanjani, A./ Sedighi-Gilani, M./ Abbasion, S./ Saneinejad, S./ Defraeye, T./ Poulikakos, L./ Lehmann, E./ Guyer, R./ Carmeliet, J.	Transport in porous building materials experiment and modeling/ 16th Workshop on characterization of porous materials, Bad Soden, DE, 11-13 thru 14 🍀 ○
	Derome, D. / Derluyn, H./ Sedighi-Gilani, M./ Saneinejad, S./ Defraeye, T./ Poulikakos, L./ Ghazi Wakili, K./ Lehmann, E./ Carmeliet, J.	Neutron imaging of transport in porous materials: rocks, gypsum, asphalt, clay brick, wood, and fruits / ESS Neutron Imaging User Symposium, Bad Zurzach, 04- 15 thru 18 🍀 ○
	Derome, D. / Guyer, R./ Carmeliet, J.	(Non)linear (non)elastic deformation of microporous materials subjected to sorption / International Conference on Non-Linear Elasticity of Materials, Cefalu, IT, 07-01 thru 05 🍀
	Derome, D. / Patera, A./ Rafsanjani, A./ Carmeliet, J.	HYSTERETIC SWELLING AND SHRINKAGE OF WOOD PROBED BY PHASE CONTRAST X-RAY TOMOGRAPHY/ Mechanics of Nano, Micro and Macro Composite Structures, Torino, IT, 06-18 thru 20 🍀
	Derome, D./Derluyn, H./ Jerjen, I./ Dewanckele, J./ Vontobel, P./ Cnudde, V./ Lehmann, E./ Carmeliet, J.	Characterizing salt transport and crystallization damage in porous limestone with neutron radiography and X-ray micro-tomography/Cryspom Crystalization in Porous Media, Troia, PT, 09-04 thru 07 🍀
	Derome, D./ Lee, JB./ Patera, A./ Rafsanjani, A./ Sedighi-Gilani/ M., Defraeye, T./ Lehmann, E./ Carmeliet, J.	Does dead wood remember water? / Conference Biology, Physics and Chemistry of Water, Dover, Vermont, US, 10-18 thru 20 🍀 ○
	Derome, D./ Rafsanjani, A./ Patera, A./ Abbasion, S./ Sedighi Gilani, M./ Carmeliet, J.	Hygromorphic behavior of cellular material: hysteretic swelling and shrinkage of wood probed by phase contrast X-ray tomography / Interpore, Purdue, US, 05-14 thru 16 🍀
	Derome, D./ Rafsanjani, A./ Patera, A./ Sedighi Gilani, M./ Dressler, M./ Abbasion, S./ Carmeliet, J.	The role of water in the behavior of wood / International Building Physics Conference, Kyoto, JP, 05-28 thru 31 🍀
	Derome, D./ Saneinejad, S./ Defraeye, T./ Moonen, P./ Blocken, B./ Carmeliet, J.	Analysis of evaporative cooling in street canyons: coupled model and advanced imaging of transport in porous media, 15th Australasian Wind Engineering Society Workshop, Sydney, AU, 02-23 thru 24 🍀

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## Conferences

<b>Building Science and Technology</b>	<b>Ferdowsi, B./ Griffa M./ Daub, E.G./ Guyer, R.A./ Johnson, P.A./ Marone, C./ Carmeliet, J.</b>	Intrinsic and vibration-induced stick-slip behaviour of dense granular media: micro- and meso-mechanics of dynamic earthquake triggering/ 8th European Solid Mechanics Conference (EUROMECH), Graz, AT, 07-09 thru 13 🍄
	<b>Ferdowsi, B./ Griffa, M./ Guyer, R.A./ Johnson, P.A./ Marone, C./ Carmeliet, J.</b>	3D MD modeling of slip triggering in sheared granular media by means of boundary vibration/ 17th Fall Seminar on Nonlinear Dynamics, Bayreuth, DE, 10-07 thru 10 ♦
	<b>Ghazi Wakili, K./ Binder, B./ Zimmermann, M./ Tanner, Ch.</b>	Aerogel Containing High Efficiency Insulation Layer Used for Retrofitting a 130 Years Old Building, COBEE 2012, Boulder, US, 08-01 thru 04 🍄
	<b>Ghazi Wakili, K./ Brunner, S./ Zimmermann, M. / Koebel, M.</b>	Superinsulation Materials for Building Applications, kgh 43rd HVAC&R Congress, Belgrade, RS, 12-05 thru 07 🍄
	<b>Ghazi Wakili, K./ Koebel, M./ Kaufmann, J./ Derluyn, H./ Hofer, M./ Glaetli, T./ Modregger, P.</b>	Thermal Conductivity of Gypsum Plasterboard beyond Dehydration and its Correlation with the Pore Structure, HEFAT 2012, Saint Julien, MT, 07-16 thru 18 🍄
	<b>Hugi, E./ Fontana, M./ Frangi, A./ Knobloch, M.</b>	Int. Conf. on Structures in Fire SiF 2012, ETH Zürich, 06-06 thru 08 ■
	<b>Kubilay A./ Blocken B./ Carmeliet J.</b>	Comparison of numerical methods for wind-driven rain in urban environment, ICUC 8, Dublin, IE, 08-06 thru 10 🍄
	<b>Moonen, P./ Dorer, V./ Carmeliet, J.</b>	Large Eddy Simulation of concentration fluctuations in an urban street canyon, Shanghai, CN, 09-02 thru 06 🍄 ○
	<b>Moonen, P./ Dorer, V./ Carmeliet, J.</b>	Large Eddy Simulation of concentration fluctuations in an urban street canyon, BBAA 7, Shanghai, CN, 09-02 thru 06 🍄
	<b>Moonen, P./ Gromke, C./ Dorer, V./ Carmeliet J.</b>	Performance assessment of a model for simulating dispersion in an urban street canyon with tree planting, IBPC 5, Kyoto, JP, 05-28 thru 31 🍄
	<b>Moonen, P./ Gromke, C./ Dorer, V./ Carmeliet, J.</b>	Performance assessment of a model for simulating dispersion in an urban street canyon with tree planting, CHAMPS 9, Tokyo, JP, 06-01 thru 03 🍄
	<b>Patera, A./ Derome, D./ Carmeliet, J.</b>	Occurrence of hysteresis in swelling and in sorption and detection of local deformation in wood at cellular scale / Cost Action FP 0804 Meeting, Edinburg, UK, 10-24 thru 26 🍄
	<b>Paterna, E./ Moonen, P./ Dorer, V./ Carmeliet, J.</b>	Flow around a cube: time-resolved PIV measurements and analysis, ICUC 8, Dublin, IE, 08-06 thru 10 🍄
	<b>Rafsanjani, A./ Carmeliet, J./ Derome, D.</b>	Effective poroelastic properties of softwood in relation to moisture induced swelling/ Interpore, Purdue, US, 05-14 thru 16 🍄
	<b>Rafsanjani, A./ Patera, A./ Carmeliet, J./ Derome, D.</b>	MULTISCALE MODLING OF ANISOTROPIC HYGROMECHANICAL BEHAVIOR OF NATURAL CELLULAR COMPOSITES /Mechanics of Nano, Micro and Macro Composite Structures, Torino, IT, 06-18 thru 20 🍄
	<b>Sattler, M./ Strittmatter, T./ Zumsteg, H.P./ Dorer, V./ Wiederkehr, M.</b>	Lastmanagement im Kraftwerk Haus – Der Beitrag des Gebäudes zur Integration erneuerbarer Energien im Stromnetz, Staus Seminar 2012, Zürich, 09-13 thru 14 🍄
	<b>Sedighi Gilani, M./ Hugi, E.</b>	Fire induced desorption and migration of hygroscopic moisture in wood, SiF-7, Zurich, 06-06 thru 08 🍄
	<b>Sedighi Gilani, M./Hugi, E./Carl, S./Derome, D./Carmeliet, J.</b>	Neutron imaging of hygroscopic moisture migration in wood exposed to high temperature. Interpore 4, Purdue, US, 05-14 thru 16 🍄
	<b>Stahl, T.</b>	Entwicklung und Erprobung eines Hochleistungsdämmputzes, 15. Eckernförder Fachtagung, Eckernförde, DE, 03-23 🍄
	<b>Stahl, T.</b>	Entwicklung und Erprobung eines Hochleistungsdämmputzes, WTA, Dübendorf, 04-07 🍄
	<b>Stahl, T.</b>	Die Entwicklung eines Aerogeldämmputzes und erste Testobjekte, Status Seminar 2012, Zürich, 09-13 thru 14 🍄



# Empa Activities 2012

## Conferences

<b>Building Science and Technology</b>	<b>Zimmermann, M./ Ghazi Wakili, K./ Koebel, M.</b>	International Symposium on Superinsulating Materials, Brussels, BE, 04-26 ■
	<b>Zweifel, G./ Struck, Ch./ Gaegauf, Ch./ Sattler, M./ Dorer, V./ Tillenkamp, F.</b>	Simulation der polyvalenten Energiebereitstellung mit Mikro-Wärme-Kraft-Kopplung für eine Wohneinheit mit Elektrofahrzeug, Berlin, DE, 09-26 thru 28 ♣
<b>Center for Synergetic Structures</b>	<b>de Laet, L./Mollaert, M./Roekens, J./Luchsinger, R.</b>	Experimental Investigation of a Full Scale Deployable Tensairity Beam. IASS-APCS 2012, Seoul, KR, 05- 21 thru 24 ♣
	<b>Galliot, C./Luchsinger, R.</b>	Non-linear tensile and shear biaxial behaviour of coated fabrics used in Tensairity structures: testing and modelling. International Textile Conference, Dresden, DE, 11- 29 and 30 ♣
	<b>Klis, R./Chatzi, E./Galliot, C./Luchsinger, R./Feltrin, G.</b>	Dynamic response and modal identification of a Tensairity girder. EMI-PMC 2012, Notre Dame, US, 06- 17 thru 20 ♣
<b>Concrete/ Construction Chemistry</b>	<b>Luchsinger, R./Galliot, C.</b>	Strong and light: Inflatable Structures with Tensairity. SAMPE 2012, Baltimore, US, 05- 21 thru 24 ♣ ○
	<b>Maffei, R./Carra, G./Beccarelli, P./Galliot, C./Zanelli, A.</b>	Design of inflatable complex shapes and geometrical analysis of pneumatic structures. IASS-APCS 2012, Seoul, KR, 05- 21 thru 24 ♣
	<b>Chen, H./Wyrzykowski, M./ Lura, P.</b>	Modeling of the internal relative humidity evolution in cement pastes at early ages. 2nd Int. Conf. on Microstructure Related Durability of Cementitious Composites, Amsterdam, NL, 04-11 thru 13 ♣
	<b>Deschner, F.</b>	Portland fly ash cements – a possibility to reduce the CO2-footprint of Portland cement, NaReP-Seminar, Dübendorf, 02-06 ♣
	<b>Deschner, F. / Lothenbach, B. / Winnefeld F. / Neubauer J.</b>	Change of cement chemistry and microstructure by replacing Portland cement by siliceous fly ash, Trondheim, NO, 06-18 thru 21 ♣
	<b>Deschner, F. / Lothenbach, B. / Winnefeld F. / Neubauer J.</b>	Einfluss unterschiedlicher Temperaturen auf die Hydratation eines flugaschereichen Zements, 18. Int. Baustofftagung (IBAUSIL), Weimar, DE, 09-12 thru 15 ♣
	<b>Deschner, F. / Münch B. / Winnefeld F. / Lothenbach, B.</b>	Quantifizierung des Flugaschegehaltes in Mischzementen mittels Bildanalyse von Rückstreuелеktronenbildern. GDCh-Tagung, Dübendorf, 10- 11 thru 12 ♣
	<b>Ferdowsi, B. / Griffa, M. / Carmeliet, J. / Daub, E.G. / Guyer, R.A. / Johnson, P.A. / Marone C.</b>	3D Molecular Dynamics simulations of triggering of slip in stick-slipping, sheared granular media by means of external vibration: learned lessons for Dynamic Earthquake Triggering / XVII International Conference on Nonlinear Elasticity in Materials, Cefalù, IT, 07-01 thru 7 ♣
	<b>Ferdowsi, B. / Griffa, M. / Daub, E.G. / Guyer, R.A. / Johnson, P.A. / Marone, C.J. / Carmeliet, J.</b>	Deformation pattern and evolution of the internal structure of granular media during stick-slip dynamics: micromechanics of dynamic earthquake triggering / Winter School on «Materials Deformation: Fluctuations, Scaling, Predictability», Les Houches, FR, 01-22 thru 27 ◆
	<b>Ferdowsi, B. / Griffa, M. / Guyer, R.A. / Johnson, P.A. / Marone, C.J. / Carmeliet, J.</b>	3D MD modeling of slip triggering in sheared granular media by means of boundary vibration / 17th Fall Seminar on Nonlinear Dynamics, Bayreuth, DE, 10-7 thru 10 ◆
<b>Fontana, P./ Pirskawetz, S./ Lura, P.</b>	Plastic shrinkage cracking risk of concrete – evaluation of test methods. 7th RILEM Int. Conf. on Cracking in Pavements, Delft, NL, 06-20 thru 22 ♣	
<b>Garcia, A./ Lura, P./ Partl, M.N.</b>	Influence of cement content and environmental humidity on cement-asphalt composites performance. 3rd Int. Conf. on Concrete Repair, Rehabilitation and Retrofitting, Cape Town, RSA, 09-03 thru 5 ♣	
<b>Griffa, M. / Ferdowsi, B. / Carmeliet, J. / Daub, E.G. / Guyer, R.A. / Johnson, P. / Marone, C.</b>	How external vibration affects stick-slip dynamics in sheared granular layers: the micro- and meso-mechanics of Dynamic Earthquake Triggering / 8th European Solid Mechanics Conference, Graz, AT, 07-09 thru 13 ♣	

# Empa Activities 2012

## Conferences

Concrete/ Construction Chemistry	Griffa, M. / Ferdowsi, B. / Carmeliet, J. / Daub, E.G. / Guyer, R.A. / Johnson, P. / Marone, C.	Mesosopic scale analysis of deformation patterns for dynamically triggered slip in sheared granular layers: insights into the granular mechanics of dynamic earthquake triggering via Discrete Element Method numerical simulations / European Geosciences Union General Assembly 2012, Wien, AT, 04-22 thru 27 🍀
	Griffa, M. / Ferdowsi, B. / Carmeliet, J. / Daub, E.G. / Guyer, R.A. / Johnson, P. / Marone, C.	Statistics and mesoscale mechanics of 2D stick-slipping sheared granular layers: improving our understanding of Dynamic Earthquake Triggering physical controls / XVII International Conference on Nonlinear Elasticity in Materials, Cefalù, IT, 07-01 thru 7 🍀
	Griffa, M. / Lura, P. / Leemann, A. / Neuenschwander, J. / Wyrzykowski, M. / Antonaci, P. / Scalerandi, M.	Nonlinear Mesoscopic Elasticity and microstructural developments in cement-based materials due micro-damage processes / Microstructure, setting and aging of cement: from Soft Matter Physics to sustainable materials, Monte Verità, Ascona, 08-12 thru 16 ♦
	Justs J./Deschner F./Winnefeld F./Bajare D./Lura P.	Influence of superabsorbent polymers on hydration of cement pastes with very low water-binder ratio. GDCh-Tagung, Dübendorf, 10- 11 thru 12 ♦
	Justs, J./Wyrzykowski, M./ Deschner, F./Winnefeld, F./Bajare, D./Lura, P.	Influence of superabsorbent polymers on hydration of cement pastes with very low water-to-binder ratio. GDCh-Tagung Bauchemie, Dübendorf, 10-11 thru 12 ♦
	Kaufmann, J./Winnefeld, F./Zurbriggen, R.	Untersuchung der Interaktion von Polymerdispersionen mit Fliesenoberflächen mittels Rasterkraftmikroskopie und Zeta-Potentialmessung. GDCh-Tagung, Dübendorf, 10- 11 thru 12 ♦
	Kunther, W. / Lothenbach, B. / Scrivener, K	Mörteltests: Einfluss Sulfatlösung und Zementzusammensetzung. Cemsuisse Sulfattagung, Dübendorf, 05-08 🍀 ○
	Le Saoût, G./Lothenbach, B./Hori, A./Higuchi, T./Winnefeld, F.	Hydration mechanism of quick hardening cement based on OPC blended with an amorphous calcium aluminate. 18. Int. Baustofftagung (IBAUSIL), Weimar, DE, 09-12 thru 15 🍀
	Leemann, A.	Alkali-aggregate reaction in Switzerland. Guest Lecture at ETHZ, Civil Engineering, Concrete Science course, Master, Zurich, 03-27 🍀 ○
	Leemann, A.	Betonerosion in Schweizer Abwasserreinigungsanlagen. ÖWAV-Seminar «Korrosionsschutz auf Abwasseranlagen», Wien, AT, 04-18 🍀 ○
	Leemann, A.	Grundlegende Mechanismen der AAR. Seminar on Zustandserfassung und Instandsetzung von AAR-geschädigten Bauwerken, Wildeg, 05-09 🍀 ○
	Leemann, A.	Schwinden – aktuelle Erkenntnisse. Seminar on Risse im Beton- Das Streitthema auf der Baustelle, Wildeg, 11-27 🍀 ○
	Leemann, A./ Loser, R.	Accelerated sulfate resistance test for concrete – chemical and microstructural aspects, Amsterdam, NL, 04-11 thru 13 🍀
	Leemann, A./Loser, R.	Accelerated sulfate resistance test for concrete – chemical and microstructural aspects. 2nd Int. Conf. on Microstructure Related Durability of Cementitious Composites., Amsterdam, NL, 04-11 thru 13 🍀
	Leemann, A. / Loser, R.	Sulfatschäden im Belchen Tunnel, Dübendorf, 05-08 🍀 ○
	Leemann, A. / Loser, R.	Sulfatwiderstand von Beton: Verbessertes Verfahren basierend auf der Prüfung nach SIA 262/1, Anhang D», Dübendorf, 05-08 🍀 ○
	Leemann, A./Lesaut, G.	Alkali-silica reaction: autogenous deformations and pressure development in a model system. 14th Int. Conf. on Alkali-Aggregate-Reaction., Austin/TX, USA, 05-20 thru 25 🍀
	Leemann, A./Merz C.	A comparison between an ultra-accelerated microbar test and a concrete performance test. 14th Int. Conf. on Alkali-Aggregate-Reaction., Austin/TX, USA, 05-20 thru 25 🍀
	Leemann, A./Merz C.	Validation of the concrete performance test with the degree of AAR-induced damage observed in concrete structures. 14th Int. Conf. on Alkali-Aggregate-Reaction., Austin/TX, USA, 05-20 thru 25 🍀
	Loser, R./Winnefeld, F./Nygaard, P./Bäurle, L./Leemann, A.	Einfluss verschiedener Zusatzstoffe auf Hydratation, Festigkeitsentwicklung und Stabilität von Zementstein und Mörtel, GDCh-Tagung Bauchemie, Dübendorf, 10- 11 thru 12 ♦
	Lothenbach, B	Cemsuisse Sulfattagung, Dübendorf, 05-08 ■
	Lothenbach, B.	Thermodynamic modelling and cement hydration. Public seminar, University of Sao Paulo, Sao Paulo, BR, 09-25 thru 26 🍀 ○

# Empa Activities 2012

## Conferences

Concrete/ Construction Chemistry	Lothenbach, B.	Thermodynamic modelling and determining solid solution limits. Guest Lecture at EPFL, Materials Science, Laboratory of Construction Materials, Master, Lausanne, 10-09 ♣ ○
	Lothenbach, B.	Thermodynamic modelling of cement hydration. 23rd NIST Computer Modeling Workshop, Gaithersburg, MD, USA, 07-16 thru 18 ♣ ○
	Lothenbach, B. / Kunther, W. / Idiart	Thermodynamic modeling of sulfate interaction. 3rd Int. Conf. on Concrete Repair, Rehabilitation and Retrofitting, Cape Town, RSA, 09-03 thru 5 ♣
	Lothenbach, B. / LeSauot, G.	Influence of temperature on the hydration of blended cements. 3rd Int. Conf. on Concrete Repair, Rehabilitation and Retrofitting, Cape Town, RSA, 09-3 thru 5 ♣
	Lothenbach, B. / Winnefeld, F.	Thermodynamic modelling. Workshop university of Sao Paulo, Sao Paulo, BR, 09-17 thru 21 ■ ♣ ○
	Lothenbach, B./Dilnesa, B. Z./Wieland, E.	Fate of iron during the hydration of cements. 18. Int. Baustofftagung (IBAUSIL), Weimar, DE, 09-12 thru 15 ♣ ○
	Lothenbach, B./Le Saout, G.	Temperatureinfluss auf die Hydratation von Portlandzement mit hohen Gehalten an Microsilica. GDCh-Tagung Bauchemie, Dübendorf, 10- 11 thru 12 ◆
	Lötscher, L./Leemann, A./LeSaout, G./Lothenbach, B./Espinosa Marzal, R.	Verhinderung einer Alkali-Aggregat-Reaktion durch die Verwendung von LiNO <sub>3</sub> . GDCh-Tagung Bauchemie, Dübendorf, 10- 11 thru 12 ◆
	Lura, P.	Moisture transport in fresh and hardening cementitious materials. DRYING of BUILDING and SOIL MATERIALS Workshop, Saint Gobain / Ecole des Ponts, Paris, FR, 07-03 ♣ ○
	Lura, P.	Early-age properties. Guest Lecture at EPFL, Materials Science, Laboratory of Construction Materials, Master, Lausanne, 10-16 ♣ ○
	Lura, P. /Stang, H.	Workshop «Early age dimensional changes», Nanocem Consortium Fall events, Vienna, AT, 06-11 ■
	Lura, P. /Wyrzykowski, M.	Applications of superabsorbent polymers in early-age concrete. Workshop on superabsorbent polymers organized by BASF, Trostberg, DE, 01-26 ♣ ○
	Lura, P. /Wyrzykowski, M.	Applications of superabsorbent polymers in early-age concrete. Seminar organized by Holcim Group Support, Holderbank, 02-23 ♣ ○
	Lura, P. /Wyrzykowski, M.	Early-age deformations and cracking in high-performance concrete: measurements, modelling and mitigation. Civil Engineering Seminar at EPFL, Lausanne, 03-22 ♣ ○
	Lura, P. /Wyrzykowski, M.	Modelling of self-desiccation shrinkage, drying shrinkage and their interaction at early ages. Workshop «Early age dimensional changes», Nanocem Consortium Fall events, Vienna, AT, 06-11 ♣
	Merz, C./Leemann, A.	Assessment of the residual expansion potential of concrete from structures damaged by AAR – Methodical aspects. 14th Int. Conf. on Alkali-Aggregate-Reaction., Austin/TX, USA, 05-20 thru 25 ♣
	Peretti, C./ Leemann, A./ Loser, R./ Lura, P.	Influence of different conditioning regimes on the oxygen diffusion and oxygen permeability of concrete. 2nd Int. Conf. on Microstructure Related Durability of Cementitious Composites, Amsterdam, NL, 04-11 thru 13 ♣
	Schöler, A. / Winnefeld, F. / Lothenbach, B. / Zajac, M.	Effect of cubic C <sub>3</sub> A on the hydration kinetics of Portland fly ash cement. GDCh-Tagung Bauchemie, Dübendorf, 10- 11 thru 12 ◆
	Trtik, P./Diaz, A./ Guizar-Sicairos, M./ Menzel, A./ Bunk, O.	Density mapping of hardened cement paste using PXCT, NICOM 4, Agios Nikolaos, GR, 05-31 thru 06-03 ♣
	Trtik, P./Diaz, A./ Guizar-Sicairos, M./ Menzel, A./ Bunk, O.	Density mapping of hardened cement paste using PXCT, SSOM 3Dmicroscopy conference, Les Diablerets, 03-05 thru 08 ♣ ○
	Trtik, P./ Münch, B./ Lura, P./ Wyrzykowski, M./Jefimovs, K./ Kaestner, A./Lehmann, E./ Pinzer, B.R./ Stampanoni, M./ Weiss, W.J./ Trtik, K.	Patchy microstrusturcture of early-age cement paste investigated by neutron and synchrotron tomographies/ITMNR-7, Kingston, CA, 06-16 thru 24 ♣
	Trtik, P./ Münch, B./ Lura, P./ Wyrzykowski, M./Jefimovs, K./ Kaestner, A./Lehmann, E./ Pinzer, B.R./ Stampanoni, M./ Weiss, W.J./ Trtik, K.	Patchy microstrusturcture of early-age cement paste investigated by neutron and synchrotron tomographies/NIUS2012, Bad Zurzach, 04-17 thru 18 ♣ ○

# Empa Activities 2012

## Conferences

Concrete/ Construction Chemistry	Winnefeld, F.	Interaction of superplasticizers with calcium sulfoaluminate cements. Tenth ACI International Conference on Superplasticizers and Other Chemical Admixtures in Concrete, Berlin, DE, 01-31 ♣ ○
	Winnefeld, F.	Hydration of alternative binders: Calcium sulfoaluminate cement – an example. Public seminar, University of Sao Paulo, Sao Paulo, BR, 09-25 thru 26 ♣ ○
	Winnefeld, F.	Interaction between Portland cement (OPC) and polycarboxylate-type (PCE) superplasticizers. Public seminar, University of Sao Paulo, Sao Paulo, BR, 09-25 thru 26 ♣ ○
	Winnefeld, F.	Wechselwirkungen zwischen Calciumsulfoaluminatzementen und Fließmitteln. GDCh-Tagung Bauchemie, Dübendorf, 10- 11 thru 12 ◆
	Winnefeld, F.	Interaction of superplasticizers with calcium sulfoaluminate cements. Tenth ACI International Conference on Superplasticizers and Other Chemical Admixtures in Concrete, Prague, CZ, 10-28 thru 31 ♣
	Winnefeld, F. / Lothenbach, B	GDCh-Tagung Bauchemie, Dübendorf, 10-11 thru 12 ■
Mechanical Systems Engineering	Winnefeld, F./Pelletier- Chaignat, L./Lothenbach, B./Le Saoût, G./Plusquellec, G./Müller, C./Famy, C.	Hydration of ternary binders based on Portland cement – calcium sulfoaluminate cement – calcium sulfate: influence of binder composition and water/cement ratio. 18. Int. Baustofftagung (IBAUSIL), , Weimar, DE, 09-12 thru 15 ♣
	Wyrzykowski, M./ Lura, P.	Early-age thermal deformations of cement paste and mortars. 2nd Int. Conf. on Microstructure Related Durability of Cementitious Composites, Amsterdam, NL, 04-11 thru 13 ♣
	Wyrzykowski, M./ Lura, P.	Thermal expansion of high-performance cement paste and mortar at early age. 3rd Int. Conf. on Concrete Repair, Rehabilitation and Retrofitting, Cape Town, RSA, 09-3 thru 5 ♣
	Wyrzykowski, M./ Lura, P. /D. Gawin	Modelling of internal curing with SAP at meso- and macro-level. Special Session on Internal Curing, ACI Fall Meeting, Toronto, CA, 10-21 thru 25 ♣
	Wyrzykowski, M./ Lura, P. /D. Gawin	Modelling internal curing in concrete. 4th Int. Workshop of Young Doctors in Geomechanics, W(H)YDOC 12, École des Ponts ParisTech (ENPC), Paris, FR, 11-21 thru 23 ♣ ○
	Brunner, A.J./Bachmann, F.	Acoustic Emission Monitoring of Tensile Tests on Packaged Piezoceramic Wafer Transducers, 30th European Conference on Acoustic Emission Testing & 7th International Conference on Acoustic Emission, University of Granada, Granada, E, 09-12 thru 15 ♣
	Brunner, A.J./Stelzer, S. Habrard, F.	PLSE 2012, Hampton, Virginia, USA, 05-29 ♣ ○ Super-compliant metallic electrodes for electroactive polymer actuators, Electroactive Polymer Actuators and Devices, SPIE/Smart Structures/NDE 2012, San Diego, USA, 03-12 thru 15 ♣
	Habrard, F.	Super-compliant metallic electrodes for electroactive polymer actuators, Smart Systems Integration 2012, Zurich, 03-21 thru 22 ♣
	Kovacs, G.	EAP transducers: toward industrialization, Training School on Dielectric EAP, CSEM, Neuchatel, 10-16 thru 18 ♣ ○
	Maluk, C.H., Bisby, L.A., Kraktovil, M., Terrasi G., Torero, J.	A novel experimental methodology for the characterisation of fire induced concrete spalling (HTRIS), 1st International Conference on Performance Based and Life Cycle Structural Engineering, , Hong-Kong, PRP, 12-05 thru 07 ♣ ○
Mechanics for Modelling and Simulation	Michel, S./Luchsinger, R.	Pneumatische Strukturen und bionisches Antriebskonzept, Achema 2012 Conference, Frankfurt, DE, 06-19 ♣ ○
	Terrasi, G.P./Maluk, C.H./Bisby, L.A./Hugi, E./Kanik, B.	Fire experiments of thin-walled CFRP pretensioned high strength concrete slabs under service load, 6th International Conference on FRP Composites in Civil Engineering (CICE 2012), Rome, I, 06-12 thru 15 ♣
	Weisse, B.	Improvement of the reliability of ceramic hip joint implants – 4 approaches, WMF, Lucerne, 09-25 ♣
	Ehrhardt, F.; Holdsworth, S.R.; Kühn, I.; Mazza, E.	Creep-fatigue crack development in dissimilar metal welded joints between steels and nickel base alloy, Proc. IOMM Conf. on Integrity of High Temperature Welds & Creep and Fatigue Elevated temperatures, London, GB, 09-25 thru 27 ■ ♣
	Holdsworth, S. R.	Influence of prior fatigue on creep properties; Proc. 12th Intern. Conf on Creep and Fracture of Engineering Materials and Structures (CREEP 2012), Kyoto, Jpn, 05- 27 thru 31 ♣
	Holdsworth, S. R.	Metallurgical reasons for differences in the corrosion fatigue properties of blading and disc alloys in pure steam; Proc. EPRI Expert Workshop on Corrosion Fatigue Damage in Steam Turbine Blades, Boston, USA, 07-18 and 19 ♣ ○
	Holdsworth, S.R.	Metallographic characterisation of creep-fatigue damage in power plant steels; Proc. Intern. Conf. on Advances in Condition and Remaining Life Assessment for Fossil Power Plants – Coal, Gas and HRSG, EPRI, Hilton Head, USA, 10-17 thru 19 ♣ ○
	Holdsworth, S.R.	Creep-fatigue deformation and damage interactions in advanced power turbine materials; Proc. Conf. on Cyclic Operation of Power Plants/CCGTs – Technical, Operational & Cost Issues, ETD, Charlotte, USA, 11-28 thru 30 ■ ♣ ○

# Empa Activities 2012

## Conferences

<b>Mechanics for Modelling and Simulation</b>	<b>Holdsworth, S. R.; Radosavijevic, M.; Grossmann, P.; Kühn, I.; Mazza, E.</b>	Effectiveness verification of creep-fatigue assessment procedures for fast-starting steam turbines; Proc. ASME Turbo Expo 2012, Kopenhagen, DK, 06-11 thru 15
	<b>Hosseini, E.; Holdsworth, S. R.; Mazza, E.</b>	Sensitivity of FE numerical creep analyses to the adopted creep constitutive model, Proc. 12th Intern. Conf. on Creep and Fracture of Engineering Materials and Structures (CREEP 2012), Kyoto, Jpn, 05-27 thru 31 🍄
	<b>Mayer, T./Mazza, E./Holdsworth, S. R.</b>	A Masing-type modeling concept for cyclic plasticity at elevated temperature; Proc. IUTAM Symp. on Advanced Materials Modelling for Structures; Ecole des Mines, Paris, F, 04- 23 thru 27 🍄
<b>Road Engineering/ Sealing Components</b>	<b>Pham, M.S./Holdsworth, S.R.</b>	Constitutive model for cyclic deformation response of AISI 316L based on relationships between internal stress and dislocation microstructure; Proc. 1st Intern. Workshop on Physics Based Modelling of Material Properties and Experimental Observations, Ankara, TR, 10-22 and 23 🍄
	<b>Pham, M.S./Holdsworth, S.R.</b>	Relation of microstructural condition to the evolution of internal stresses during cyclic loading of AISI 316L, Proc. 8th European Solid Mechanics Conf. ESMC, Graz, A, 07- 09 thru 13 🍄
	<b>Arraigada, M.</b>	Grossversuchsanlage MLS10 Empa/KIK-Plenarversammlung, Bern, 3-21 🍄 ○
	<b>Arraigada, M./Pugliesi, A./Partl, M. N.</b>	Initial Test Results of the New Mobile Load Simulator MLS10 in Switzerland/APT 2012, UC Davis, USA, 9-19 thru 21 🍄 ○
	<b>Blab, R. /Kluger-Eigl, W./ Füssl, J./Arraigada, M</b>	Accelerated Pavement Testing on Slab and Block Pavements using the New Mobile Load Simulator MLS 10/APT10, UC Davis, USA, 9-19 thru 21 🍄 ○
	<b>Garcia, A., Lura, P., Partl, M.N.</b>	Influence of cement content and environmental humidity on cement-asphalt composites performance/ ICCRRR 2012, Cape Town, SA, 9-2 thru 5 🍄 ○
	<b>Heutschi, K./ Poulidakos, L.D.</b>	Noise Monitoring of Trucks/ Euronoise, Prag, CZ, 6-6 thru 13 🍄 ○
	<b>Hugener, M./Partl, M.N./Morant, M</b>	Vegetable oil based rejuvenators for cold asphalt recycling/2nd int. ISAP Symposium on Asphalt Pavements and Environment , Fortaleza , BR, 10-2 thru 3 🍄 🍄 ○
	<b>Hugenschmidt, J/ Fürholz, P.</b>	ATRAS – An Automated GPR System for Data Acquisition and Storage for Roads and Bridges/ 14th Int. Conf. on Ground Penetrating Radar, Shanghai, CN, 6-4 thru 8 🍄 ○
	<b>Hugenschmidt, J/ Fürholz, P./Soldovieri F.</b>	Selected topics related to the automation of mobile GPR data/ EGU 2012 General Assembly acquisition and handling, Vienna, AT, 4-22 thru 27 ◆
	<b>Hugo, F./ Arraigada, M./Shu-ming, L./ Zefeng, T./ Kim, Y.R.:</b>	International Case Studies in Support of Successful Applications of APT in Pavement Engineering/ APT 2012, UC Davis, USA, 9-19 thru 21 🍄 ○
	<b>Kalogeropoulos, A./Hugenschmidt, J./ Van der Kruk, J./ Bikowski, J./ Brühwiler, E.</b>	GPR Full-Waveform Inversion of Chloride Gradients in Concrete/ 14th Int. Conf. on Ground Penetrating Radar, Shanghai, CN, 6-4 thru 8 🍄 ○
<b>Partl, M.N.</b>	Lab- and Full-Scale Testing of Asphalt/41ª Reunião Anual de Pavimentação, Fortaleza, BR, 10-3 thru 3 🍄 ○	
<b>Partl, M.N.</b>	Challenges of Nanoscience and opportunities in Large Scale Asphalt Pavement technologies-some Empa-research Spotlights/ BrinellVinn Graduate Course on nanostructures materials, KTH Stockholm, SE, 4-16 🍄	
<b>Partl, M.N.</b>	Asphalt Pavements for Heavy Duty Bridge Decks in Alpine Climate/TRB Construction Workshop, Nanjing, CN, 5-22 🍄	
<b>Partl, M.N.</b>	Bridge Deck Pavement Technology-Conclusion Speech/ ISAP2012, Nanjing, CN, 5-23 🍄 ○	
<b>Partl, M.N.</b>	Innovations in Pavement Engineering/ KTH Retreat , Haga Slott, Enköping, SE, 8-23 🍄 ○	
<b>Poulidakos, L.D.</b>	Application of Weigh-in-Motion in Pavement Engineering/ISWIM6, Dallas, USA, 6-4 thru 6 🍄 ○	
<b>Poulidakos, L.D.</b>	Environmental Impact of Heavy Vehicles Based on Noise, Axle Load, and gaseous Emissions/ISWIM6, Dallas, USA, 6-4 thru 6 🍄 ○	
<b>Pugliesi, A./ Arraigada, M./Partl, M.N./ Martinez, F./ Angelone, S.</b>	Utilizacion de simuladores moviles de carga MMLS3 y MLS10 para el estudios de pavimentos- 2ª parte/XVI Congreso Argentino de Vialidad y Tránsito, Cordoba, AR, 10-22 thru 26 🍄 ○	
<b>Raab, C.</b>	Effect of moisture on interlayer bonding of asphalt pavements/ Mairepav7, Auckland, NZ, 8-28 thru 30 🍄 ○	
<b>Raab, C.</b>	Stripping of Low Noise Surface Courses during Laboratory Scaled Wheel Tracking// Mairepav7, Auckland, NZ, 8-28 thru 30 🍄 ○	

# Empa Activities 2012

## Conferences

<b>Road Engineering/ Sealing Components</b>	<b>Tebaldi, G./ Dave, E./ Marsac, P./ Muraya, P./ Hugener, M./ Pasetto, M./ Graziani, A./ Grilli, A./ Marradi, A./ Wendling, L./ Gaudefroy, V./ Jenkins, K./Loizos, A./ Bocci, M</b>	Classification of Recycled Asphalt (RA) Material/2nd int. ISAP Symposium on Asphalt Pavements and Environment , Fortaleza , BR, 10-2 thru 3 ■ ♣ ○
<b>Structural Engineering</b>	<b>Czaderski, C./Said, O.</b>	En-core round Robin Testing Program / CICE 2012, 6th Int. Conference on FRP Composites in Civil Engineering, Rome, IT, 06-13 thru 15 ♣
	<b>Feltrin, G.</b>	Einfluss eines bituminösen Belags auf die Schwingungseigenschaften von Fussgängerbrücken, 2. Int. Holzbrückentage IHB 2012, Bad Wörishofen, DE, 04-19 thru 20 ♣ ○
	<b>Feltrin, G.</b>	Monitoring Bridges with Wireless Sensor Networks: A Critical Assessment, IABMAS 2012, Taylor and Francis, Stresa, IT, 07-08 thru 12 ♣ ○
	<b>Feltrin, G.</b>	Wireless Sensor Networks: A Monitoring Tool for Improving Remaining Lifetime Estimation, Civil Structural Health Monitoring Workshop (CSHM-4), Berlin, DE, 11-6 thru 8 ♣ ○
	<b>Feltrin, G./Weber, B.</b>	Temperaturinduzierte Veränderung der Schwingungseigenschaften einer Fussgängerbrücke aus Holz mit Gussasphaltbelag, 15. Symposium für Bauwerksdynamik, Ziegler Consultants, Empa Akademie Dübendorf, 06-15 ♣ ○
	<b>Fernandez-Cabo, J./Bona-Gallego, E./Bona-Gallego, M./Avila-Nieto, M./ Avila-Jalvo, J./Widmann, R./ Fernandez-Lavandera, J./ Diez-Barra, R.</b>	Timber composite structures: literature review and new proposals in the analysis, design and construction, COST Action FP1004, Early Stage Researches Conference, University of Bath, Zagreb, HR, 04-19 thru 20 ♣
	<b>Franke, B./Widmann, R.</b>	Zustandserfassung und Verstärkung von Brettschichtholz, 44. Fortbildungskurs SAH Schweiz. Arbeitsgemeinschaft für Holzforschung, Weinfelden, 10-23 thru 24 ♣ ○
	<b>Ghafoori, E./Motavalli, M.</b>	Prestressed FRP for fatigue crack arrest in structures, ACUN6 Composites and Nanocomposites in Civil, Offshore and Mining Infrastructure, Melbourne, AU, 11-14 thru 16 ♣
	<b>Guadagnini, M./ Serbescu, A./ Palmieri, A. /Matthys, S./ Bilotta, A./ Nigro, E./ Ceroni, F./Czaderski, C./ Olia, S./ Szabo, Z./ Balazs, G./ Mazzotti, C.</b>	Round Robin Test on the bond behaviour of externally bonded FRP Systems to Concrete / CICE 2012, 6th Int. Conference on FRP Composites in Civil Engineering, Rome, IT, 06-13 thru 15 ♣
	<b>Jalsan, K. /Flouri, K./Feltrin, G.</b>	Bi-Objective Layout Optimization of a Wireless Sensor Network for Footbridge Monitoring, IABMAS 2012, Taylor and Francis, Stresa, IT, 07-08 thru 12 ♣
	<b>Jockwer, R./Steiger, R./Frangi, A.</b>	Design of glulam beams with notches at the support, COST Action FP1004, Early Stage Researches Conference, University of Bath, Zagreb, HR, 04-19 thru 20 ♣
	<b>Maslanka, M./Weber, F.</b>	New adaptive tuned mass damper 65th Anniversary Jubilee Conference of the Faculty of Mechanical Engineering and Robotics, AGH University of Science and Technology, Krakow, PL, 09-09 ◆ ♣
	<b>Michels, J./Czaderski, C./ Brönnimann, R./Motavalli, M.</b>	Gradient anchorage method for prestressed CFRP strips – principle and application, IABMAS 2012, Taylor and Francis, Stresa, IT, 07-08 thru 12 ♣
	<b>Michels, J./Czaderski, C./El-Hacha, R./Motavalli, M.</b>	Partially Cured Epoxy Adhesive for Anchoring Prestressed CFRP Strips on Concrete, F1A03 / APFIS 2012, Hokkaido University, Sapporo, JP, 02-02 thru 04 ♣
	<b>Steiger, R.</b>	Ein Überblick zur Revision der Holzbaunorm SIA 265, 44. Fortbildungskurs SAH Schweiz. Arbeitsgemeinschaft für Holzforschung, Weinfelden, 10-23 thru 24 ♣ ○
	<b>Steiger, R./Köhler, J./Fink, G./Jockwer, R.</b>	Assessment of selected Eurocode based design equations in regard to structural reliability, CIB-W18 Meeting 2012/45-102-1, , Vaxjö, SE, 08-27 thru 30 ♣
	<b>Theiler, M./Frangi, A./Steiger, R.</b>	Design of timber columns based on 2nd order structural analyses, CIB-W18 Meeting 2012/45-2-1, Vaxjö, SE, 08-27 thru 30 ♣
	<b>Weber, B./Feltrin, G.</b>	Modelling the temperature-dependent dynamic behaviour of a timber bridge with asphalt pavement, COMSOL Conference Europe 2012, Milano, IT, 10-10 thru 12 ♣
	<b>Weber, F./Máslanka, M./Distl, J.</b>	Nowy adaptacyjny dynamiczny tłumik drgań: Udział w opracowaniu i badaniach w ramach współpracy z instytutem EMPA w Szwajcarii. 65th Anniversary Jubilee Conference of the Faculty of Mechanical Engineering and Robotics, Krakow, Poland, 09-13, Krakow, PL, ◆

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## Conferences

<b>Structural Engineering</b>	<b>Weber, F./Maslanka, M./Distl, H./ Paroli, L./ Mangerik, L.</b>	Semi-active tuned mass damper with MR damper for Volgograd Bridge, Russia, 15. Symposium für Bauwerksdynamik, Ziegler Consultants, Empa Akademie Dübendorf, 06-15 🍄 ○
	<b>Widmann, R./Jockwer, R./ Frei, R./Haeni, R.</b>	Comparison of different techniques for the strengthening of glulam members, COST Action FP1004, Early Stage Researches Conference, University of Bath, Zagreb, HR, 04-19 thru 20 🍄
	<b>Widmann, R./Kutnar, A./Brémaud, I.</b>	Use of Dynamic Mechanical Analyse (DMA) Data for the Adjustment of Thermal Modification Processes, Sixth European Conference on Wood Modification 2012, Ljubljana, SI, 09-17 thru 18 🍄
	<b>Zemp, R./de la Llera, J.C. / Weber, F.</b>	Control of tuned masses using MR dampers and a new real time feedback signal and physical controller, 15th World Conference on Earthquake Engineering WCEE, Lisbon, PT, 09-24 thru 28 🍄
		<b>Materials meet Life</b>
	<b>Krug, H.F.</b>	NANOMATERIALIEN – ANWENDUNGEN UND AUSWIRKUNGEN: Risiken eines neuen Technologiefeldes / Empa-Kurs, Empa Dübendorf, 03-07 🍄 ○
	<b>Krug, H.F.</b>	Nanomedicine – Nanotoxicology: controversial aspects of nanotechnological applications / NanoDiARA Conference on Nanomedicine, Berlin, DE, 04-19 thru 20 🍄 ○
	<b>Krug, H.F.</b>	Nanomaterials and ceramic Nanoparticles – Use without Side Effects? / 10 <sup>th</sup> CMCEE Conference, Dresden, DE, 05-21 thru 24 🍄 ○
	<b>Krug, H.F.</b>	Düsentrieb goes market – Von der Idee zur Innovation? / 12. Ostschweizer Technologiesymposium, St.Gallen, 08-24 🍄 ○
	<b>Krug, H.F.</b>	Reduction of energy consumption and environmental pollution: Material challenges for our future / 3rd International WMRIF Workshop for Young Materials Scientists, Bangkok, TH, 08-28 thru 31 🍄 ○
	<b>Krug, H.F.</b>	«Nanosafety and Risk Assessment: Controversial Results of Toxicological Studies» / 6 <sup>th</sup> Int. Conference on Nanotoxicology, Beijing, CN, 09-04 thru 07 🍄 ○
	<b>Krug, H.F.</b>	«Nanosicherheit und Risikoabschätzung: kontroverse Resultate von toxikologischen Studien» / acatech, München, DE, 10-11 🍄 ○
	<b>Krug, H.F.</b>	Kleine Partikel, grosse Bedenken: Die internationale Risikodebatte und ihre Schwächen / 6. GHUP Jahrestagung, Freiburg, DE, 11-22 thru 23 🍄 ○
<b>Advanced Fibers</b>	<b>Amberg, M./ Rupper, P./ Barbara, H./ Patscheider, J./ Benkhaled, C.</b>	Morphology of Sputtered Gold and Silver Thin Film, PSE – Plasma Surface Engineering, Garmisch, DE, 09-11 🍄
	<b>Amberg, M./Fortunato, G./Hegemann D.</b>	Fadenbeschichtung mit Niederdruckplasmen, Workshop Fadenbeschichtung – TITV Greiz, Greiz, DE, 10-18 🍄 ○
	<b>Amberg, M./Klaus, M./Fortunato, G./Hegemann D.</b>	Möglichkeiten und Hochskalierung plasmabeschichteter Fäden, 51st MFC-Man Fiber Conference, Dornbirn, AT, 09-21 🍄 ○
	<b>Amberg, M./Klaus, M./Fortunato, G./Ritter, A./Hegemann D.;</b>	Hightech Gold-Beschichtung macht Textil zum edlen Fashion-Element, Innovation Day, Empa Dübendorf, 08-30 🍄
	<b>Fortunato, G./Tenniche, A./Michalow, K./Gottardo, L./Reifler, F.A., Hufenus, R.</b>	Development of PET Fibers for Photocatalytic Degradation of OrganicMolecules, Fiber Society Spring Conference, St. Gallen, 05-25 🍄
	<b>Gaan, S.</b>	EMPA: Advanced Fibers, FP7-REGPOT-2008-1-229801:T-Pot project, Unlocking the Croatian Textile Research Potentials, Zagreb, HR, 02-16 🍄 ○
	<b>Gaan, S.</b>	Standardization and Testing of Flame Retardant Textiles, FLARTEX COST meeting, Paris, FR, 11-12 thru 13 🍄 ○
	<b>Gaan, S./Ganu, S./Ritter, H./Rupper, P./Reifler, F./Faller, M./Roth, C.</b>	Protective and Insulative Coatings for e-Fibers, The Fiber Society Spring Conference, Empa St. Gallen, 05-23 thru 25 🍄
	<b>Gaan, S./Neisius, M.</b>	P-N Bonded Organophosphorus Compounds: Synthesis and Flame Retardant Application, ICPC 2012: 19th International Conference on Phosphorus Chemistry, Rotterdam, NL, 07-08 thru 12 🍄 ○
	<b>Gaan, S./Neisius, M./Hannan, A.</b>	Developments of Flame Retardants for Textiles, 45th IDC 2011, IDC – International Detergency Conference, Duesseldorf , DE, 05-04 🍄 ○
	<b>Guex, G.</b>	An MSC-seeded PCL graft provides heart function stabilisation, Swiss Experimental Surgery Symposium, SESS, Genf, 01-20 🍄

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<b>Advanced Fibers</b>	<b>Guex, G.</b>	Evaluation of an MSC-seeded polycaprolactone graft in a rat model of myocardial infarction, PhD Symposium, University of Berne, Bern, 02-01 🍀
	<b>Guex, G.</b>	A novel electrospun biograft for heart function stabilisation after myocardial infarction, AGLA & Cardiovascular Biology Meeting, Zürich, 03-08 🍀
	<b>Guex, G.</b>	Functionalised scaffolds for myocardial VEGF delivery, 7th Ascona International Workshop on Cardiomyocyte Biology, Ascona, 04-25 ♦
	<b>Guex, G./Frobert, A./Cook, S./Fortunato, G./Körner, E./Hegemann, D./Fouassier, C./Valentin, J./Carrel, T./Tevearai, H./Giraud, M.N.</b>	Biodegradable Fibers for Cardiac Repair, The Fiber Society Spring Conference, Empa St. Gallen, 05-23 thru 25 🍀
	<b>Halbeisen, M.</b>	Nanotechnologie für die Entwicklung der textilen Zukunft, Rotary Club Oberer Bodensee, Arbon, 02-03 🍀 ○
	<b>Halbeisen, M.</b>	Interferenz-Farben: Faser-Mikrostrukturierung auf Textilien, 51. Chemiefasertagung, Dornbirn, AT, 09-21 🍀 ○
	<b>Hegemann, D.</b>	Mikro- und Nanotechnologie zur Entwicklung leitfähiger Fasern, Mikro- und Nanotechnologie – Infoabend, Buchs, 03-15 🍀 ○
	<b>Hegemann, D.</b>	Plasmafunktionalisierung von Textilien und Fasern: von der Forschung zu Anwendungen, 12. Workshop AK Atmosphärendruckplasma, Chemnitz, DE, 05-09 🍀 ○
	<b>Hegemann, D.</b>	Plasma Chemical and Physical Aspects of Functional Plasma Polymers, Gordon Research Conference on Plasma Processing Science, Smithfield (RI), US, 07-23 ♦
	<b>Hegemann, D.</b>	Die Plasmatechnologie erwächst den Kinderschuhen, NanoTalks #1 Plasmatechnologie – Neues für Kundennutzen und Prozessverbesserung, St.Gallen, 09-27 🍀 ○
	<b>Hegemann, D.</b>	Oberflächen- und Gasphasenprozesse zur Erzeugung funktionaler Plasmaschichten auf Polymer substraten, 20. Neues Dresdner Vakuumtechnisches Kolloquium (NDVaK), Dresden, DE, 10-25 🍀 ○
	<b>Hegemann, D.</b>	Nano Textiles: What can be expected from it?, International Conference on Textile Coating and Laminating (TCL), Valencia, ES, 11-15 🍀 ○
	<b>Hegemann, D./Drabik, M./Hanselmann, B./Amberg, M.</b>	Plasma Coating of Fibers: Specifics and Opportunities, Fiber Society Spring Conference 2012, St.Gallen, 05-25 🍀
	<b>Hegemann, D./Hanselmann, B./Blanchard, N./Drabik, M.</b>	Control of Film Density and Porosity of Functional Plasma Polymers, 13th Int. Conf. on Plasma Surface Engineering (PSE), Garmisch-Partenkirchen, AT, 09-11 🍀
	<b>Hegemann, D./Hanselmann, B./Drabik, M.</b>	Plasma Chemical Gas Phase Processes in Plasma Polymerization, 5th International Workshop on Plasma Spectroscopy (IPS 2012), Giens, FR, 🍀
	<b>Hegemann, D./Hanselmann, B./Drabik, M./Amberg, M.</b>	Reel-to-Reel Plasma Functionalization of Fibers: Opportunities and Specifics, Aachen-Dresdner International Textile Conference (ADITC), Dresden, DE, 11-30 🍀 ○
	<b>Heuberger, M.</b>	Structure mechanics and dynamics of confined fluids, Engineering Conferences International (ECI), Advances in Tribology, Puntarenas, CR, 01-10 🍀 ○
	<b>Heuberger, M.</b>	Novel Fibers as Base Technology for Smart Textile Integration, CIMTEC 2012, Conference, Montecatini Terme, IT, 06-12 🍀 ○
	<b>Heuberger, M./Schurtenberger, E.</b>	Trapping fluctuations in confined carbon dioxide near the supercritical ridge, Spring Conference of the American Physical Society (APS), Boston MA, US, 02-02 🍀
	<b>Hufenus, R.</b>	Fasern mit adaptiven Dämpfungseigenschaften, Faserverbundwerkstoffe im Automobilbau und Transportwesen, Dübendorf, 01-13 🍀 ○
	<b>Hufenus, R.</b>	Fibers with flexure rate dependent damping properties, 4th International R&D Project Proposals Brokerage Event in Textiles and Clothing, Bursa, TR, 02-02 🍀 ○
	<b>Hufenus, R.</b>	Multicomponent Synthetic Fibers, ITCF-Seminar, ITCF Denkendorf, DE, 07-24 🍀 ○
	<b>Hufenus, R.</b>	Innovation through bicomponent melt spinning and fiber nanomodification, Nanotec Seminar, Bangkok, TH, 12-11 🍀 ○
	<b>Hufenus, R. (Einladung), Gaan, S. (Vortrag)</b>	Biodegradable bicomponent fibers from renewable sources, 243th American Chemical Society Meeting: Advanced Materials from Cellulose and Renewable Polymers, San Diego, US, 03-25 🍀 ○
	<b>Hufenus, R./Hegemann, D./Gaan, S./Reifler, F.A./Scherer, L.J.</b>	Base fiber technologies for smart textiles, The Fiber Society Fall 2012 Conference, Boston MA, US, 11-07 thru 09 🍀



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<b>Advanced Fibers</b>	<b>Hufenus, R./Rossi, R.</b>	Fiber Research for Tomorrow's Applications, The Fiber Society 2012 Spring Conference, Empa, St. Gallen, 05-23 thru 25 ■
	<b>Liang, S./Neisius, M./Gaan, S.</b>	Recent Developments in Non-Intumescent Flame Retardant Coatings, ENFIRO workshop, Brussels, BE, 11-07 thru 08 ♣ ○
	<b>Liang, S./Yim, S./Neisius, M./Gaan, S.</b>	Development of Halogen-Free Flame Retardant Coatings, European Coating Conference, Berlin, DE, 03-13 thru 14 ♣ ○
	<b>Neisius, M./Gaan, S.</b>	Recent Development in Flame Retardancy of Cellulose and its Derivatives, 243th American Chemical Society Meeting, San Diego, US, 03-26 ♣ ○
	<b>Neisius, M./Gaan, S.</b>	Protective and Insulative Coatings for e-Fibers, ECC Coatings Conference: Functional Coatings, Berlin, DE, 06-05 ♣ ○
	<b>Neisius, M./Gaan, S./Liang, S.</b>	Flame Retardants for Flexible Polyurethane Foams: Structure-Property-Relationship Studies, 243th American Chemical Society Meeting: ACS Fire and Polymers Conference, San Diego, US, 03-25 ♣ ○
	<b>Reifler, F.A.</b>	Innovation through bicomponent melt spinning and fiber micro- and nano-modification, Polyester & PET Chain 2012 – 16th Annual Polyester & PET Chain World Congress, Zürich, 02-15 ♣ ○
	<b>Reifler, F.A./Sellami, F./Barbadoro, P./Hufenus, R.</b>	Overjacketing extrusion technology for novel bicomponent fibers, 51st Dornbirn Man-Made Fibers Congress, Dornbirn, AT, 09-19 ♣ ○
	<b>Schöller, K.</b>	Selective reversible binding and release from thin coatings, Marie Curie Actions Conference, Dublin, IRL, 07-10 thru 11 ◆
	<b>Schöller, K.</b>	Reversible Selective Binding and Release of Small Molecules from Thin Polymer Coatings, SCS-2012 Fall Meeting, Zürich, 09-13 ◆
<b>Biomaterials</b>	<b>Aschwanden, S.</b>	Development of multi-enzyme reactions for methylation processes, 7th International Summer School on Advanced Biotechnology, Palermo, IT, 09-10 thru 12 ♣
	<b>Boesel, L.</b>	Crystallization of PLA in the interlayer of clay particles, 7th International Conference «Nanostructured Polymers and Nanocomposites», Prag, CZ, 04-24 thru 27 ♣
	<b>Bühler, M.</b>	A novel approach for optimizing and designing plasticizers for biopolymer blends using experimental design, International Conference on Biobased Polymers and Composites, Siofok, HU, 05-27 thru 31 ♣
	<b>Faccio, G.</b>	Engineering of lactate oxidase for tyrosinase-mediated cross-linking, 2nd Symposium on Protein engineering for biocatalysis, Greifswald, DE, 08-29 thru 31 ◆
	<b>Faccio, G.</b>	Proteolytic processing of tyrosinase, 8th International Copper Meeting – Copper in Biology, Alghero, IT, 09-30 thru 10-05 ◆
	<b>Heck, T.</b>	Site-directed protein immobilization on solid support using the sortase SrtA from Staphylococcus aureus, Gordon Research Conference: Biointerface Science, Les Diablerets, 05-20 thru 25 ◆
	<b>Heck, T.</b>	Site-directed protein immobilization on solid support using the sortase SrtA from Staphylococcus aureus, 13th Swiss-Japanese Conference on Biotechnology and Bioprocess Engineering, Walzenhausen, 11-04 thru 07 ◆
	<b>Ihssen, J.</b>	Wood protection by laccase-iodide treatment, Achema Technology Transfer Days, Frankfurt am Main, DE, 06-18 thru 22 ♣
	<b>Ihssen, J.</b>	Iodination of wood and phenolic compounds by laccase catalysis, 13th Swiss-Japanese Conference on Biotechnology and Bioprocess Engineering, Walzenhausen, 11-04 thru 07 ◆
	<b>Kämpf, M.</b>	Development of a bioprocess for the high yield production of glycoconjugate vaccines against Shigella bacteria in E.coli, 13th Swiss-Japanese Conference on Biotechnology and Bioprocess Engineering, Walzenhausen, 11-04 thru 07 ◆
	<b>Lavielle, N.</b>	Controlled formation of poly(ε-caprolactone) ultrathin electrospun nanofibres in a hydrolytic degradation-assisted process, Electrospinning: Principles, Possibilities and Practice 2012, London, UK, 03-21 thru 22 ♣
	<b>Le Meur, S.</b>	Utilization of low-cost agricultural feedstock to produce mcl-PHAs by engineered strains. 1 DAY SYMPOSIUM Biocatalysis, Dübendorf, Switzerland, Dübendorf, 01-18 ♣ ○
	<b>Le Meur, S.</b>	Utilization of low-cost agricultural feedstock as carbon source for production of medium-chain-length polyhydroxyalkanoates (mcl-PHA) by engineered strains, 5th European Symposium «Polymerix 2012», Rennes, FR, 05-31 thru 06-01 ♣
	<b>Pham, P.H.</b>	Sortase-Catalyzed Site-Directed Protein Couplings, 7th International Summer School on Advanced Biotechnology, Palermo, IT, 09-10 thru 12 ♣
	<b>Reiss, R.</b>	Engineering of bacterial laccase-mediator-systems, 15th European Congress on Biotechnology, Istanbul, TR, 09-23 thru 27 ♣
	<b>Richter, M.</b>	Enzymes and Materials, Empa, 2nd 1 Day Symposium Biocatalysis, Dübendorf, 01-18 ■ ♣ ○
<b>Richter, M.</b>	Prinzipien der Biosynthese, Conference 2012 BMBF Collaborative Research Project «Embodied Information», Freie Universität Berlin, Berlin, DE, 06-15 thru 16 ♣ ○	
<b>Richter, M.</b>	Cloning, expression and characterization of a cholesterol oxidase from Chryseobacterium gleum, BioCat 2012, Hamburg, DE, 09-02 thru 06 ♣	
<b>Richter, M.</b>	Revcel, a resorbable biomaterial as wound dressing, 3rd TERMIS World Congress «Tissue Engineering and Regenerative Medicine», Wien, AT, 09-05 thru 08 ◆	

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<b>Biomaterials</b>	<b>Richter, M.</b>	Revcel, a resorbable biomaterial as wound dressing, CTI Medtech Event 2012, Luzern, 09-24 2012 ◆
	<b>Richter, M.</b>	Laccases – Boring or Valuable Enzymes for Diverse Biotech Applications? 13th Swiss-Japanese Conference on Biotechnology and Bioprocess Engineering, Walzenhausen, 11-04 thru 07 ◆ ♣ ○
	<b>Richter, M.</b>	Enzyme und Materialien, 8. Wissenschaft trifft Wirtschaft, BioLAGO, Konstanz, DE, 12-14 ♣ ○
	<b>Schmidt, S.</b>	Comparison of different methods for biofilm quantification in microtiter plates. Biofilm5, Paris, FR, 12-10 thru 12 ◆
	<b>Thöny-Meyer, L.</b>	Tyrosinase and laccase – copper enzymes for biotechnology, Albert-Ludwigs-University, Freiburg i. Br., DE, 01-12 ♣ ○
<b>Electronics/ Metrology/ Reliability</b>	<b>Thöny-Meyer, L.</b>	Structural insights from random mutagenesis of Campylobacter jejuni oligosaccharyl transferase PglB, Gordon Research Conference Biocatalysis, Smithfield, RI, US, 07-8 thru 13 ♣ ○
	<b>Grossmann, G.</b>	Nanotechnologie in der Elektronik, 15. Europäisches Elektroniktechnologie- Kolleg, Mallorca, ES, 03- 19 thru 21 ♣ ○
	<b>Hack, E.</b>	Speckle 2012, Vigo, ES, 09-10 thru 13 ■ ♣
	<b>Jacob, P.</b>	Fehlermechanismen in kleinen Geometrien, ITG Tagung: «EDD (ElectroDynamic Discharge) -ein unterschätztes Betriebsrisiko mit EOS-Folgen», Bad Schandau, Grainau, DE , 05-14 thru 16 ♣ ○
	<b>Jacob, P.</b>	ESDA Symposium 2012 on EOS/ESD: «ESD Risk evaluation of automatic semiconductor process equipment – A new guideline of the German ESD Forum e.V.», Tucson, USA, 09-10 thru 17 ♣
	<b>Jacob, P.</b>	41. Kolloquium Halbleiter-Leistungs-Bauelemente und ihre Systemtechnische Integration: «Überlegungen zu den Anforderungen von Leistungshalbleiter-Bauelementen in Windkraftwerken – Auszüge und Erfahrungen aus Fehleranalysen und Gesprächen mit Systemherstellern», Freiburg i. Breisgau, DE, 10-30 ♣ ○
	<b>Jacob, P.</b>	38th ISTFA International Symposium for Testing and Failure Analysis «EOS-the Old, Unknown Phenomenon», Phönix, USA, 11-13 thru 14 ♣
	<b>Jacob, P.</b>	Universität Stuttgart IMS (Institut f. Mikrosystemtechnik): «Laserinduzierte Schäden in Mikrochips», Stuttgart, DE, 11-23 ♣ ○
	<b>Jacob, P.</b>	ESD Workshop «Richtlinie des ESD Forum e.V. für die Vorgehensweise bei der ESD-Risikobewertung für ESD-gerechte Maschinen und Anlagen – was ist neu in 2012?», Frankfurt, DE, 11-26 ♣ ○
	<b>Scholder, O.</b>	SPS, Zürich, 06-21 thru 22 ◆
	<b>Schütz, Ph.</b>	Conference on Industrial Computed Tomography (ICT), «Strategies for the Reduction of Environmental Scattering in X-ray Computed Tomography», Wels, AT, 09-16 thru 22 ♣
	<b>Schütz, Ph.</b>	DACH Jahrestagung 2012, «Verfahren zur Reduktion der Umgebungsstreuung in der Röntgencomputertomographie», Graz, AT, 09-16 thru 21 ♣
	<b>Materials-Biology Interactions</b>	<b>Schütz, Ph.</b>
<b>Stiefel, M.</b>		EUFANET: «Smart Failure Analysis for New Materials in Electronic Devices», Dresden, DE, 09-17 thru 18
<b>Scholder, O.</b>		7th Int. Workshop on Nano-Scale Spectroscopy& Nanotechnolgie, Zürich, 07-02 thru 7 ♣
<b>Bürki-Thurnherr, T.</b>		The need of a simplified but reliable human placental tissue model for nanomaterial testing: An organotypic microtissue and perfusion transwell system approach/5th European Human ex vivo Placental Perfusion Workshop, Manchester, UK, 06-14 thru 15 ♣
<b>Bürki-Thurnherr, T./Annaheim, H./Rimann, M./Kelm, J.M./Graf-Hausner, U./Wick, P.</b>		The need of a simplified but reliable human placenta barrier tissue model for nanomaterial or drug testing: an organotypic microtissue approach/3D cell culture Conference, Zürich, 03-14 thru 16 ◆
<b>Grafmüller, S.</b>		Determination of the physicochemical properties responsible for placental translocation of nanomaterials using ex vivo human placental perfusion/5th European Human ex vivo Placental Perfusion Workshop, Manchester, UK, 06-14 thru 15 ♣
<b>Grafmüller, S./Sommerhalder, J./Manser, P./Diener, L./Diener, P.-A./Jochum, W./Krug, H.F./Wick, P./von Mandach, U.</b>		Nanoparticle transport across the human placenta/Jahreskongress der Schweizerischen Gesellschaft für Gynäkologie und Geburtshilfe in Interlaken , Interlaken, 06-28 thru 30 ◆

# Empa Activities 2012

## Conferences

<b>Materials-Biology Interactions</b>	<b>Hirsch, C.</b>	Challenges and obstacles on the way to a reliable in vitro platform for nanomaterial toxicity testing/OECD Expert Meeting (Expert consultation meeting of the WPMN steering group 7 on alternative test methods in nanotoxicology), Paris, FR, 03-27 thru 29 ♣ ○
	<b>Hirsch, C.</b>	A comprehensive evaluation platform to assess nanoparticle toxicity in vitro; Mechanistic study towards a better understanding of ZnO nanoparticle toxicity/EuroTox, Congress of the European Societies of Toxicology, Stockholm, SE, 06-17 thru 20 ♣
	<b>Hirsch, C.</b>	Challenges and obstacles on the way to a reliable in vitro platform for nanomaterial toxicity testing/ETH Zürich, Institute of Food, Nutrition and Health, Zürich, 10-02 ♣ ○
	<b>Hirsch, C.</b>	A novel comprehensive evaluation platform to assess nanoparticle toxicity in vitro/ESTIV European Society for Toxicology in vitro, Lissabon, PT, 10-19 ♣
	<b>Hirsch, C./Rösslein, M./Wick, P./Krug, H.F./</b>	A novel comprehensive evaluation platform to assess nanoparticle toxicity in vitro/3D cell culture Conference, Zürich, 03-14 thru 16 ◆
	<b>Hirsch, C./Rösslein, M./Wick, P./Krug, H.F./</b>	How nanomaterials might interfere with «simple» in vitro toxicity assays/CCMX Annual Meeting 2012, Bern, 04-25 ◆
	<b>Idaszek, J./Zell, V./Bruinink, A./Swieszkowski, W./Kurzydowski, K.J.</b>	Ternary Composite with Improved Mechanical Properties and Human Bone Marrow Mesenchymal Stem Cells Response/9th World Biomaterials Congress, Chengdu, CN, 06-01 thru 05 ♣
	<b>Idaszek, J./Zinn, M./Obarzanek-Fojt, M./Zell, V./Świąszkowski, W./Bruinink, A.</b>	Proliferation of Human Bone Marrow Mesenchymal Stem Cells on PHBV-Based Binary and Ternary Composites/3rd TERMIS World Congress 2012 «Tissue Engineering and Regenerative Medicine», Wien, AT, 09-05 thru 08 ◆
	<b>Kaiser, J.-P./Diener, L./Wick, P.</b>	Nanoparticles in Paints: A Safe Strategy to Protect Façades and Surfaces?/NanoSafe 2012, Grenoble, FR, 11-13 thru 15 ◆
	<b>Lischer, S./Rottmar, M./Tobler, U./Maniura, K.</b>	Different cell fate for human osteoblasts and osteosarcoma cell line MG63 on implant surfaces/SSB2012 – 18th Swiss Conference in Biomaterials, Zürich, 05-03 ◆
	<b>Lischer, S./Rottmar, M./Tobler, U./Maniura, K.</b>	Different cell reaction of cell lines and primary human cells towards biomaterials/22nd Annual BioInterface Conference 2012, Dublin, IE, 10-23 thru 25 ◆
	<b>Müller, M./Studer, D./Maniura-Weber, K./Zenobi-Wong, M.</b>	Novel bioprinted co-culture system for investigating chondrogenesis/International Conference on Biofabrication 2012, Manchester, UK, 10-29 thru 31 ◆
	<b>Obarzanek-Fojt, M., Lizundia, E., Sarasua, J.R., Bruinink, A.</b>	MWCNT reinforced PLLA composite – a good material candidate for bone implants? / SSB2012 – 18th Swiss Conference in Biomaterials, Zürich, 05-03 ◆
	<b>Obarzanek-Fojt, M./Di Maggio, N./Rottmar, M./Zell, V./Banfi, A./Bruinink, A.</b>	Defined multiple cell type 3D cocultures for biomaterial evaluations/3D cell culture Conference, Zürich, 03-14 thru 16 ◆
	<b>Rösslein, M.</b>	Transcript Isoform Standards – Quantitative RNA-seq-in silico work/Group Seminar at NIST, Gaithersburg, MD, USA, 08-24 ♣ ○
	<b>Rösslein, M.</b>	Next Generation Sequencing: Urgent Needs for Standardized Performance Metrics/Universitätsspital, Institut für Klinische Pathologie, Zürich, 10-26 ♣ ○
	<b>Rottmar, M./Richter, M./Mäder, X./Grieder, K./von Rechenberg, B./Nuss, K./Zimmermann, E./Buser, S./Dobmann, A./Blume, J./Bruinink, A.</b>	Revcel, a resorbable biomaterial as wound dressing/3rd TERMIS World Congress 2012 «Tissue Engineering and Regenerative Medicine», Wien, AT, 09-05 thru 08 ◆
<b>Rottmar, M./Richter, M./Mäder, X./Grieder, K./von Rechenberg, B./Nuss, K./Zimmermann, E./Buser, S./Dobmann, A./Blume, J./Bruinink, A.</b>	Revcel, a resorbable biomaterial as wound dressing/SSB2012 – 18th Swiss Conference in Biomaterials, Zürich, 05-03 ◆	

# Empa Activities 2012

## Conferences

<b>Materials-Biology Interactions</b>	<b>Rottmar, M./Zenobi-Wong, M./Vogel, V./Maniura, K.</b>	Drug-induced re-expression of the chondrogenic phenotype-actin cytoskeleton integrity and its links to PI3K-, PKC- and MAPK-signaling pathways/3rd TERMIS World Congress 2012 «Tissue Engineering and Regenerative Medicine», Wien, AT, 09-05 thru 08 ◆
	<b>Rottmar, M./Zenobi-Wong, M./Vogel, V./Maniura, K.</b>	Steering the chondrogenic phenotype – a novel approach to improve cell based cartilage repair strategies/3D cell culture Conference, Zürich, 03-14 thru 16 ◆
	<b>Schipanski, A.</b>	Development of a ceramic resurfacing hip joint implant with osseointegrative surface structure/KTI MedTech Event, Luzern, 09-24 ◆
	<b>Studer, D./Millan, C./Maniura, K./Zenobi-Wong, M.</b>	Cell Index as an Indicator for Chondrogenesis/SSB2012 – 18th Swiss Conference in Biomaterials, Zürich, 05-03 ♣
	<b>Studer, D./Millan, C./Zenobi-Wong, M./Maniura, K.</b>	Cell Index as a Indicator for the chondrogenesis of MSCs/3D cell culture Conference, Zürich, 03-14 thru 16 ◆
	<b>Wick, P.</b>	The Janus face of carbon nanotubes: a health and safety perspective/CNT Workshop EAWAG, Dübendorf, 01-23 ♣ ○
	<b>Wick, P.</b>	Wie viel Nanotechnologie braucht es im Alltag?/Amt für Energie und Umwelt, St. Gallen, 02-06 ♣ ○
	<b>Wick, P.</b>	Modeling the placenta barrier/9th International Conference and Workshop on Biological Barriers-in vitro and in silico Tools for Drug Delivery and Nanosafety Research, Saarbrücken, DE, 03-05 thru 07 ♣ ○
	<b>Wick, P.</b>	Nanotechnologie – ein neues Risiko?/Schweizerische Gesellschaft für Arbeitssicherheit SGAS, Olten, 03-14 ♣ ○
	<b>Wick, P.</b>	Nanotechnology: an Interdisciplinary Challenge/Universität Graz, Graz, AT, 04-27 ♣ ○
	<b>Wick, P.</b>	How safe is nanosafety research?/Swiss Nanoconvention, Lausanne, 05-22 thru 24 ♣ ○
	<b>Wick, P.</b>	How safe is Nanosafety research?/NanoFormulation 2012, Barcelona, ES, 05-28 thru 30 ♣ ○
	<b>Wick, P.</b>	Nanotoxicology: an interdisciplinary challenge/BioValley Science Day/The Toyama Symposium, Basel, 09-25 ♣ ○
	<b>Wick, P.</b>	The Janus face of nanoparticles: a health and safety perspective/Swiss Biotech Roundtable, Rüslikon, 10-04 ♣ ○
<b>Protection and Physiology</b>	<b>Annaheim, S.</b>	Evaluation of the evaporative cooling efficiency in protective fabrics, 5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 ◆
	<b>Annaheim, S.</b>	Definition of standard criteria for the characterisation of the thermo-physiological performance of clothing using the sweating Torso, 9th International Meeting for Manikins and Modeling, Waseda University, Tokyo, JP, 08-21 thru 24 ♣
	<b>Baumann, L./De Courten, D./Wolf, M./Scherer, L.J.</b>	Development of light responsive membranes for controlled drug release, SCS Fall Meeting, Zürich, 09-13 ◆
	<b>Camenzind, M./Annaheim, S./Psikuta, A./Rossi, R.</b>	Standardization of a Sweating Torso: Assessment of The Physical Impact of Protective Clothing, TIFE (Textile International Forum and Exhibition) and 3rd Asian Protective Clothing Conference (APCC, Taipeh, TW, 09-27 ♣ ○
	<b>Camenzind, M./Weder, M.</b>	Wolle und Körper aus der Sicht der Bekleidungsphysiologie, Seminar «Wolle – Wunder -Was», Ballenberg, Ballenberg, 08-04 ♣ ○
	<b>Derler, S.</b>	Skin Tribology – Friction mechanisms of human skin in contact with hard and soft materials, Seminar, KTH Royal Institute of Technology, Stockholm, SE, 11-15 ♣
	<b>Derler, S./Kohn, H.-U.</b>	Decubitus Preventive Hospital Textile (Bed Sheet), KTI-MedTech-Event 2012, Luzern, 09-24 ♣ ○
	<b>Dorrestijn, M./Agathe Camerlo, A./Widmer, S./Rossi, R.M./Korent Urek, S./Viltuznik, B./Ribič, A./Lobnik, A./Scherer, L.J.</b>	Polymer Optical Fibers as Gas Sensors, International Meeting on Chemical Sensors (IMCS), Nürnberg, DE, 05-22 ♣
	<b>Fortunato G./Guex G./Giraud-Flück M.N./Hufenus R.</b>	Bulk and surface modification of nano- and micron-sized e-spun fibers for tissue engineering applications, Cost conference: Electrospun Nanofibres Composite Materials, Antalya, TK, 02-21 ♣ ○
	<b>Frackiewicz-Kaczmarek J./Psikuta, A./Bueno M.A./Rossi R. M.</b>	Approach to Evaluate Air Gap in Clothing by Surface Comparison, 12th AUTEX – World Textile Conference, Zadar, CR, 06-13 thru 15 ♣
	<b>Frackiewicz-Kaczmarek, J./Psikuta, A./Rossi, R./Bueno, M.-A.</b>	Distribution of the air gap thickness and contact area in wet underwear, 1. 5th European Conference on Protective Clothing and Nokobetef 10 (ECPC), Valencia, ES, 05-29 thru 31 ◆
	<b>Krehel M.</b>	Tunable Force Sensor Based on Flexible Polymeric Optical Fibers, Fiber Society Fall Conference 2012, Boston, US, 11-07 thru 09 ♣ ○

# Empa Activities 2012

## Conferences

Protection and Physiology	<b>Lavielle, N.</b>	Controlled formation of polycaprolactone ultrathin electrospun nanofibers in a hydrolytic degradation-assisted proces, Electrospinning, Principles, Possibilities and Practice 2012, Institute of Physics, London, UK, UK, 03-21 thru 22 🍀
	<b>Meyer, V. R.</b>	How Pure is your Reference Material?, 38th International Symposium on High Performance Liquid Phase Separations and Related Techniques, Anaheim, CA, US, 06-16 thru 21 ♦
	<b>Morrissey, M.</b>	A cost-effective, high spatial-resolution thermal manikin for the design of protective clothing based on open-source technology, 9th International Meeting for Manikins and Modeling, Waseda University, Tokyo, GB, 08-21 thru 24 🍀
	<b>Psikuta, A.</b>	Use of 3D Body Scanning Technique for Heat and Mass Transfer Modelling in Clothing, 3D Body Scanning Technologies, Lugano, 10-16 thru 17 ■ 🍀 ○
	<b>Rossi, R.</b>	Fiber Society Spring Conference, St. Gallen, 05-23 thru 25 ■
	<b>Rossi, R. M.</b>	Clotech 2012, 10th International Conference, Warschau, PL, ■
	<b>Rossi, R. M.</b>	Textile Innovations at Empa, UTIB IV.INTERNATIONAL R&D PROJECT BROKERAGE EVENT, Bursa, TK, 02-03 🍀
	<b>Rossi, R. M.</b>	UTIB IV.InternationalL R&D Project Brokerage Event, Bursa, TK, 02-03 ■
	<b>Rossi, R. M.</b>	Druck, Last und Kontakt im Versuchslabor, 12. Textil Symposium, armasuisse, Bern, 03-14 🍀
	<b>Rossi, R. M.</b>	Belastung der Wirbelsäule durch Lasttragsysteme, VCC Textilien: 12. Sitzung, Wiesbaden, DE, 04-18 thru 20 🍀
	<b>Rossi, R. M.</b>	Projekt 3D-Bodyscan, Wirkung von Luftschichten in der Bekleidung, VCC Textilien: 12. Sitzung, Wiesbaden, DE, 04-18 thru 20 🍀
	<b>Rossi, R. M.</b>	Analysis of the 3D water distribution in textile structures with X-ray tomography/radiography, Imaging and image analysis of porous materials, Empa-Akademie, Dübendorf, 05-02 🍀
	<b>Rossi, R.</b>	Modeling of Thermal Comfort: From Microscale to Macroscale, Fiber Society Spring Conference, St. Gallen, 05-25 🍀 ○
	<b>Rossi, R. M.</b>	5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 ■
	<b>Rossi, R. M.</b>	Flame engulfment test according to ISO 13506: correlations between burn predictions and total heat transferred, 5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 🍀 ○
	<b>Rossi, R. M.</b>	Standardization of a sweating torso for the evaluation of the thermo-physiological performance of protective clothing, 5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 🍀 ○
	<b>Rossi, R. M.</b>	Analysis of the cooling efficiency of sports shirts using a sweating torso, Clotech 2012, Warschau, PL, 09-20-21 🍀 ○
	<b>Rossi, R.M.</b>	Die Kleidung als zweite Haut, Master-Diplomfeier der Bewegungswissenschaftler/innen, ETH Zürich, D-HEST, Zürich, 12-06 🍀 ○
	<b>Rossi, R. M.</b>	Use of advanced materials in textiles and clothing for improved comfort, Notgerifa: New ways towards improved clothing comfort, Monasterium PoortAckere, Gent, BE, 12-13 🍀 ○
	<b>Rotaru, G. M.</b>	Friction between human skin and medical textiles for decubitus prevention, 39th Leeds-Lyon Symposium on Tribology, Leeds, GB, 09-4 thru 7 🍀
	<b>Scherer, L.</b>	Materials meet Light, Fachhochschule Wädenswil, 10-19 🍀
	<b>Wang, F./Gao, Ch./Kuklane, K./Holmér, I.</b>	A comparison of three different calculation methods for clothing evaporative resistance, 5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 🍀
	<b>Wang, F./Lin, L.-Y./Kuklane, K./Gao, Ch./Holmer, I.</b>	Validation of the physiological model of sleeping bags defined in EN 13537, 913M, Waseda University, Tokyo, JP, 08-21 thru 24 🍀
<b>Wang, F./Psikuta, A./Aeberhard, M./Wang, L.-Ch./Weder, M./Rossi, R.M.</b>	Effects of body motion and wind on the thermal comfort properties evaluated using manikin with realistic gait pattern, 913M, Waseda University, Tokyo, JP, 08-21 thru 24 🍀	
<b>Wang, F./Zhao, M./Gao, Ch.</b>	Cooling vest incorporated with phase change materials (PCMs): how much benefit is there?, 5th European Conference on Protective Clothing (ECPC), Valencia, ES, 05-29 thru 31 ♦	
<b>Weder, M.</b>	Herausforderung Solarimpulse – die Pilotenbekleidung, 12. Textil Symposium, armasuisse, Bern, 03-14 🍀	
<b>Zuber, S./Crespy, D./Landfester, K./Popa, A.-M.</b>	Thermoresponsive microgels and nanofibers based on poly(N-vinylcaprolactam, Smart Polymer Konferenz, Mainz, DE, 10-7 thru 9 ♦	

# Empa Activities 2012

## Conferences

		Mobility, Energy and Environment
Air Pollution/ Environmental Technology	Brennwald M./ Vogel N./Vollmer M. K. / Langenfelds R. / Steele L. P. / Maden C. / Kipfer R.	Trends in concentrations and isotope ratios of He/AGAGE, Urbino, It, 11-12 thru 16 ♣
	Brunner, D.	Atmosphärische Modellierung von Feinstaub und seiner Quellen mit dem Chemietransportmodell COSMO-ART/Feinstaub: Inhaltsstoffe und Quellenzuordnung, Erkenntnisse aus NABEL und Forschungsprojekten, Dübendorf, 01-19 ♣
	Brunner, D.	NO2 distribution, sources and trends observed from OMI and the airborne spectrometer APEX/IUP University of Bremen seminar series, Bremen, DE, 01-27 ♣ ○
	Brunner, D./Henne. S./Knote C./Keller C.	Estimation of air pollutant and GHG sources using Lagrangian and Eulerian models/Chinese Academy of Sciences seminar, Beijing, CN, 04-27 ♣ ○
	Brunner, D./Knote C.	Simulating ambient aerosol characteristics with COSMO-ART/COSMO User Seminar, Zürich, 01-17 ♣
	Brunner, D./Knote C.	Regional chemistry-transport modeling with COSMO-ART: Selected results/SPARC SSG Meeting 2012, Zurich, 02-07 ♣ ○
	Brunner, D./Reimann, S./Henne, S./Vollmer, M. K./Maione, M./O'Doherty, S.	The evolution of methylbromide and other halocarbon emissions in Europe estimated by an extended Kalman filter/2012 ACCENT-IGAC-GEIA Conference, Toulouse, FR, 06-11 thru 13 ♣
	Emmenegger, L./Mangold, M./ Tuzson, B./Mohn J.	Application of direct absorption mid IR laser spectroscopy for isotope specific detection of greenhouse gases / Laser Optics, St. Petersburg, RU, 06-25 thru 29 ♣ ○
	Emmenegger, L./Manninen A./Tuzson B./Köster J.R./Wunderlin P./Mohn, J.	High-precision analysis of N2O isotopomers by QCLAS to study microbial processes in soil and waste water / LACSEA, San Diego, USA, 01-29 thru 02-03 ◆
	Emmenegger, L./Manninen, A./ Tuzson, B./Loser H./Bonnetti Y.	High-precision trace gas measurements using quantum cascade lasers and novel star-like cell designs / LACSEA, San Diego, USA, 01-29 thru 02-03 ♣
	Eugster W./ Rocha A. V./ Kling G. W./ Shaver G. R./ Merbold L./ Imer D./ Stieger J./ Hiller R./ Buchmann N. C.	Getting control over spatial variability in CH4, N2O and CO2 flux measurements – examples from Switzerland and Alaska/AGU Fall Meeting, San Francisco, USA, 12-03 thru 07 ♣
	Eyer, S.	Optimization of CH4 adsorption from ambient air for high precision isotopic analysis/Jesium 2012, Leipzig, DE, 09-03 thru 07 ◆
	Eyer, S.	Optimization of CH4 adsorption from ambient air for high precision isotopic analysis/SCS-Meeting 2012, ETH Zürich, 09-13 ◆
	Fischer, M.	Transient wavelength tuning of distributed feedback QCL/International Quantum Cascade Lasers School and Workshop 2012, Baden, AT, 09-02 thru 06 ◆
	Gehrig, R.	Anforderungen an Feinstaubmessungen mit automatischen Monitoren/Feinstaub: Inhaltsstoffe und Quellenzuordnung, Erkenntnisse aus NABEL und Forschungsprojekten, Dübendorf, 01-19 ♣
	Gehrig, R.	Fachtagung Feinstaub: Inhaltsstoffe und Quellenzuordnung, Erkenntnisse aus NABEL und Forschungsprojekten, Dübendorf, 01-19 ■
Gehrig, R.	Quality needs Assurance: SOPs, Type Approvals, Equivalence Tests for Regulated Pollutants/Second AirMonTech Workshop: Current and Future Air Quality Monitoring, Barcelona, ESP, 04-25 thru 26 ♣ ○	
Gehrig, R.	Measurement Techniques for Fine Particles in Ambient Air/16th ETH Conference on Combustion Generated Nanoparticles, Focusevent: How to Regulate Ambient Nanoparticles, Zürich, 06-24 thru 27 ♣ ○	
Henne, S./Brunner D./Schnadt Poberaj T./Reimann S.	Global-scale tropospheric Lagrangian particle models with linear chemistry/Chinese Academy of Sciences seminar, Beijing, CN, 04-27 ♣ ○	
Henne, S./Shallcross D.E./Reimann S./Xiao P./Boulos S./Gerecke A.C./Brunner D.	Environmental Impacts of HFO-1234yf and Other HFOs/ASHRAE/NIST Refrigerants Conference, Gaithersburg, MD, USA, 11-29 thru 30 ♣ ○	

# Empa Activities 2012

## Conferences

Air Pollution/ Environmental Technology	Henne, S./Yao B./Li S./Vollmer M.K./An X./Park S./Reimann S./Kim J./Zhou L./Brunner D.	East Asian halocarbon emissions determined from continuous observations and inverse modeling/2012 ACCENT-IGAC-GEIA Conference, Toulouse, FR, 06-11 thru 13 ◆
	Herich, H./Gianini, M.F.D./Piot C./Cozic, J./Jaffrezo, J.L./Besombes, J.L./Prevot, A.S.H./Hüglin, C.	Overview of the impact of wood burning emissions on carbonaceous aerosols and PM in the Alpine region/European Aerosol Conference EAC, Granada, ESP, 09-02 thru 07 ◆
	Herich, H./Hueglin, C./Fischer, A./Buchmann, B.	Long term monitoring of black carbon at eight measurement sites in Switzerland/European Aerosol Conference, Granada, SP, 09-02 thru 07 ♣
	Hiller R./ Neininger B./ Henne S./ Künzle T./ Buchmann N./ Eugster W./ Brunner D.	Assessment of the Swiss methane inventory with the help of in situ aircraft measurements and backward Lagrangian particle dispersion simulations/Swiss Geoscience Meeting, Bern, 11-17 ♣
	Hiller, R./Neininger, B./ Brunner, D./Buchmann, N./Eugster W.	Comparison of a spatially explicit methane inventory with fluxes measured by aircraft in an agriculturally dominated region in Switzerland/30th Conference on Agricultural and Forest Meteorology, Boston, USA, 05-29 thru 06-01 ♣
	Hüglin, C.	Chemische Zusammensetzung und Quellen von Feinstaub (PM10)/Feinstaub: Inhaltsstoffe und Quellenzuordnung, Erkenntnisse aus NABEL und Forschungsprojekten, Dübendorf, 01-19 ♣
	Hüglin, C.	Measurements of ambient air in Switzerland (NABEL) and Europe (EMEP)/HS_Course Oeschgerzentrum/Medizinische Fakultät Uni Bern/Empa, Dübendorf, 01-23 thru 26 ♣ ○
	Hüglin, C.	Applications of sensors for urban air quality monitoring/Artificial Intelligence Applications and Innovations Conference AIAI, Halkidiki, GR, 09-27 thru 30 ♣ ○
	Hüglin, C.	Quality of Air: Assessment and Measures/Inter-disciplinary Training for Young Scientists 2012 NRP 62 and NRP 64, Muntelier Löwenberg, 10-31 thru 11-02 ♣ ○
	Hüglin, C./Herich, H./Gianini, M.F.D./Piot C./Cozic, J./Jaffrezo, J.L./Besombes, J.L./Prevot, A.S.H.	Impact of wood burning emissions on carbonaceous aerosols and particulate matter (PM) in the Alpine region/ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, 06-24 thru 27 ◆
	Hüglin, C./Wejers, E.	Air Quality Monitoring Technologies – An Update from the AirMonTech Project Covering their Current State and Emerging Themes/Monitoring Ambient Air 2012, London, GB, 12-12 thru 13 ♣ ○
	Jágerská, J.	Ultrafast Leak Detection / Research Day: Photonics Without Frontiers, Lausanne, 06-14 thru 15 ◆
	Jágerská, J.	Ultrafast Leak Detection/ACHEMA 2012, Frankfurt, DE, 06-18 thru 22 ◆
	Jágerská, J.	Ultrafast leak detection of propane/butane propellants using a 3.3 µm Quantum Cascade Laser/IR Workshop Laser Components, Olching, DE, 11-12 thru 13 ♣
	Knote, C./Brunner, D.	Effects of changing gaseous precursor emissions on aerosol chemical composition in Europe/EGU 2012, Wien, AT, 04-22 thru 27 ◆
	Mangold, M.	Novel gas cell design for CO2 isotopic composition measurements using mid-infrared laser absorption spectroscopy/IR Workshop Laser Components, Olching, DE, 11-12 thru 13 ♣
	Mangold, M./Tuzson, B./Looser, H./Emmenegger, L.	Novel gas cell design for CO2 isotopic composition measurements using mid-infrared laser absorption spectroscopy/ MIOMD-XI Infrared Optoelectronics – Materials and Devices, Chicago, USA, 09-04 thru 08 ◆
	Mohn, J./Tuzson, B./Emmenegger, L.	Laser based N2O isotopomer analysis bridges the gap between pure culture studies and field applications/ISI 2012, Washington, USA, 06-18 thru 22 ♣
	Mohn, J./Wunderlin, P./Tuzson, B./Joss, A./Siegrist, H./Emmenegger, L.	Identification of N2O source processes in biological wastewater treatment by site-specific isotopic analysis/JESIUM 2012, Leipzig, DE, 09-02 thru 07 ♣
	Popp, C./Brunner, D./Damm, A./Buchmann, B.	Mapping of high resolution nitrogen dioxide vertical column densities with the airborne prism experiment (APEX) imaging spectrometer over Zurich, Switzerland/IGARSS 2012, Munich, DE, 07-22 thru 27 ♣
	Popp, C./Brunner, D./Damm, A./Van Roozendaal, M./Fayt, C./Buchmann, B.	NO2 VCD retrieval from the Airborne Prism Experiment (APEX) data over the city of Zurich, Switzerland/ESA Atmospheric Science Conference 2012, Bruges, BE, 06-18 thru 22 ◆

# Empa Activities 2012

## Conferences

Air Pollution/ Environmental Technology	Reimann, S.	global and regional F-gases/SPARC SSC meeting, Zurich, 02-06 thru 09 🌿 ○	
	Reimann, S.	overview activity on lifetime reevaluation/SPARC SSC meeting, Zurich, 02-06 thru 09 🌿 ○	
	Reimann, S.	Re-evaluation of lifetime of ozone-depleting substances within SPARC/ESRL/NOAA annual meeting, 2012, Boulder, USA, 05-14 thru 18 🌿	
	Reimann, S.	University of Frankfurt: Real-world Emission Verification of Halogenated Greenhouse Gases, Frankfurt, DE, 05-09 🌿	
	Reimann, S.	VOCs in AGAGE/VOC WMO expert meeting 2012, York, GB, 09-11 thru 12 🌿 ○	
	Schnadt Poberaj, C./Brunner, D./Henne, S./Spahni, R.	Swiss Geoscience Meeting, Bern, 11-16 thru 17 🌿	
	Steinbacher, M.	Die Aktivitäten der Empa «at Top of Europe»/ Medienanlass «Top Science at the Top of Europe, 75 Jahre Sphinx Observatorium», Jungfrauoch, 05-03 🌿 ○	
	Steinbacher, M.	Long-term continuous ground-based in-situ trace gas observations at Jungfrauoch/NDACC-IRWG/TCCON 2012 Meeting, Wengen, 06-11 thru 13 🌿 ○	
	Steinbacher, M.	Neues von der DACH-Station Jungfrauoch/Sitzung der GAW-DACH-Arbeitsgruppe, München, DE, 09-12 thru 13 🌿	
	Steinbacher, M.	Ozone in the free troposphere – Results from recent JFJ studies/Sitzung der GAW-DACH-Arbeitsgruppe, München, DE, 09-12 thru 13 🌿	
	Steinbacher, M./Suter, I./Henne, S./Keller, J./Stahelin, J./Hueglin, C.	Meteorologically adjusted long-term trends (1990-2009) of surface ozone and ozone precursors in Switzerland/Quadrennial Ozone Symposium, Toronto, CA, 08-27 thru 31 🌿	
	Steinbacher, M./Zellweger, C.	Evaluation of laser spectrometer techniques for CO measurements/5th ICOS Atmosphere Workshop, Arona, I, 10-08 thru 09 🌿	
	Steinbacher, M./Zellweger, C./Buchmann, B.	World Calibration Centre WCC-Empa & QA / SAC Switzerland/GAW-CH Landesausschuss Sitzung, Zurich, 05-16 🌿	
	Steinbacher, M./Zellweger, C./Buchmann, B.	Results from Travelling Instrument Exercises During WCC audits/5th ICOS Atmosphere Workshop, Arona, I, 10-08 thru 09 🌿	
	Steinbacher, M./Zellweger, C./Buchmann, B.	QA / SAC Switzerland Progress Report Fall 2012/GAW-CH Landesausschuss Sitzung, Zurich, 11-09 🌿	
	Analytical Chemistry	Sturm, P./Tuzson, B./Henne, S./Brunner, D./Mohn, J./Steinbacher, M./Buchmann, B./Emmenegger, L.	Tracking isotopic signatures of CO2 at Jungfrauoch with laser spectroscopy: analytical improvements and exemplary results/JESIUM 2012, Leipzig, DE, 09-02 thru 07 🌿
		Sturm, P./Tuzson, B./Henne, S./Emmenegger, L.	Tracking isotopic signatures of CO2 at Jungfrauoch with high-precision laser spectroscopy/SCS Fall Meeting 2012, Zurich, 09-13 🌿
Vollmer M. K./Reimann S.		new halocarbons/InGOS WP 4, Bristol, GB, 09-26 thru 27 🌿	
Zellweger, C./Hatakka, J./Steinbacher, M./Buchmann, B.		The Value of on-site Comparisons during WCC Audits for Methane, Carbon Dioxide and Carbon Monoxide/NOAA GMD Annual Conference, Boulder, USA, 05-15 thru 17 🌿	
Zeyer, K./Emmenegger, L./Schrade S./Keck M.		A dual tracer gas ration method for the determination of NH3 emissions in naturally ventilated cattle housings/EmiLi 2012, St. Malo , FR, 06-10 thru 13 ◆	
Al-Kattan A./Wichser A./Vonbank R./Brunner S./Ulrich A./Nowack B.		Release of TiO2 particles from paints containing pigment TiO2 and/or nano-TiO2 by weathering experiments, NanoSafe2012, Grenoble, FR, 11-13 thru 15 🌿	
Bahk, Y./Buha, J./Kim, S.C./Pui, D.Y.H./Wang, J.		CNT penetration through a screen filter and nano-fiber filter: numerical modeling and comparison with experiments, 11th World Filtration Congress, Graz, AT, 04-16 thru 20 🌿	
Bahk, Y.K./Wang, J.		Filtration of airborne carbon nanotubes with nanofiber filters, European Aerosol Conference 2012, Granada, ES, 09-03 thru 07 ◆	
Bendixen, N./Losert, S./Al-Kattan, A./Adlhart, C./Ulrich, A.		Membrane-Particle Interactions in A4F: The Importance of the Zeta-Potential in the Analysis of Nanoparticles, SCS Fall Meeting, Zurich, 09-13 ◆	



# Empa Activities 2012

## Conferences

Analytical Chemistry	<b>Beni, a./Ott, N./Pawlkiwicz, M./Wardé, M./Young, K./Bauer, B./Gille, P./McGrath, R./Rajput, P./Detlefs, B./Zegenhagen, J./Barthès-Labrousse, M.G./Schmutz, P.</b>	HXPES Characterization of the nm-thick protecting oxide layer on new Al-Cr-Fe Complex Metallic Alloys (Quasicrystal approximants)/ESRF User Meeting 2012, Grenoble, FR, 02-06 thru 09 ◆
	<b>Brunner, D./Knote, C./Gianini M.F.D./Hueglin, C./Ulrich, A./Heeb, N: Buha, J.</b>	Impact of increased NO <sub>2</sub> fraction in today's vehicle emissions on aerosol composition and air quality/ITM – 32st NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application , Utrecht, NL, 05-07 thru 11 ♣
	<b>Buha, J./Fissan, H./Wang, J.</b>	Filtration measurements for silver nanoparticle agglomerates, 11th World Filtration Congress, Graz, AT, 04-16 thru 20 ♣
	<b>Buha, J./Thompson, D./Leparoux, M./Jaeggi, C./Pui, D./Wang, J.</b>	Exposure and Risk Assessment during Production of Nanoparticles by Plasma Synthesis, European Aerosol Conference 2012, Granada, ES, 09-03 thru 07 ◆
	<b>Chen, S-C./Wang, J./Fissan, H./Pui, D.Y.H.</b>	Agglomerate and Spherical Nanoparticle Penetration Through Nuclepore Filters: Models and Experiment, 31st Annual Conference of American Association for Aerosol Research, Minneapolis, USA, 10-08 thru 12 ♣
	<b>Figi, R.</b>	Differenzierte Bestimmung von Hg in Sparlampen. Ein neues Analysentool/Bafu-Fachkreis Gruppe ROHS, Bern, 04-02 ♣ ○
	<b>Figi, R.</b>	Hg-Differenzierung in CCFL-Lampen (Cold cathod fluoreszenz lamp), ein neues Analysentool, Plattform Marktkontrolle, Bundesamt für Gesundheit (BAG), Bern, 08-30 ♣ ○
	<b>Heeb, N.</b>	Secondary Pollutants of combined Filter-deNO <sub>x</sub> -Technologies/3. VERT Forum Diesel Particle Filters Meet de NO <sub>x</sub> Technologies, Empa Dübendorf, 03-22 ■ ♣
	<b>Heeb, N.</b>	Effects of a Combined DPF-deNO <sub>x</sub> System on Reactive Nitrogen Compounds Emissions/16th ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, Zürich, 06-24 thru 27 ♣
	<b>Heeb, N.</b>	Benefits and risks of deNO <sub>x</sub> - and combined filter-deNO <sub>x</sub> technologies, 3.TEVENOX-MEETING, Zürich, Zürich, 09-25 ♣
	<b>Heeb, N.</b>	PCDD/F Formation Potential of DPFs: New Risks with Biofuels, NAREP Seminar, Dübendorf, Dübendorf, 10-01 ♣
	<b>Heeb, N.</b>	Secondary Emissions of Modern Converter Technologies, MVEG Meeting, Brussels, Brüssel, BE, 11-19 ♣
	<b>Heeb, N.</b>	HBCD Transformation: From an Analytical Challenge to an Analytical Nightmare, Safety and Environmental Group Seminar, ETH Zürich, Zürich, 11-23 ♣ ○
	<b>Hess, A./Ludwig, Ch./Ulrich, A.</b>	Size-Resolved Element-Specific Analysis of Nanoparticles using an Online SMPS-ICPMS Coupling, CCMX Annual Meeting, Bern, 04-25 ◆
	<b>Hess, A./Ludwig, Ch./Ulrich, A.</b>	Simultaneous Analysis of Size Distribution and Elemental Composition of Airborne Nanoparticles Using an Online-Coupling SMPS and ICPMS/16th ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, Zürich, 06-24 thru 27 ◆
	<b>Hess, A./Ludwig, C./Ulrich, A.</b>	Online Size Distribution and Elemental Composition Analysis of Airborne Nanoparticles Using a Novel SMPS-ICPMS Coupling, PhD Day, Dübendorf, 11-13 ◆
	<b>Kammenou, I.M./Wang, J.</b>	Real-time measurement of airborne nanoparticles released to a windtunnel and filtration test, European Aerosol Conference 2012, Granada, ES, 09-03 thru 07 ◆
	<b>Kuo, Y-Y./Buha, J./Wang, J.</b>	Nanoparticle Emission Measurement during Polymer Extrusion Experiments, European Aerosol Conference 2012, Granada, ES, 09-03 thru 07 ◆
	<b>Losert, S.</b>	Characterization and quantification of nanoparticle release from commercial available spray products containing engineered nanoparticles/Product Group Meeting, ETHZ, ETH Zürich, 03-08 ♣
	<b>Losert, S./Hungerbühler K./Ulrich A.</b>	Characterization and quantification of nanoparticle release from commercial available spray products containing engineered nanoparticles, BAG Verbraucherschutzforum, Bern, 04-25 ♣
<b>Losert, S./Lattuada M./Hungerbühler K./Ulrich A.</b>	Characterization and quantification of nanoparticle release from commercial available spray products, NanoSafe2012, Grenoble, FR, 11-13 thru 15 ♣	
<b>Ott, N./Beni, A./Schmutz, P./Ludwig, C./Ulrich, A.</b>	Local, Time-Resolved and Element-Specific Investigations of Corrosion Processes for the Development of Biodegradable Mg Alloys/PRiME 2012, Honolulu, USA, 10-07 thru 12 ♣	

# Empa Activities 2012

## Conferences

<b>Analytical Chemistry</b>	<b>Ott, N./Schmutz, P./Ludwig, C./Ulrich, A.</b>	Biodegradable Materials – Local, Time-Resolved and Element-Specific Dissolution of Magnesium Alloys/ENAC Research Day 2012, EPFL Lausanne, 06-15 ◆
	<b>Ott, N./Schmutz, P./Ludwig, C./Ulrich, A.</b>	Local, Time-Resolved and Element-Specific Dissolution Characterization of an Mg-Y-RE alloy/63rd Annual Meeting of the International Society of Electrochemistry, Prag, CZ, 08-19 thru 24 ♣
	<b>Pavlova, P./Schmid, P./Bogdal, C./Schwikowski, M.</b>	Accelerated release of POPs from Alpine glaciers, Alpine Glaciology Meeting, Zurich, 02-02 ◆
	<b>Pavlova, P./Schmid, P./Bogdal, C./Schwikowski, M.</b>	Tracing POPs on a temperate glacier, Open Science Conference of the International Partnerships in Ice Core Sciences (IPICS) 2012, Griens, FR, 04-10 ♣
	<b>Schlagenhauf, L./Chu, B./Buha, J./Nüesch, F./Wang, J.</b>	Release of carbon nanotubes from an epoxy-based nanocomposite during an abrasion process, European Aerosol Conference 2012, Granda, ES, 09-03 thru 07 ◆
	<b>Schlagenhauf, L./Chu, B./Buha, J./Nüesch, F./Wang, J.</b>	Abrasion Behavior of an Epoxy-based nanocomposite with Raw- and Functionalized Carbon Nanotubes, International Conference on Safe production and use of nanomaterials, Nanosafe 2012, Grenoble, FR, 11-13 thru 15 ♣
	<b>Schmid, P.</b>	Exposition der Umwelt, Hormonaktive Stoffe: Phthalate – Folgetagung zum Nationalen Forschungsprogramm 50, Tierspital der Universität Bern, Bern, 06-05 ♣ ○
	<b>Senn, M./Eschenlohr, L.</b>	Experimente zur Erzeugung von Eisen im Rennofen/Annual conference EXAR 2012, Fachhochschule Nordwestschweiz, Brugg, 10-04 thru 07 ♣ ♣
	<b>Senn, M./Tuchschnid, M./Leber, H.</b>	Wege zur Definition der Materialeigenschaften von französischen Blechblasinstrumenten aus dem 19. Jh./Romantic Brass Symposium, Berner Fachhochschule, Hochschule der Künste Bern, 11-07 thru 10 ♣
	<b>Shin, W.G./Mulholland, G./Kim, S.C./Wang, J./Scheckman, J./Pui, D.Y.H.</b>	Estimates of Non-Ideal Effects on the Agglomerate Dynamics, 31st Annual Conference of American Association for Aerosol Research, Minneapolis, USA, 10-08 thru 12 ◆
	<b>Thompson D./Wang, J./Buha, J./Jaeggi, C./Leparoux, M./Pui, D.Y.H.</b>	Aerosol Emission Monitoring in the Production of Silicon Carbide Nanoparticles by Induction Plasma Synthesis, 31st Annual Conference of American Association for Aerosol Research, Minneapolis, USA, 10-08 thru 12 ♣
	<b>Ulrich, A.</b>	Metal Analysis in Combustion Engine Exhaust/3. VERT Forum Diesel Particle Filters Meet de NO <sub>x</sub> Technologies, Empa Dübendorf, 03-22 ♣
	<b>Ulrich, A.</b>	16th ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, Zürich, 06-24 thru 27 ■
	<b>Ulrich, A.</b>	Herausforderungen bei der Analyse von Nanopartikeln, Workshop Swiss Engineeres, Dübendorf, 11-09 ■ ♣
	<b>Ulrich, A./Losert, S./Bendixen, N./Al-Kattan, A./Hagendorfer, H./Nowack, B./Lattuada, M.</b>	Prospects and limitations of size fractionated, chemical analysis of engineered nanoparticles, NanoImpactNet – QNano Conference, Dublin, IRL, 02-27 thru 03-02 ◆
	<b>Ulrich, A./Ott, N./Schmutz, P./Ludwig, C.</b>	Investigations of local corrosion processes on biodegradable magnesium alloys using a novel online micro-flow capillary plasma mass spectrometer set-up with electrochemical control, Conference on Biodegradable Alloys, Maratea, I, 08-27 thru 31 ♣ ○
	<b>Ulrich, A./Wichser, A./Heeb, N./Emmenegger, L./Comte, P./Czerwinski, J./Hess, A./Kasper, M./Mooney, J./Mayer, A.</b>	Particle and Metal Emissions of Diesel and Gasoline Engines – are DPF/GPF an Appropriate Measure?, 16th ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, Zürich, 06-24 thru 27 ◆
	<b>Ulrich, A./Wichser, A./Heeb, N./Emmenegger, L./Comte, P./Czerwinski, J./Hess, A./Kasper, M./Mooney, J./Mayer, A.</b>	Particle and metal emissions of diesel and gasoline engines Are particle filters appropriate measures? 16th ETH Conference on Combustion Generated Nanoparticles, ETH Zürich, Zürich, 06-24 thru 27 ◆
	<b>Ulrich, A./Walaszek, D./Wichser, A./Wagner B/Bulska, E.</b>	Chemical analysis of ancient metal objects – Prospects and limitations of trace metal investigation using plasma mass spectrometry, AChZ Analiza Chemiczna w Ochronie Zabytków, Warsaw, PL, 11-07 thru 09 ♣ ○

# Empa Activities 2012

## Conferences

<b>Analytical Chemistry</b>	<b>Ulrich, A./Losert, S./Bendixen, N./Hagendorfer, H. A. Al-Kattan, M. Lattuada</b>	Size fractionated, chemical analysis of engineered nanoparticles using plasma mass spectrometry, Kirchhoff-Bunsen-Symposium at Analytika Conference, München, D, 04-01 thru 04 🍷 ○
	<b>Wang, J./Tronville, P.</b>	Filtration of airborne nanoparticles down to single-digit nanometer range, International Symposium on Contamination Control, ETH Zürich, 09-03 thru 06 ■ 🍷
<b>Hydrogen &amp; Energy</b>	<b>Bielmann, M.</b>	Market Potential for Hydrogen in Off-Grid Energy Systems, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷
	<b>Bielmann, M.</b>	Hydrogen Production from excess energy – the targets of EMPA, NAREP seminar, Empa, Dübendorf, 02-06 🍷
	<b>Bielmann, M.</b>	Electrolysis – technology, systems and current trends, Water splitting seminar, Empa, Dübendorf, 07-09 🍷
	<b>Bielmann, M.</b>	Wasserstoff in der Mobilität, Jahrestagung Verband emobile, Dübendorf, 07-24 🍷 ○
	<b>Bielmann, M.</b>	Wasserstoff und Elektromobilität: Eine Ideale Kombination?, Fertigungstechnisches Kolloquium, Institut für Werkzeugmaschinen und Fertigung, ETH Zürich, Zürich, 10-04 🍷 ○
	<b>Bielmann, M.</b>	Power-to-Gas: – basics of electrolysis and systemic consequences, Shell Corporate Research, Amsterdam, NL, 10-05 🍷
	<b>Bielmann, M.</b>	Hydrogen Metering – Challenges and Issues, CHIC biannual project meeting, Oslo, NO, 10-25 🍷
	<b>Bliersbach, A.</b>	How to watch hydrogen diffuse in any absorbing material, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷
	<b>Bliersbach, A.</b>	Recent advances on Smart carbon-based materials for hydrogen storage, Uni Parma – Empa HyCarBo Meeting, Parma, IT, 08-31 🍷
	<b>Borgschulte, A.</b>	Sorption Enhanced Reactions for Renewable Synfuels, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷
	<b>Borgschulte, A.</b>	Sorption Enhanced Reactions for Renewable Synfuels, Swiss Chemical Society – 2012 Fall Meeting, ETH Zürich, Zürich, 09-13 🍷
	<b>Borgschulte, A.</b>	Neutrons for Hydrogen Storage: Dynamics – Kinetics – Reactions, Neutrons for Energy, ESS Science Symposium, Delft, NL, 09-17 thru 19 🍷 ○
	<b>Borgschulte, A.</b>	From Mobile Bulk Species to Hydrogen Release in Borohydrides, International Symposium on Metal-Hydrogen Systems 2012 (MH2012) Kyoto TERRSA, Kyoto, JP, 10-21 thru 26 🍷
	<b>Borgschulte, A.</b>	Vibrational properties of Vanadium and Zirconium based metal hydrides, International Symposium on Metal-Hydrogen Systems 2012 (MH2012) Kyoto TERRSA, Kyoto, JP, 10-21 thru 26 🍷
	<b>Borgschulte, A.</b>	Some results from Empa supporting materials down selection of hydrogen storage materials, FCH JU Collaborative Project BOR4STORE, 2nd Project Meeting, Seville, ES, 11-04 🍷
	<b>Borgschulte, A.</b>	Raman spectroscopy on novel hydrogen storage materials and Li-ion conductors, Bruker Anwendertreffen, Ettlingen, DE, 11-13 🍷 ○
	<b>Borgschulte, A.</b>	Advanced Spectroscopy for Hydrogen Storage, Advances and Frontiers in Chemical Spectroscopy with Neutrons Symposium, The Cosener's house, Abingdon, UK, 11-14 thru 16 🍷 ○
	<b>Borgschulte, A.</b>	Energiespeicherung – wer hat das Ei des Kolumbus?, ZVR-Tagung 2012: Auf dem Weg zur 2000 Watt Gesellschaft Energiezukunft Schweiz – Strategien, Wege und Visionen, Emmen, 11-29 🍷 ○
	<b>Callini, E.</b>	Catalysis by Metathesis, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷
	<b>Callini, E.</b>	Catalysis by Metathesis, IEA Task 22 Meeting, Heidelberg, DE, 05-06 thru 10 🍷
<b>Callini, E.</b>	Physical and Chemical Properties of Volatile Complex Hydrides, XII Nano Conference 2012, Rhodos, GR, 08-28 🍷 ○	
<b>Callini, E.</b>	Physical and Chemical Properties of Volatile Complex Hydrides, Department of Physics of the University of Bologna, Bologna, IT, 09-17 🍷 ○	
<b>Callini, E.</b>	Physical and Chemical Properties of Volatile Complex Hydrides, International Symposium on Metal-Hydrogen Systems 2012, Kyoto, JP, 10-21 thru 26 🍷	
<b>Gorbar, M.</b>	ESEM and Raman Mapping of Polyphenylene Sulphide / Polysulfone / Olivine Diaphragms, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷	
<b>Kato, S.</b>	Hydrogenation of CO2 on the hydride surface of Mg2NiH4, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷	
<b>Kim, J.W.</b>	Corrosion Behaviour of Steel Interconnects and Coating Materials in Solid Oxide Electrolysis Cell (SOEC), 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷	
<b>Martelli, P.</b>	Solid Acid Fuel cells, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷	
<b>Mauron, Ph.</b>	Hydrogen absorption in Na intercalated C60, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ 🍷	
<b>Mauron, Ph.</b>	Hydrogen absorption of Na10C60, 2nd HyCarBo Meeting, Seminar- und Wellness Hotel Stoos, Stoos, 01-23 ■ 🍷	

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## Conferences

Hydrogen & Energy	<b>Mauron, Ph.</b>	Hydrogen absorption of Mx <sub>2</sub> C <sub>60</sub> , Uni Parma – Empa HyCarBo Meeting, Parma, IT, 08-31 ♣
	<b>Remhof, A.</b>	Hydrogen Dynamics in Nanoconfined Lithiumborohydride, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ♣
	<b>Remhof, A.</b>	Solvent-free Synthesis and Decomposition of Y(BH <sub>4</sub> ) <sub>3</sub> , 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ◆
	<b>Remhof, A.</b>	Hydrogen Dynamics in nanoconfined LiBH <sub>4</sub> , Conference «Materials for Hydrogen Storage – Future Perspectives?», MS Trollfjord, NO, 06-14 thru 18 ♣
	<b>Remhof, A.</b>	Hydrogen – The future Energy Carrier, Ruhr-Universität Bochum, Bochum, DE, 07-06 ♣ ○
	<b>Remhof, A.</b>	Hydrogen Dynamics in Nano-Confined Lithiumborohydride, Neutrons for Energy – Advanced materials for energy storage, TU Delft, Delft, NL, 09-17 thru 19 ◆
	<b>Remhof, A.</b>	Controlling the hydrogen release of borohydrides, European Technical School on Hydrogen and Fuel Cells 2012, Heraklion, GR, 09-24 thru 28 ♣
	<b>Remhof, A.</b>	In-situ and in-operando methods for hydrogen related research, European Technical School on Hydrogen and Fuel Cells 2012, Heraklion, GR, 09-24 thru 28 ♣
	<b>Remhof, A.</b>	Influence of nanoconfinement on the hydrogen dynamics in LiBH <sub>4</sub> , Advances and Frontiers in Chemical Spectroscopy with Neutrons Symposium, The Cosener's house, Abingdon, UK, 11-14 thru 16 ♣ ○
	<b>Trajkovic, I.</b>	Electrochemical characterisation of a small-scale alkaline electrolyzer and novel membranes, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ♣
	<b>Vogt, U.</b>	Self Igniting Catalytic Hydrogen Burner with Zero Immission, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ◆
	<b>Vogt, U.</b>	Catalytic Combustion of Hydrogen on Porous SiC Ceramics, 10th CMCE, Dresden, DE, 05-20 thru 23 ♣
	<b>Vogt, U.</b>	CORROSION BEHAVIOUR OF STEEL INTERCONNECTS AND COATING MATERIALS IN SOLID OXIDE ELECTROLYSIS CELL (SOEC), 10th European SOFC Forum 2012, Luzern, 06-26 thru 29 ♣
	<b>Vogt, U.</b>	CATALYTIC HYDROGEN BURNERS FOR CLEAN HEAT, 4th SHFCA Annual Conference, Inverness, GB, 09-26 thru 27 ♣ ○
	<b>Wu, Ch.</b>	Development of Low Cost Vanadium-based Hydrogen Storage Alloys in Sichuan University, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ♣
	<b>Yan, Y.</b>	Controlling the decomposition of LiBH <sub>4</sub> , 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ♣
	<b>Yan, Y.</b>	Hydrogen Dynamics in Alkali-Metal Borohydrides, HSC14 – HERCULES Specialised Courses: Neutrons and Synchrotron Radiation in materials for energy, Grenoble, FR, 09-17 thru 21 ◆
	<b>Züttel, A.</b>	The Energy Density of Hydrogen Storage Systems, 6th International Symposium Hydrogen & Energy, Seminarhotel Stoos, Stoos, 01-22 thru 27 ■ ◆
	<b>Züttel, A.</b>	Synthetic Energy Carriers – Closing the Cycle, Fourth Annual International Workshop on Advanced Materials (IWAM 2012), Al Hamra Convention Center, Ras Al Khaimah, AE, 02-19 thru 21 ♣ ○
	<b>Züttel, A.</b>	From Metal to Complex Hydrides, DTU Physics Seminar, Technical University of Denmark, Kongens Lyngby, DK, 03-21 ♣ ○
<b>Züttel, A.</b>	STORAGE OF RENEWABLE ENERGY IN SYNTHETIC FUELS, International Conference «Functional Materials and Nanotechnologies», FM&NT – 2012, Riga, LV, 04-17 thru 20 ♣ ○	
<b>Züttel, A.</b>	Storage of renewable Energy in Synthetic Fuels, Seminar TU Delft, Delft, NL, 04-23 ♣ ○	
<b>Züttel, A.</b>	Synthetic Energy Carriers, IFE Seminar, Kjeller, NO, 08-27 ♣ ○	
<b>Züttel, A.</b>	Global Aspects of Hydrogen Storage, The Humboldt-Kolleg of Societas Humboldtiana Polonorum, Man and Environment, Kraków, PL, 10-12 ♣ ○	
<b>Züttel, A.</b>	The Physical Potential and Limitations of Hydrogen Storage, International Symposium on Metal-Hydrogen Systems 2012, Kyoto, JP, 10-21 thru 26 ♣ ○	
Internal Combustion Engines	<b>Bach, Ch.</b>	Die Nutzung von Erdgas/Biogas-Wasserstoffgemischen als Treibstoff in Erdgas-Hybridfahrzeugen; Atlas-Copco Symposium, Türkenfeld, DE, 05-10 ♣
	<b>Bach, Ch.</b>	Kehrfahrzeug mit Brennstoffzellen-Elektrohybridantrieb; eCarTec-Konferenz, München, DE, 10-24 ♣
	<b>Bütler, Th.</b>	Automobilantriebe der Zukunft, TecDay@SAM, Schweizerische Alpine Mittelschule Davos, Davos, 03-15 ♣ ○
	<b>Dimopoulos Eggenschwiler, P.</b>	Impact of biodiesel fuel (RME) on the operation of particulate filters, 12th Stuttgart International Symposium Automotive and Engine Technology, Stuttgart, DE, 03-13 thru 14 ♣ ○
	<b>Mauke, D.</b>	CNG and CNG hybrid vehicles, 3rd International Emissions Symposium, Bielsko-Biala, PL, 05-24 thru 25 ♣ ○

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## Conferences

Internal Combustion Engines	<b>Onder, Ch./Guzzella, L./Ott, T./Amstutz, A./Boulouchos, K./Steurs, K./Obrecht, P./Soltic, P./Biffiger, H./Weidenkaff, A./Populoh, S./Brunko, O./Trottmann, M./Sennhauser, U./Berdinas, V./Held, M.</b>	A potential concept to reduce CO2 emissions?, Jahrestagung CCEM, St. Gallen, 05-24 ◆
	<b>Populoh, S./Trottmann, M./Brunko, O./Xie, W./Weidenkaff, A./Ott, T./Onder, C./Steurs, P./Boulouchos, K./Biffiger, H./Soltic, P./Held, M./Sennhauser, U.</b>	Cohyb – Customized Hybrid Powertrains, Swisselectric research award 2012, Bern, 09-18 ◆ ♣ ○
	<b>Populoh, S./Trottmann, M./Brunko, O./Xie, W./Weidenkaff, A./Ott, T./Onder, C./Steurs, P./Boulouchos, K./Biffiger, H./Soltic, P./Held, M./Sennhauser, U.</b>	Cohyb – Customized Hybrid Powertrains, IAV, 3rd Conference on Thermoelectrics, Berlin, DE, 11-21 thru 23 ◆
	<b>Soltic, P.</b>	CNG hybrid electric powertrains, IEA AMF Workshop, Dübendorf, 03-31 ♣ ○
	<b>Soltic, P.</b>	Erdgas-Elektrohybridantriebe für Mittelklasse-PW, e-Mobile Jahrestagung, Dübendorf, 08-24 ♣ ○
	<b>Soltic, P.</b>	Der CNG Parallel-Hybrid Versuchsträger «CLEVER», 7. Tagung Gasfahrzeuge, Potsdam, DE, 09-24 thru 25 ♣
	<b>Soltic, P.</b>	Konzepte und Brennverfahren für effiziente und schadstoffarme Antriebe von Personenwagen, SSM-SAE Tagung, Sursee, 09-27 ♣ ○
	<b>Soltic, P.</b>	Euro VI Technologie, VÖV Jahrestagung, Dübendorf, 10-31 ♣ ○
	<b>Spiteri, A.</b>	PhD Day, Empa, Duebendorf, 11-13 ■
	<b>Weilenmann, M.</b>	Fleet modelling of fuel consumption of mobile air conditionings and reduction potentials, IQPC climate control conference, Wiesbaden, DE, 10-22 thru 23 ♣ ○
	<b>Weilenmann, M.</b>	19th International Transport and Air Pollution Conference 2012, Thessaloniki, GR, 11-26 thru 27 ■
	<b>Weilenmann, M.</b>	Cold Start Emissions of Passenger Car Fleets: a Simplified Physical Modelling Approach, 19th International Transport and Air Pollution Conference 2012, Thessaloniki, GR, 11-26 thru 27 ♣
	<b>Weilenmann, M.</b>	Discrepancies in Modelling Emissions of Mobile Air Conditionings, 19th International Transport and Air Pollution Conference 2012, Thessaloniki, GR, 11-26 thru 27 ◆
	<b>Weilenmann, M.</b>	Effect of Low Ambient Temperature on Fuel Consumption and Emissions of Hybrid Electric Vehicles in Real-World Conditions, 19th International Transport and Air Pollution Conference 2012, Thessaloniki, GR, 11-26 thru 27 ♣
Solid State Chemistry and Catalysis	<b>Amrousse, R./Brunet, J./Keav, S./Batonneau, Y./Kappenstein, C./Pirault-Roy, L./Théron, M./Bravais, P.</b>	Catalytic Ignition of Cold O2/H2 Mixtures for Propulsion Applications – From Pellets to Cellular Ceramics / 15th International Congress on Catalysis 2012, Munich, DE, 07-1 thru 6 ◆
	<b>Brahmi, R./Farhat, K./Keav, S./Saouabé, M./Amrousse, R./Batonneau, Y./Kappenstein, C./Pirault-Roy, L.</b>	From Cellular Ceramics to Catalysts for Green Propulsion Applications / 15th International Congress on Catalysis 2012, Munich, DE, 07-1 thru 6 ◆
	<b>Chiarello, G.L./Altorfer, H./Nachtegaal, M./Quaroni, L./Tricoli, A./Weidenkaff, A./Ferri, D.</b>	A novel setup for combined in situ XAS, DRIFTS and MES / CSX 20121, Zürich, 07-04 thru 06 ◆

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Solid State Chemistry and Catalysis	Chiarello, G.L./Altorfer, H./Nachtegaal, M./Quaroni, L./Weidenkaff, A./Ferri, D.	A novel approach to combine XAS and DRIFTS / CCMX 2012 Annual Meeting, Bern, 04-25 ◆
	Chiarello, G.L./Ferri, D.	Modulated Excitation Spectroscopy: a powerful tool to enhance sensitivity of in situ spectroscopic techniques for catalytic applications / XVIII Congresso Nazionale della Divisione di Chimica Industriale della Società Chimica Italiana, Firenze, I, 06-11 thru 14 ♣
	Chiarello, G.L./Ferri, D.	Modulated Excitation Spectroscopy: a Powerful Tool to Enhance Sensitivity of Spectroscopic Techniques for Catalytic Applications / XVIII Congress of the Italian Chemical Society (XVIII DCI SCI), Firenze, IT, 06-11 thru 14 ♣
	Chiarello, G.L./Lu, Y./Matam, D. K./Newton, M. A./di Michiel, M./Yoon, S./Weidenkaff, A./Ferri, D.	Red-ox dynamics of Al <sub>2</sub> O <sub>3</sub> and Ce <sub>1-x</sub> Zr <sub>x</sub> O <sub>2</sub> supported Pd studied by time-resolved modulation excitation hard X-ray diffraction / 15th International Congress on Catalysis 2012, München, DE, 07-01 thru 06 ♣
	Eilertsen, J.	Marie Curie Action (Research Fellow) Conference / ESOF 2012, Dublin, IR, 07-10 thru 17 ♣ ○
	Eyssler, A./Lu, Y./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.	Influence of composition on the state of Pd in La(Me,Pd)O <sub>y</sub> (Me= Mn, Fe, Co) and Y(Fe,Pd)O <sub>y</sub> oxidation catalysts / 15th ICC meeting, Munich, DE, 07-01 thru 06 ◆
	Eyssler, A./Lu, Y./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.	Influence of composition on the state of Pd in La(Me,Pd)O <sub>y</sub> (Me= Mn, Fe, Co) and Y(Fe,Pd)O <sub>y</sub> oxidation catalysts / 12th International Conference on Catalysis, Munich, DE, 07-02 thru 07 ◆
	Eyssler, A./Lu, Y./Michalow-Mauke, K./Graule, T./Heel, A./Santhosh Kumar, M./Weidenkaff, A./Ferri, D.	Perovskite-type oxide based automotive catalysts for Pd stabilization / Seltene Metalle Technology Briefing, Akademie EMPA, 01-09 ◆
	Ferri, D./Chiarello, G.L./Newton, M.A./Santhosh Kumar, M./Lu, Y./Yoon, S./Weidenkaff, A.	Modulation excitation spectroscopy coupled with synchrotron X-ray methods to unravel dynamic processes on supported Pd catalysts / CSX2011, ETH Zurich, 07-04 thru 06 ♣
	Ferri, D./Lu, Y./Matam, S. K./Newton, M.A./di Michiel, M./Yoon, S./Weidenkaff, A.	Modulation excitation hard X-ray diffraction to capture red-ox dynamics of supported Pd catalysts / Operando IV conference, Brookhaven National Laboratory, Upton, New York, USA, 04-29 thru 05-03 ♣
	Ferri, D./Nachtegaal, M./Newton, M.A./Matam, S. K./Lu, Y./Hug, P./Weidenkaff, A.	Modulation excitation spectroscopy coupled with synchrotron X-ray methods to unravel dynamic processes on supported Pd catalysts / 28th Annual Meeting of SAOG, Fribourg, 01-27 ◆
	Ferri, D./Newton, M.A./di Michiel, M./Lu, Y./Matam, S. K./Eyssler, A./Hug, P./Weidenkaff, A.	Modulation excitation spectroscopy (MES) coupled with XAS and XRD to capture dynamic structural changes in supported Pd catalysts / CAPoC9 meeting, Brussels, BE, 08-29 thru 31 ♣
	Ferri, D./Yoon, S./Matam, S. K./Lu, Y./Chiarello, G. L./Weidenkaff, A.	Modulated excitation spectroscopy coupled with XAS and XRD to capture dynamic structural changes in supported Pd catalysts / SCS 2012 Fall meeting, ETH Zurich, 09-13 ◆
	Gałązka, K./Populoh, S./Leyre Sagarna/Duarte, L.I./Beni, A./Schmutz, P./Hulliger, J./Weidenkaff, A.	Surface oxidation studies and phase stability of Ti <sub>0.33</sub> Zr <sub>0.33</sub> Hf <sub>0.33</sub> NiSn half-Heusler compound / E-MRS spring meeting, Strasbourg, FR, 05-01 thru 13 ◆

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Solid State Chemistry and Catalysis	<p><b>Gałązka, K./Populoh, S./Leyre Sagarna/Duarte, L.I./Beni, A./Schmutz, P./Hulliger, J./Weidenkaff, A.</b></p>	<p>Surface oxidation studies and phase stability of <math>Ti_{0.33}Zr_{0.33}Hf_{0.33}NiSn</math> half-Heusler compound / ICT 2012, Aalborg, DK, 07-08 thru 13 ◆</p>
	<p><b>Gałązka, K./Populoh, S./Xie, W./Sagarna, L./Duarte, L. I./Hulliger, J./Weidenkaff, A.</b></p>	<p>Influence of difference synthesis methods on thermoelectric properties of <math>Ti_{0.33}Zr_{0.33}Hf_{0.33}NiSn</math> half-Heusler compound / Annual meeting of the swiss physical society, ETH Zurich, 06-21 ◆</p>
	<p><b>Kappenstein, C./Brahmi, R./Keav, S./Batonneau, Y./Farhat, K./Saouabé, M./Wingborg, N./Woschnak, A./Scharlemann, C.</b></p>	<p>Energetic Ionic Liquids for Green Propulsion / 9th International Symposium on Special Topics in Chemical Propulsion (9-ISICP), Québec City, CA, 07-9 thru 13 ◆</p>
	<p><b>Keav, S./Lu, Y./Tschudin, J./Ferri, D./Weidenkaff, A.</b></p>	<p>Foam and honeycomb structured catalytic converters for automotive pollution control / SCS 2012 Fall meeting, ETH Zurich, 09-13 ◆</p>
	<p><b>Korsak, O./Wen, F./Kumar, S. K./Gieshoff, J./Hug, P./Weidenkaff, A./Ferri, D.</b></p>	<p>Effect of hydrothermal aging on structure and activity of alumina and ceria-zirconia supported Pd three-way catalysts / CAPOC9 meeting, Brussels, BE, 08-29 thru 31 ◆</p>
	<p><b>Lu, Y./Keav, S./Michalow-Mauke, K./Maegli, A./Heel, A./Matam, S. K./Graule, T./Weidenkaff, A./Ferri, D.</b></p>	<p>Flame-made PdO/YFeO<sub>3</sub> as TWC for methane abatement from stoichiometric engines / SCS 2012 Fall meeting, ETH Zurich, 09-13 ♣</p>
	<p><b>Lu, Y./Keav, S./Michalow-Mauke, K./Maegli, A./Heel, A./Matam, S. K./Graule, T./Weidenkaff, A./Ferri, D.</b></p>	<p>Flame-made PdO/YFeO<sub>3</sub>±δ as TWC for methane abatement from stoichiometric engines / SCS 2012 Fall meeting, ETH Zurich, 09-13 ♣</p>
	<p><b>Lu, Y./Matam, S. K./Newton, M. A./di Michiel, M./Yoon, S./Weidenkaff, A./Ferri, D.</b></p>	<p>Modulation excitation hard X-ray diffraction to capture red-ox dynamics of supported Pd catalysts / Operando IV conference, Brookhaven National Laboratory, Upton, New York, USA, 04-29 thru 05-3 ♣</p>
	<p><b>Lu, Y./Matam, S. K./Newton, M. A./di Michiel, M./Yoon, S./Weidenkaff, A./Ferri, D.</b></p>	<p>Red-ox dynamics of Al<sub>2</sub>O<sub>3</sub> and Ce<sub>1-x</sub>ZrO<sub>2</sub> supported Pd studied by time-resolved modulation excitation hard X-ray diffraction / 15th ICC meeting, Munich, DE, 07-1 thru 6 ◆</p>
	<p><b>Lu, Y./Michalow-Mauke, K./Heel, A./Santhosh Kumar Matam/Weidenkaff, A./Ferri, D.</b></p>	<p>Flame spray synthesized hexagonal Y(Fe<sub>1-x</sub>Pdx)O<sub>3</sub> and their three-way catalytic activity / 7th ICEC, Lyon, FR, 09-2 thru 6 ◆</p>
	<p><b>Lu, Y./Michalow-Mauke, K./Winkler, A./Heel, A./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.</b></p>	<p>Flame spray synthesis of Palladium supported perovskite-type three-way catalysts for exhaust after treatment of natural gas engines / 2012 E-MRS Spring Meeting, Strasbourg, FR, 05-14 thru 18 ♣</p>
	<p><b>Lu, Y./Michalow-Mauke, K./Winkler, A./Heel, A./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.</b></p>	<p>Flame spray synthesis of Palladium supported perovskite-type three-way catalysts for exhaust after treatment of natural gas engines / EMRS – 2012 Spring meeting, Strasbourg, FR, 05-14 thru 18 ◆</p>

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## Conferences

Solid State Chemistry and Catalysis	Lu, Y./Michalow-Mauke, K./Winkler, A./Heel, A./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.	Flame spray synthesis and structural characterization of Palladium supported perovskite-type three-way catalysts / 12th International Conference on Catalysis, Munich, DE, 07-02 thru 08 ◆
	Lu, Y./Michalow-Mauke, K./Winkler, A./Heel, A./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.	Flame spray synthesis of Palladium supported perovskite-type three-way catalysts for exhaust after treatment of natural gas engines / CAPoC9 meeting, Brussels, BE, 08-29 thru 31 ◆
	Lu, Y./Michalow-Mauke, K./Winkler, A./Heel, A./Matam, S. K./Hug, P./Weidenkaff, A./Ferri, D.	Pd supported on LaFeO <sub>3</sub> as potential catalyst for methane oxidation / CAPoC9 meeting, Brussels, BE, 08-29 thru 31 ◆
	Maegli, A./Hisatomi, T./Otal, E./Sagarna L./Pokrant S./Yoon, S./Graetzel, M./Weidenkaff, A.	Enhanced photocatalytic activity of LaTiO <sub>2</sub> N by Ca-modification / 12th International Conference on Catalysis, Munich, DE, 07-02 thru 06 ♣
	Maegli, A./Hisatomi, T./Yoon, S./Otal, E./Pokrant, S./Graetzel, M./Weidenkaff, A.	Properties and applications of perovskite oxynitrides: SrTi <sub>1-x</sub> Nb <sub>x</sub> (O,N) <sub>3</sub> and La <sub>1-x</sub> Ca <sub>x</sub> Ti(O,N) <sub>3</sub> / 7th International Symposium on Nitrides ISNT2012, Saint-Malo, FR, 06-04 thru 06 ♣
	Matam, S. K./Aguirre, M./Hug, P./Rentsch, D./Winkler, A./Weidenkaff, A./Ferri, D.	The impact of aging environment on the evolution of Pt nanoparticles on alumina and NO oxidation activity / CAPoC9 meeting, Brussels, BE, 08-29 thru 31 ◆
	Matam, S. K./Korsak, O./Wen, F./Gieshoff, J./Weidenkaff, A./Ferri, D.	Evaluation of hydrothermal aging on three-way catalytic properties of Rh/Al <sub>2</sub> O <sub>3</sub> and Rh/CeZrO <sub>2</sub> / 15th ICC meeting, Munich, DE, 07-01 thru 06 ◆
	Matam, S. K./Korsak, O./Wen, F./Gieshoff, J./Weidenkaff, A./Ferri, D.	Evaluation of hydrothermal aging on three-way catalytic properties of Rh/Al <sub>2</sub> O <sub>3</sub> and Rh/CeZrO <sub>2</sub> / 12th International Conference on Catalysis, Munich, DE, 07-02 thru 06 ◆
	Matam, S. K./Korsak, O./Wen, F./Gieshoff, J./Weidenkaff, A./Ferri, D.	Evaluation of hydrothermal aging on three-way catalytic properties of Rh/Al <sub>2</sub> O <sub>3</sub> and Rh/CeZrO <sub>2</sub> / 7th ICEC, Lyon, FR, 09-02 thru 06 ◆
	Matam, S. K./Otal, E. O./Winkler, A./Weidenkaff, A./Ferri, D.	Operando X-ray absorption spectroscopy for understanding the origin of phosphorous induced chemical aging of Pd-based three-way catalysts / Operando IV conference, Brookhaven National Laboratory, Upton, New York, USA, 04-29 thru 05-3 ♣
	Matam, S. K./Otal, E.H./Winkler, A./Weidenkaff, A./Ferri, D.	Operando X-ray absorption spectroscopy for understanding the origin of phosphorous induced chemical aging of Pd-based three-way catalysts / Operando IV conference, Brookhaven National Laboratory, Upton, New York, USA, 04-29 thru 05-03 ♣
	Matam, S. K./Weidenkaff, A./Ferri, D.	Phosphorous induced chemical aging of three-way catalysts: An operando X-ray absorption spectroscopic study / 2012 E-MRS Spring Meeting, Strasbourg, FR, 05-14 thru 18 ◆
	Matam, S. K./Weidenkaff, A./Ferri, D.	Phosphorous induced chemical aging of three-way catalysts: An operando X-ray absorption spectroscopic study / EMRS - 2012 Spring meeting, Strasbourg, FR, 05-14 thru 18 ◆
	Matam, S. K./Weidenkaff, A./Ferri, D.	The impact of phosphorus on the methane combustion activity of model three-way catalyst Pd/Al <sub>2</sub> O <sub>3</sub> studied by operando XANES / 7th ICEC, Lyon, FR, 09-2 thru 6 ♣
	Matam, S. K./Weidenkaff, A./Ferri, D.	Studies on thermal and chemical aging of model three-way catalysts by operando spectroscopy / SCS 2012 Fall meeting, ETH Zurich, 09-13 ◆



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Solid State Chemistry and Catalysis	Matam, S. K./Winkler, A./Ulrich, A./Wen, F./Gieshoff, J./Bach, C./Weidenkaff, A./Ferri, D.	Studies on phosphorous induced deactivation of model three-way catalysts for CNG vehicle exhaust applications / CAPoC9 meeting, Brussels, BE, 08-29 thru 31 ◆
	Michalow, K./Otal, E. H./Fortunato, G./Burnat, D./Emerich, E./Ferri, D./Graule, T.	TiO <sub>2</sub> :Cr/Ag Flame Spray Synthesised Nanopowders with Enhanced Visible Light Activity / SPEA 7, Oporto, P, 06-17 thru 20 ◆
	Pirault-Roy, L./Kappenstein, C./Brahmi, R./Keav, S./Batonneau, Y./Farhat, K./Saouabé, M./Wingborg, N./Woschnak, A./Scharlemann, C.	Thermal and Catalytic Decomposition of Ammonium Nitrate and Ammonium Dinitramide-Based Energetic Ionic Liquids / 15th International Congress on Catalysis 2012, Munich, DE, 07-1 thru 6 ◆
	Pokrant, S./ Karvonen, L. / Cheynet, M./ Weidenkaff A.	Oxidation state and bonding in KCo <sub>2</sub> O <sub>4</sub> by Electron Energy Loss Spectroscopy (EELS) / MRS, Boston, USA, 11-26 thru 30 ◆
	Pokrant, S./ Vogel-Schäuble, N. / Romanyuk, Y./ Yoon S./ Populoh, S./ Weidenkaff A.	Thermoelectric properties of Al-substituted ZnO: comparison between thin film and bulk / TCM conference, Kreta, GR, 10-22 thru 26 ♣ ○
	Populoh S./Karvonen, L./Sagarna, L./Weidenkaff, A.	Correlated transition metal oxides for thermoelectrics / Annual meeting of the swiss physical society, Zürich, 06-22 thru 23 ♣
	Populoh S./Weidenkaff, A.	The power factor of Cr-doped V <sub>2</sub> O <sub>3</sub> near the Mott transition / 2012 E-MRS Spring Meeting, Strasbourg, FR, 05-14 thru 18 ♣
	Populoh S./Weidenkaff, A.	Thermoelectric materials development for heat recovery applications / 2nd International Conference Thermal Management for EV / HEV 2012, Darmstadt, DE, 06-28 ♣ ○
	Populoh S./Weidenkaff, A.	Workshop: Thermoelectric materials development for heat recovery applications / 2nd International Conference Thermal Management for EV/HEV 2013, Darmstadt, DE, 06-29 ♣ ○
	Populoh, S./Brunko, O./Eilertsen, J./Karvonen, L./Sagarna, L./Shkabko, A./Saucke, G./Vogel-Schäuble, N./Trottmann, M./Weidenkaff, A.	Correlated transition metal oxides for thermoelectric power generation / XXVIII TROBADES CIENTÍFIQUES DE LA MEDITERRÀNIA, Mao, Menorca, ES, 10-24 thru 26 ♣ ○
	Sagarna, L./Populoh, S./ Shkabko, A./ Maegli, A./ Yoon, S./ Weidenkaff, A.	The effect of ammonolysis on the thermoelectric properties of EuTiO <sub>3</sub> and EuTi <sub>0.98</sub> Nb <sub>0.02</sub> O <sub>3</sub> / 2012 E-MRS Spring Meeting, Strasbourg, FR, 05-1 thru 13 ■ ◆
	Sagarna, L./Populoh, S./ Shkabko, A./ Maegli, A./ Yoon, S./ Weidenkaff, A.	The effect of ammonolysis on the structure and thermoelectric properties of EuTiO <sub>3</sub> and EuTi <sub>0.98</sub> Nb <sub>0.02</sub> O <sub>3</sub> / Nature conference, Aachen, DE, 06-17 thru 20 ◆
	Sagarna, L./Populoh, S./ Shkabko, A./ Maegli, A./ Yoon, S./ Weidenkaff, A.	The effect of nitrogen incorporation on the thermoelectric properties of EuTiO <sub>3</sub> and EuTi <sub>0.98</sub> Nb <sub>0.02</sub> O <sub>3</sub> / Annual meeting of the swiss physical society, Zürich, 06-21 thru 22 ◆
	Saucke, G./Moser, D./Mogare, K./ Vogel-Schäuble, N./Trottmann, M./Populoh, S./Weidenkaff, A.	Comparison of different methods for the heat capacity determination in Ca <sub>3</sub> Co <sub>4</sub> O <sub>9</sub> based samples / Fokus Workshop Thermoelektrik Messtechnik, Kaub, DE, 03-19 thru 20 ◆

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Solid State Chemistry and Catalysis	Saucke, G./Moser, D./Mogare, K./Sagarna, L./Alfaruq, D. S./Vogel-Schäuble, N./Trottmann, M./Populoh, S./Rechsteiner, A./Weidenkaff, A.	Development of thermoelectric converters for heat recovery in industrial casting processes / E-MRS spring meeting, Strasbourg, FR, 05-14 thru 18 ♦
	Vogel-Schäuble, N./Baillieul, M./Saucke, G./Populoh, S./Weidenkaff, A.	Thermoelectric study of ZnO:Al / ZnAl <sub>2</sub> O <sub>3</sub> nanocomposites / EMRS – 2012 Spring meeting , Strasbourg, FR, 05-14 thru 18 ♦
	Weidenkaff, A.	Einsatz und Entwicklung thermoelektrischer Materialien für hohe Temperaturanforderungen / Materialforum Rhein Main, Hanau, DE, 03-12 ♣ ○
	Weidenkaff, A.	New Materials for alternative solar energy converters: nanostructured functional perovskite-type oxides and oxynitrides / Erwin Schrödinger Kolloquium, Universität Wien, A, 05-07 ♣ ○
	Weidenkaff, A.	High Temperature Thermoelectrics / International Symposium on Ceramic Materials and Components for Energy and Environmental Applications, 2012, Dresden, DE, 05-20 thru 23 ♣ ○
	Weidenkaff, A.	Nanosession Thermoelectrics / Nature Materials Conference Frontiers in Electronic Materials, Aachen, DE, 06-17 thru 20 ■
	Weidenkaff, A.	Functional perovskite-type oxynitrides / 7th International Symposium on Nitrides ISNT2012, Saint-Malo, FR, 06-3 thru 6 ♣
	Weidenkaff, A.	Thermoelectric Oxides- From Materials Design to Modules / 4th International Congress on Ceramics, Chicago, USA, 07-15 thru 19 ♣ ○
	Weidenkaff, A.	IAV Konferenz , Berlin, DE, 11-21 thru 23 ■
	Weidenkaff, A.	Symp AA: Oxide Nanoelectronics and Multifunctional Dielectrics / MRS Fall Meeting , Boston, USA, 11-25 thru 30 ■ ♣ ○
	Weidenkaff, A.	2-Dimensional Nanostructured Thermoelectric Oxides and Heusler Compounds for Solar Energy Converters / MRS Fall Meeting , Boston, USA, 11-25 thru 30 ♣ ○
	Weidenkaff, A.	Thermoelektrik, EWZ, Zürich, 12-06 ♣ ○
	Weidenkaff, A./Looser, S.	Symp Thermoelectrics / EMRS spring meeting, Strasbourg, FR, 05-14 thru 18 ■
	Technology & Society	Xie, W./Tang, X./Zhang, Q.
Xie, W./Zhu, S./Populoh, S./Gałazka, K./Tang, X./Zhang, Q./Tritt, T./Weidenkaff, A.		Simultaneously optimizing the independent thermoelectric properties in Ti(Co,Fe)Sb Alloy by in-situ forming InSb nanoinclusions / The 31st International & 10th European Conference on Thermoelectrics, Aalborg, DK, 07-08 thru 13 ♣
Althaus, H.J.		Peer review process and results for Renault's LCA comparison of Fluence and Fluence ZE, Peer review workshop LCA electric vehicles, Paris, FR, 5-30 ♣ ○
Althaus, H.J.		Chairing of working group 1: LCA methodology, First eLCAr workshop, Zürich, 6-12 ■ ♣
Althaus, H.J.		LCA of E-Mobility and its components: Some thoughts..., Keynote, First eLCAr workshop, Zürich, 6-12 ♣ ○
Althaus, H.J.		Scientific committee International Symposium LCA & Construction 2012, Nantes, FR, 7-10 thru 13 ■
Böni, H.		Conformity Assessment of WEEE Take-Back Schemes: The Case of Switzerland, Electronics Goes Green, Berlin, DE, 9-9 thru 12 ♣
Del Duce, A.		Challenges and main concepts in the development of LCA guidelines for electric vehicles, Second eLCAr workshop, Aachen, DE, 10-9 ♣
Del Duce, A.		Co-Chairing of Stakeholder Feedback Session, Second eLCAr workshop, , Aachen, DE, 10-9 ■
Del Duce, A.		Contribution in input presentation, Use phase and consumption calculation, Second eLCAr workshop, , Aachen, DE, 10-9 ♣
Del Duce, A.	Goal definition, Second eLCAr workshop, Aachen, DE, 10-9 ■ ♣	
Del Duce, A.	Life Cycle Inventory Analysis: Production, Second eLCAr workshop, Aachen, DE, 10-9 ♣	
Del Duce, A.	Chairing of working group 2: The use phase – key references and parameters, First eLCAr workshop, , Zürich, 6-12 ■ ♣	
Del Duce, A.	Working Group 2: The use phase – key references and parameters: Main results, First eLCAr workshop, Zürich, 6-12 ♣	
Del Duce, A.	New passenger transport data , 48th Swiss Discussion Forum Life Cycle Assessment onecoinvent v3, Dübendorf, 6-13 ♣ ○	
Faist Emmenegger, Mireille	47th Discussion Forum on LCA on «LCA of energetic biomass utilisation: actual projects and new developments», Bern, Ittigen, 04-23 ■	

# Empa Activities 2012

## Conferences

<b>Technology &amp; Society</b>	<b>Faist Emmenegger, Mireille</b>	Update and harmonization of the bioenergy inventories, 47th Discussion Forum on LCA on «LCA of energetic biomass utilisation: actual projects and new developments», Bern, Ittigen, 04-23 ♣ ○
	<b>Faist Emmenegger, Mireille</b>	Parameterisation of the dyeing process for the optimisation of the textile production chain / LCA-conference 2012, Copenhagen, DK, 11-26 thru 28 ◆
	<b>Gmünder, S.</b>	47th Discussion Forum on LCA on «Spatial LCA of Colombian Biofuels», Bern, Ittigen, 04-23 ♣ ○
	<b>Gmünder, S.</b>	Jatropha: Green Gold? Life Cycle Assessment of Different Jatropha Bioenergy Systems in Eastern Africa, International Conference on Research for Development (ICRD 2012), Bern, 08-20 ♣ ○
	<b>Gmünder, S.</b>	Bioenergy in Africa: Potentials and risks of Jatropha and related crops, Nairobi, KE, 11-26 thru 27 ■
	<b>Gmünder, S.</b>	Life cycle Assessment of Jatropha value chains: The potential of jatropha for national energy security, Bioenergy in Africa: Potentials and risks of Jatropha and related crops , Nairobi, KE, 11-26 thru 27 ♣ ○
	<b>Gottschalk, F.</b>	A probabilistic model for species sensitivity distributions taking into account inherent uncertainty and variability of effects to estimate environmental risk, SETAC Europe 22nd Annual Meeting, , Berlin, DE, 5-22 ◆
	<b>Gottschalk, F.</b>	Engineered nanomaterials in rivers – exposure scenarios for Switzerland at high spatial and temporal resolution, Goldschmidt Conference, , Montreal, CA, 6-24 ♣ ○
	<b>Hilty, L.</b>	Green ICT and Sustainability: A Critical Perspective. EU-RESPONDER Workshop, Wirtschaftsuniversität Wien, Wien, AT, 05-30 ♣ ○
	<b>Hilty, L.</b>	Gesellschaftliche Chancen und Risiken von Ortungstechnologien, GEO Summit, Messe und Kongress für Geoinformation, Bern, 06-20 ♣ ○
	<b>Hilty, L.</b>	Application of System Dynamics to Assess Mass Flows of Waste Electrical and Electronic Equipment (WEEE), 30th International Conference of the System Dynamics Society, St.Gallen, 07-22 ♣
	<b>Hilty, L.</b>	Why energy efficiency is not sufficient – some remarks on Green by IT, Keynote Lecture, EnviroInfo 2012, 26th Environmental Informatics Conference, Dessau, DE, 08-29 ♣ ○
	<b>Hilty, L.</b>	Moderation auf der-Konferenz «Erfolg und Scheitern »grüner« Innovationen: Konsequenzen für die Energiewende», Berlin, DE, 10-18 ■
	<b>Hilty, L.</b>	Die Energieeffizienz der Informationsgesellschaft: Wo ist sie geblieben? Energieapero beider Basel, Fachhochschule Nordwestschweiz , Basel, 11-13 ♣ ○
	<b>Hilty, L.</b>	Green ICT – Why Energy Efficiency is Not Sufficient, Keynote Lecture, Entretiens Jacques Cartier: Colloquium on «Towards ecological and energy efficient Information and Communication Technology», Villeurbanne, FR, 11-20 ♣ ○
	<b>Hilty, L.</b>	Moderation auf der Jahrestagung des Wissenschaftsforums Green IT, Berlin, DE, 12-13 ■
	<b>Hischier, R.</b>	Towards a new ecoinvent – the ecoinvent database approach to Completeness, Transparency & Consistency / TBE Stakeholder Workshop «Measuring Sustainability in Construction», Brussels, BE, 02-28 ♣ ○
	<b>Hischier, R.</b>	ecoinvent – a common platform for your LCI datasets, 48th Swiss Discussion Forum Life Cycle Assessment on «ecoinvent v3 – an introduction to the new features & data», Dübendorf, 06-13 ♣ ○
	<b>Hischier, R.</b>	ecoinvent v3 – an introduction to the new features & data, 48th Swiss Discussion Forum Life Cycle Assessment, Dübendorf, 06-13 ■
	<b>Hischier, R.</b>	Overview of new data, 48th Swiss Discussion Forum Life Cycle Assessment on «ecoinvent v3 – an introduction to the new features & data», Dübendorf, 06-13 ♣ ○
	<b>Müller, N.</b>	Nanoparticles in Waste Incineration, ETH Conference on combustion generated nanoparticles, , Zürich, 24-6 thru 27 ♣
	<b>Nowack, B.</b>	Nanopartikel in der Umwelt: Freisetzung, Verhalten und Effekte, Arbeitsgemeinschaft Wasserwerke Bodensee-Rhein (AWBR), Kolloquium am DVGW-Technologiezentrum Wasser, Karlsruhe, DE, 03-16 ♣ ○
	<b>Nowack, B.</b>	The release of nanomaterials to the environment, Analytica Conference 2012, München, DE, 04-17 thru 19 ♣ ○
	<b>Nowack, B.</b>	Release of nanoparticles from textiles during washing, Gordon Research Conference, Environmental Sciences: Water, , Holderness, USA, 06-24 thru 29 ◆
	<b>Nowack, B.</b>	Life cycle considerations for assessing environmental risks of nanomaterials, 7th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Banff, CA, 09-10 thru 12 ♣ ○
	<b>Nowack, B.</b>	Modellierung von Konzentrationen und Umwelteffekten von Nanomaterialien, 5. NRW Nano-Konferenz, Dortmund, DE, 09-19 ♣ ○
	<b>Nowack, B.</b>	Third International Conference in safe production and use of nanomaterials, Grenoble, FR, 11-13 thru 15 ♣ ○
	<b>Nowack, B.</b>	Auswirkungen der Nanotechnologie auf die Umwelt, Pädagogische Hochschule Zentralschweiz, , Luzern, 11-6 ♣ ○
	<b>Ott, D.</b>	e-Waste Recycling in Switzerland – An Overview, First e-Waste Conference in Uruguay, , Montevideo, URU, 02-16 ♣ ○

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## Conferences

Technology & Society	Ott, D.	Workshop Presentation, PWB Recycling – Lessons Learnt from Case Studies in India and Colombia, BIR Annual Conference, , Rome, IT, 05-30 🍀 ○
	Ott, D.	Key Aspects of WEEE Recycling – Lessons Learnt from Empa's Perspective, International Dialogue about e-Waste Management, Presentation per Video-streaming, San Salvador, ELS, 05-7 🍀 ○
	Ott, D.	Global Tendencies in WEEE Recycling – An Overview, Forum on Fridge and e-Waste Recycling, organized by ANDI, , Bogota, COL, 09-20 🍀 ○
	Ott, D.	Public-private Workshop on WEEE Management, Mexico City, MX, 09-27 ■
	Ott, D.	Scaling up the Recovery of Secondary Resources in Colombia, Water & Light Conference @ HSG, , St.Gallen, 09-4 🍀 ○
	Ott, D.	Workshop «e-Waste Recycling in Developing Countries», EGG 2012 , Berlin, DE, 09-9 ■
	Ott, D.	pre-ADF XIII Workshop, Urban Mining, Challenges and Opportunities for Africa, Addis Abeba, ET, 10-22 ■
	Ott, D.	Scaling up the Recovery of Secondary Resources in Colombia, ACIS Symposium 2012 @ EPFL, , Lausanne, 11-2 🍀 ○
	Piccinno, F.	Sustainability of nanocellulose biocomposite derived from vegetable food waste ,The 1st Conference of COST Action FP 1003, Barcelona, ES, 05-17 🍀 ○
	Schluemp, M.	Where are WEee in Africa? Baseline information on e-waste volumes in selected West Africa countries, Pan-African Forum on e-Waste, Nairobi, KE, 03-14 ■ 🍀
	Schluemp, M.	The Perspective of Academic Institutions – Addressing e-waste challenges and opportunities through public-private sector cooperation – Multi-Stakeholder Policy Dialogue, Osaka, JP, 07-18 🍀 ○
	Schluemp, M.	Solutions: Towards Sustainable ICT Supply Chains Greening the ICT reverse supply chain, ITU Green Standards Week, Paris, FR, 09-18 🍀 ○
	Schluemp, M.	The Complexity of the E-waste Problem What is e-waste – and why is it an issue?, ITU Green Standards Week, Paris, FR, 09-18 🍀 ○
	Schluemp, M.	Where are WEEE in Africa, EGG 2012, Berlin, DE, 09-9 🍀
	Schluemp, M.	Workshop «e-Waste Recycling in Developing Countries», EGG 2012, Berlin, DE, 09-9 ■ 🍀 ○
	Schluemp, M.	Workshop: Urban Mining, Challenges and Opportunities «Synergies between e-waste recycling and mining of mineral resources”, World Resources Forum 2012, Beijing, CN, 10-21 ■
	Som C.	Life cycle thinking about façade coatings based on nanomaterials, 4th NanoImpactNet Integrating Conference and the 1st QNano Integrating Conference, Dublin, IE, 03-02 🍀 ○
	Som C.	Development of Environmental and Technical Data and assessment of substitution potential, Project Meeting NanoCelluComp, Zürich, 09-27 thru 28 ■ 🍀
	Som C.	Invited Keynote: Nanomaterials – risk assessment under uncertainty, Communication about scientific uncertainty in environmental research an interdisciplinary workshop, Uni Koblenz, Anweiler, D, DE, 10-22 🍀 ○
	Wäger, P.	Seltene Metalle– Anwendungen, Kritikalitäten, Handlungsoptionen, Transfer Transparent, Windisch, 02-28 🍀 ○
Wäger, P.	Kritische Rohstoffe – nachhaltiger(er) Umgang mit seltenen Metallen, SEN Cleantech Tagung, Zürich, 02-3 🍀 ○	
Wäger, P.	Seltene Metalle – Rohstoffe für Zukunftstechnologien, Ressourcenmanagement: Handlungsbedarf für die Zukunft, Regensdorf, 06-15 🍀 ○	
Wäger, P.	Posters Integrative Ressourcenforschung & Was sind eigentlich Ressourcen?, SAGUF Jubiläumstagung, Langenthal, 06-19 ◆	
Wäger, P.	Scarce metals – Applications, supply risks and need for action, Annual Meeting, Swiss Physical Society, ETH Zürich, Zürich, 06-21 🍀 ○	
Wäger, P.	Empfehlungen für eine Rohstoffstrategie, Workshop Rohstoffstrategie Kanton Zürich, Horgen, , 09-4 🍀	
Wäger, P.	Kritische Rohstoffe in Elektro-und Elektronikgeräten – haben wir sie im Griff?, Zuger Cleantech Day, Zug, 09-6 🍀 ○	
Wäger, P.	Monologue of a recalcitrant element , Electronics Goes Green, Berlin, DE, 09-9 thru 12 🍀	
Wäger, P.	Towards a comprehensive recovery system for critical metals in Switzerland, Electronics Goes Green, Berlin, DE, 09-9 thru 12 🍀	
Wäger, P.	Input for e-waste workshop panel discussion, WRF 2012, Beijing, CN, 10-23 🍀	
Wäger, P.	Seltene Metalle – Anwendungen, Kritikalitäten, Handlungsbedarf, BAFU Info-Pick, Bern, 11-1-2011 🍀 ○	
Wäger, P.	Nachhaltiger Umgang mit seltenen Metallen, Swissmem und Cleantech, Dübendorf, 11-2-2011 🍀 ○	
Zah. R.	Der ökologische Rucksack von Elektromobilität, 3rd Congress on eMobility, Swiss eMobility Forum, Verkehrshaus Luzern, 02-7 🍀 ○	
Zah. R.	Future Sustainability of 1st and 2nd Generation Biofuels, World Biofuels Markets 2012, Rotterdam, NL, 03-14 🍀 ○	
Zah. R.	47th Discussion Forum on LCA on «LCA of energetic biomass utilisation: actual projects and new developments», Bern, Ittigen, 04-23 ■	
Zah. R.	48th Discussion Forum on LCA on «ecoinvent V3», Dübendorf, 06-13 ■	
Zah. R.	International Conference on Research for Development (ICRD 2012), Bern, 08-20 ■	

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<b>Technology &amp; Society</b>	<b>Zah. R.</b>	Bio-Energieproduktion – Chancen, Potenziale Gefahren, scnat – Energiedialog der Akademien, Bern, 09-19 ■ ● ○
	<b>Zah. R.</b>	Les biocarburants, entre sécurité énergétique et crise alimentaire? scnat – conférence publique, Genève, 09-20 ● ○
	<b>Zah. R.</b>	Sustainability in Energy and Buildings Conference (SEB'12) , Stockholm, SE, 09-4 ■
	<b>Zah. R.</b>	Plants replacing fossil fuels? The science, politics, ethics and economics of plant-based solutions for the future, Plant Science Center Symposium 2012, , ETHZ, 11-8 ● ○
	<b>Zah. R.</b>	Biofuels: The big picture, Conference on BIOENERGY IN AFRICA Potentials and risks of Jatropha and related crops, Nairobi, KE, 11-26 ■ ● ○