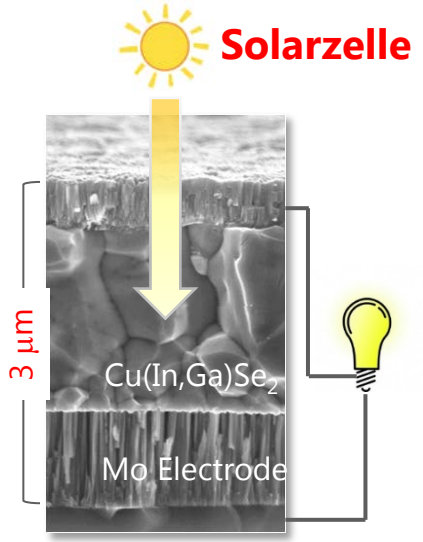
Zahlen sich Risiken schlussendlich aus?

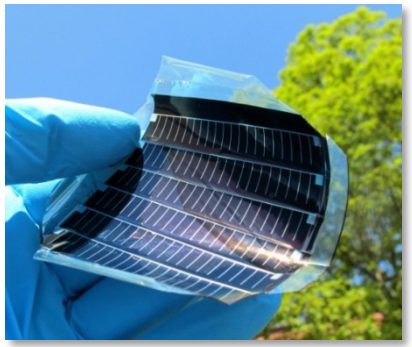
Empa
Materials Science and Technology

Empa
Materials Science and Technology

Empa

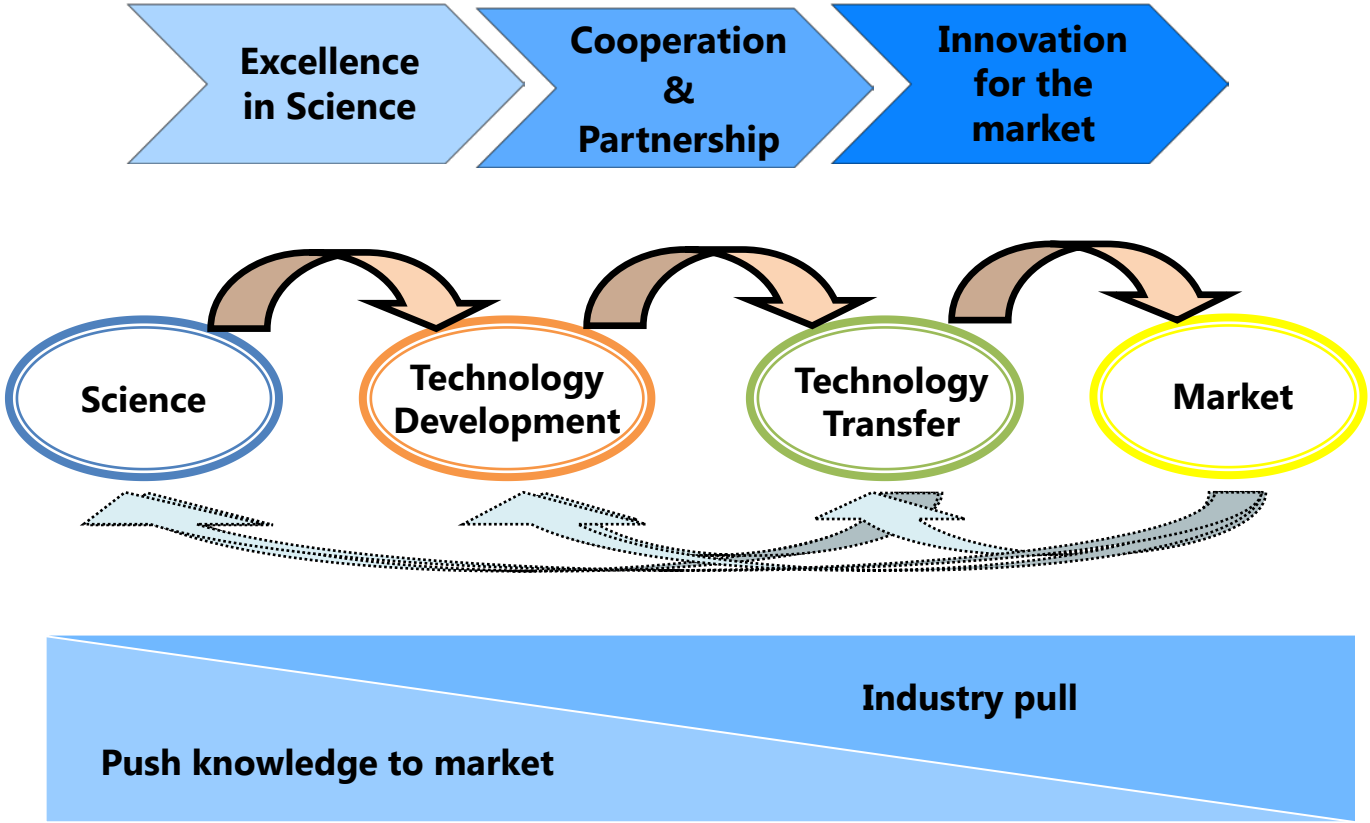
18 Jahre Forschung für die zukünftige Energieversorgung



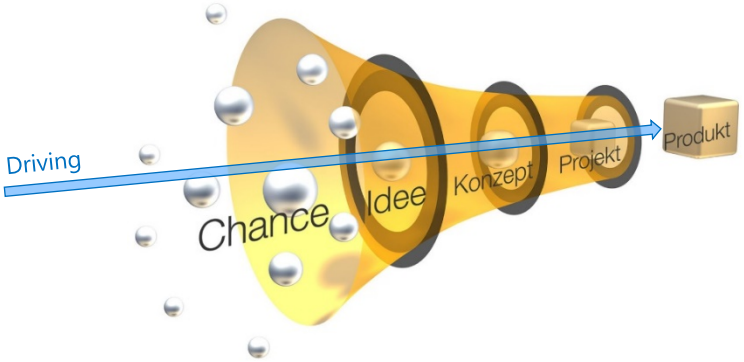


Empa - the place where innovation starts

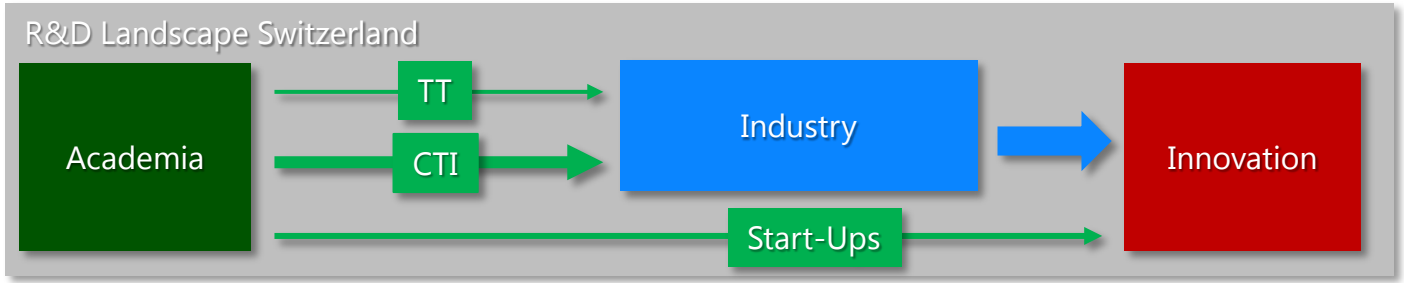
Empa
Materials Science and Technology



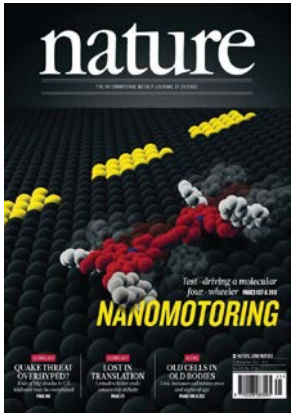
Innovation Pathway



The motivation of people is key for the success of the innovation process!!



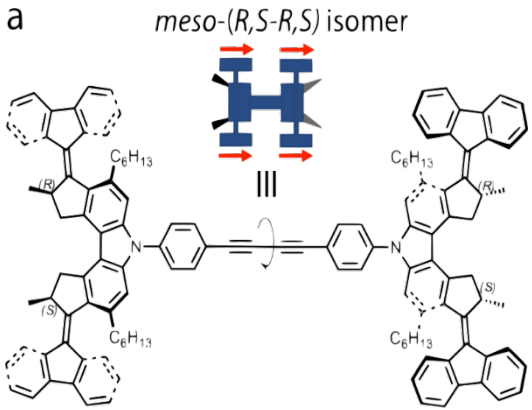
A new macromolecule .....

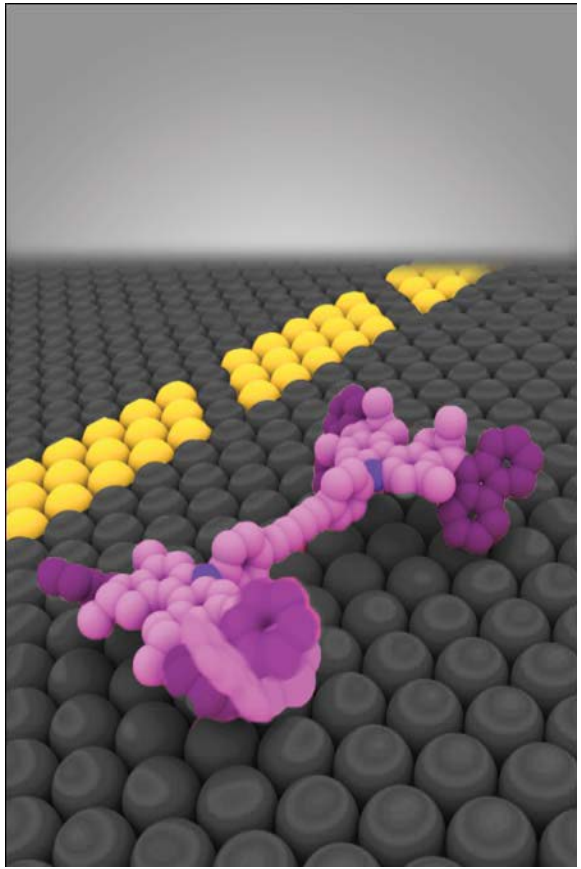


«Nature»- November 10, 2011

Electrically driven directional motion of a four-wheeled molecule on a metal surface,

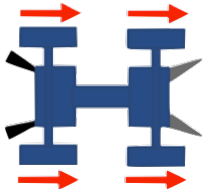
T. Kudernac, N.Ruangsupapichat, M. Parschau, B. Macia, N. Katsonis, S.R. Harutyunyan, K.-H. Ernst, **B.L. Feringa**, Nature 479 (2011), doi: 10.1038/nature10587

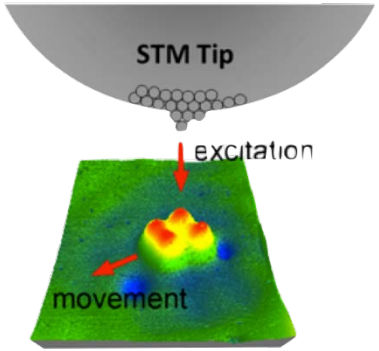


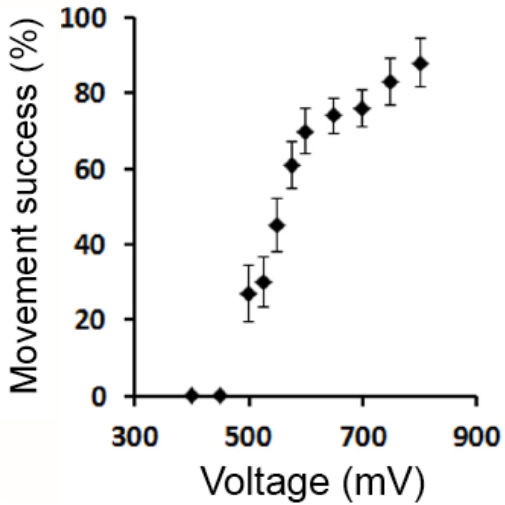


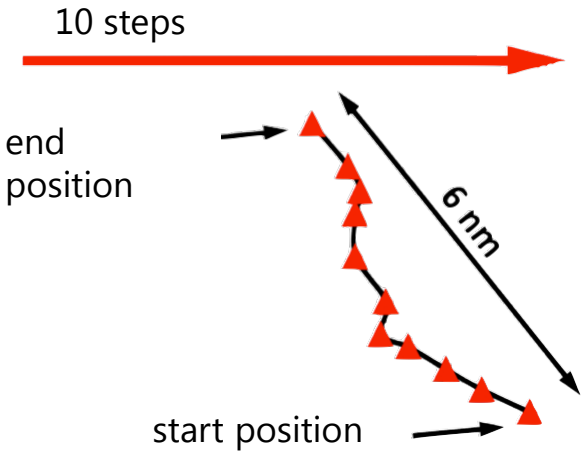
… nano-car driven first at Empa

Empa
Materials Science and Technology









Nobel Prize in Chemistry 2016

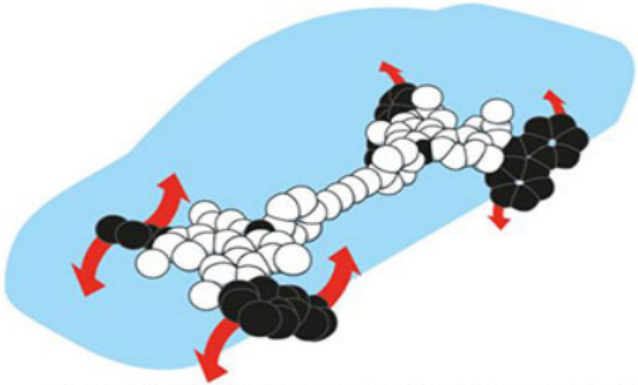


Illustration: ©Johan Jarnestad/The Royal Swedish Academy of Sciences

2016 Chemistry Laureates Developed the World's Smallest Machines

This year's Chemistry Laureates Jean-Pierre Sauvage, Sir Fraser Stoddart and Bernard L. Feringa have developed molecular machines that are a thousand times thinner than a hair strand. They have succeeded in linking molecules together to design everything from a tiny lift to motors and miniscule muscles.

Bernard L. Feringa
Prize share: 1/3

The Nobel Prize in Chemistry 2016 was awarded jointly to Jean-Pierre Sauvage, Sir J. Fraser Stoddart and Bernard L. Feringa *"for the design and synthesis of molecular machines"*.

Empa

Pflaster statt Spritze für Frühchen

bisher

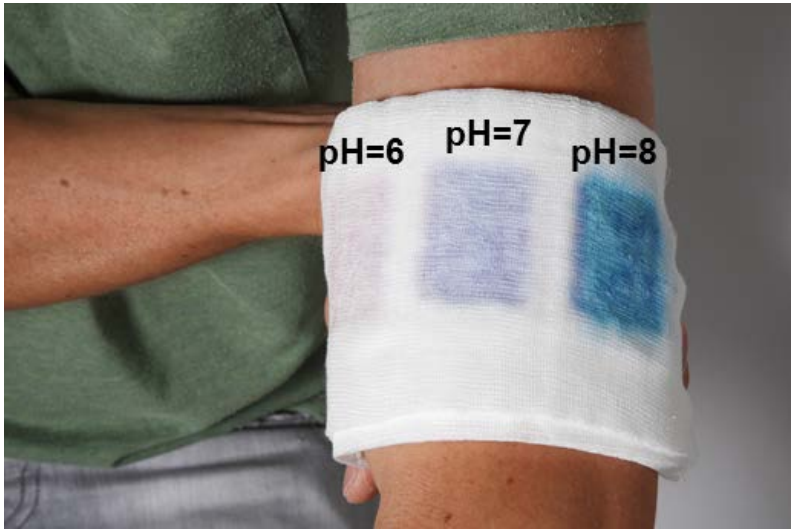
Spritze

neu Empa

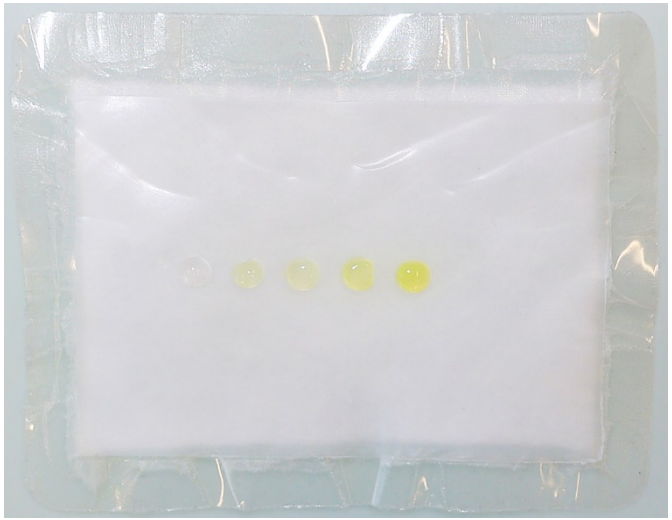
Frühchen erhalten wiederholt Koffein, um einem Atemstillstand vorzubeugen.

Pflaster wird mit UV-Licht beleuchtet: Dort, wo das UV-Licht die Membranschicht aktiviert hat, wird Koffein abgegeben.

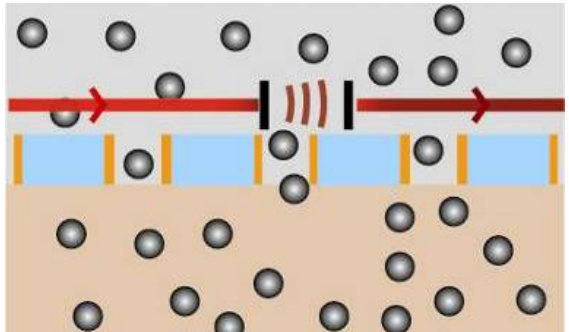
‘Intelligentes’ Plaster



pH detection



Glucose detection



Storage

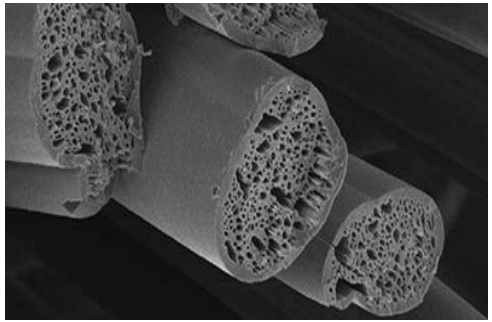
Analyzer

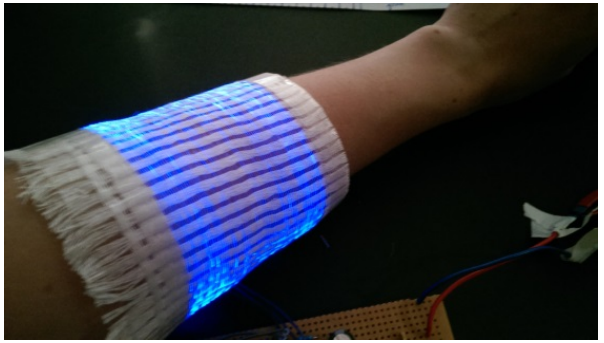
Skin

Responsive membrane

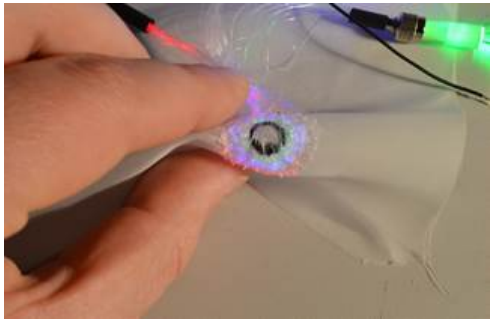
Wissenschaft – Technologie - Innovation

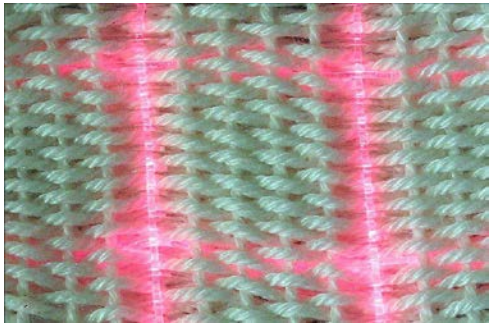
Empa
Materials Science and Technology





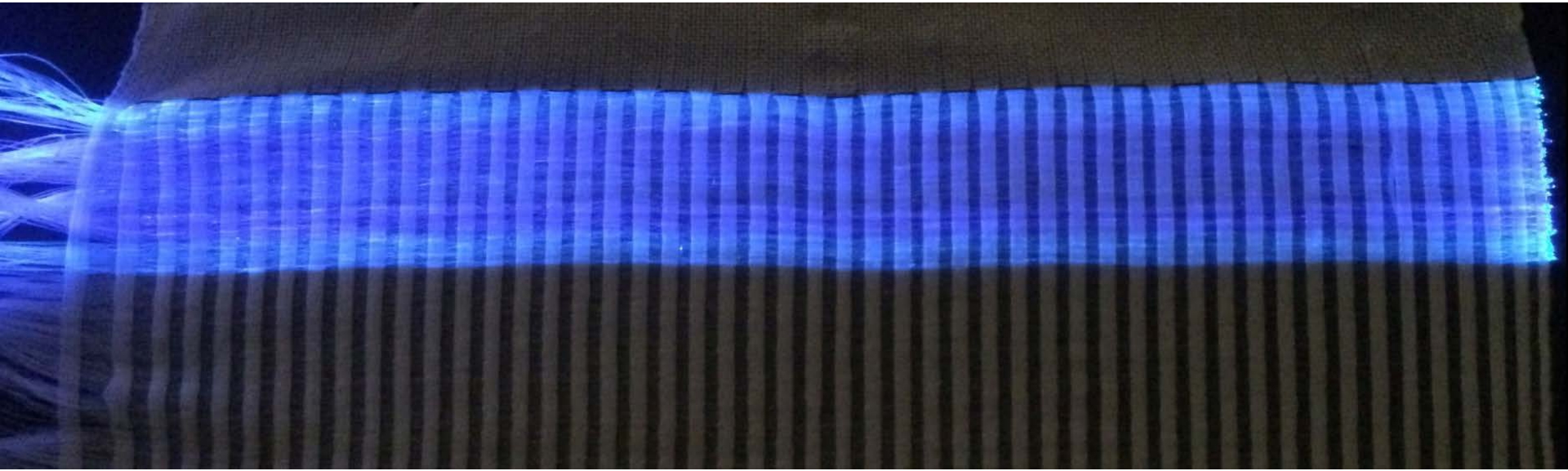
Empa – The Place where Innovation Starts





Wissenschaft – Technologie - Innovation

Empa
Materials Science and Technology



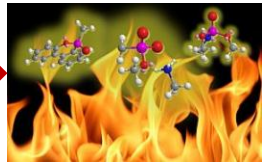
Empa
Materials Science and Technology

Von der Invention zur Innovation

Empa
Materials Science and Technology

Beispiel: Organische Flammschutzmittel ~ 7 Jahre

Grundlagen



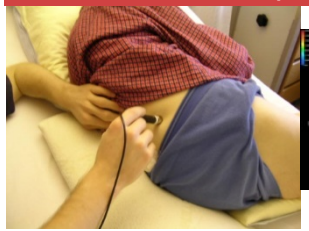
KTI Projekte

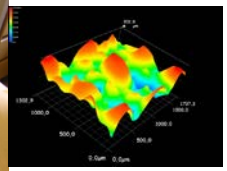
Seit 2007: Synthese neuer organischer Verbindungen

Patente, Additive zu neuen Werkstoffen, viele Experimente

Vielfältige Anwendungen

Beispiel: Dekubitus Prävention mit neuem Spitalbetttuch ~ 6 Jahre





2x KTI Projekte

3x geringer Reibung

Feuchtigkeitstransport

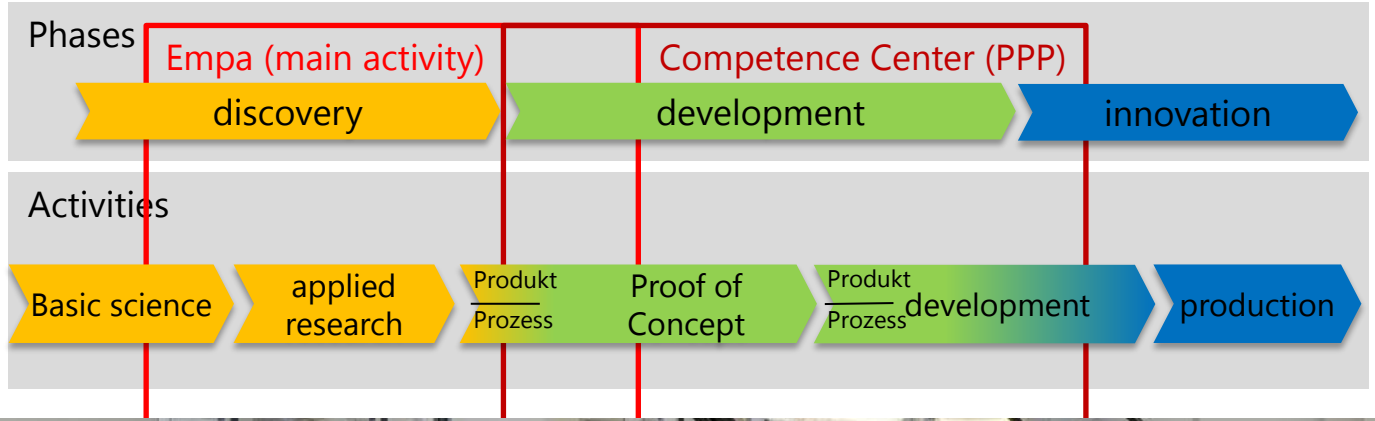
techtextil innovationprize.2013

Innovative fabrics schoeller® Switzerland

seit 2006: neue Fasern und Hautmodelle

From Discovery to Innovation

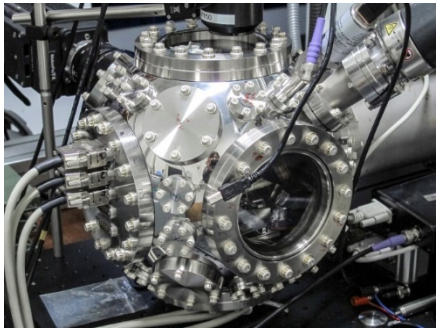
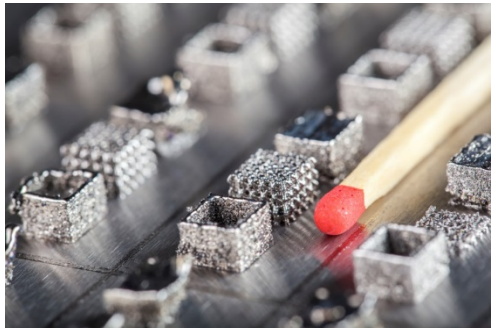
Empa
Materials Science and Technology

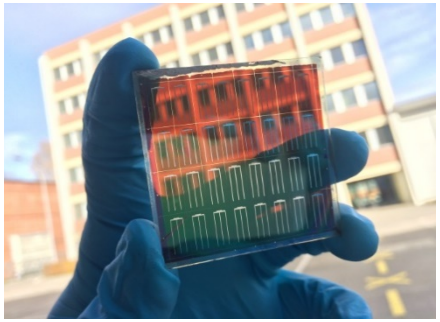


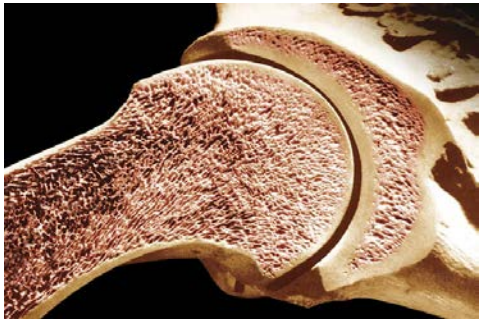
Science – Technology – Innovation

Empa – The Place where Innovation Starts

Empa
Materials Science and Technology



Thank you!!!

Questions???

Empa
Materials Science and Technology