

PAUL SCHERRER INSTITUT



Ines Günther-Leopold :: Scientific Affairs :: Paul Scherrer Institut

PSI in a nutshell

International Dual Career Day @ PSI, 06th June 2017

← Basel

Germany ↑

Aarau/Bern ↓

Zürich →





PSI west

PSI east

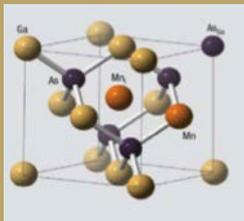
SwissFEL

PSI as part of the ETH Domain

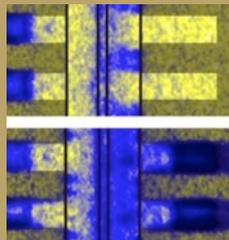
ETHZ Swiss Federal Institute of Technology Zurich	EPFL Swiss Federal Institute of Technology Lausanne	PSI Paul Scherrer Institute	Empa Swiss Federal Laboratories for Materials Testing	WSL Swiss Federal Research Institute for Forestry, Snow and Landscape	Eawag Swiss Federal Institute of Aquatic Science and Technology
PSI funds (global budget)				280	MCHF
External funding				100	MCHF
Staff				2100	
• Doctoral students				320	
• Apprentices				100	
External users: people / visits				2200 / 4100	per year
Number of scientific publications				1400	per year
PSI employees with teaching duties at both ETH and universities				100	
Patient visits (proton therapy treatment)				6300	per year

Our Mission

Matter and materials



Energy and environment



Human health



Development
Construction
Operation



Large research facilities



Swiss and foreign users
from academia and industry

Knowledge & expertise



Education

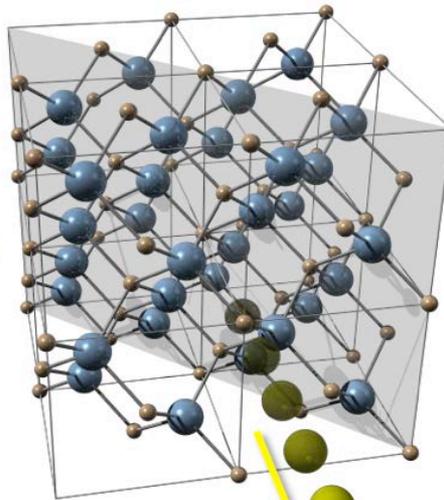


Technology transfer



Research at large facilities

Photons
Neutrons
Muons



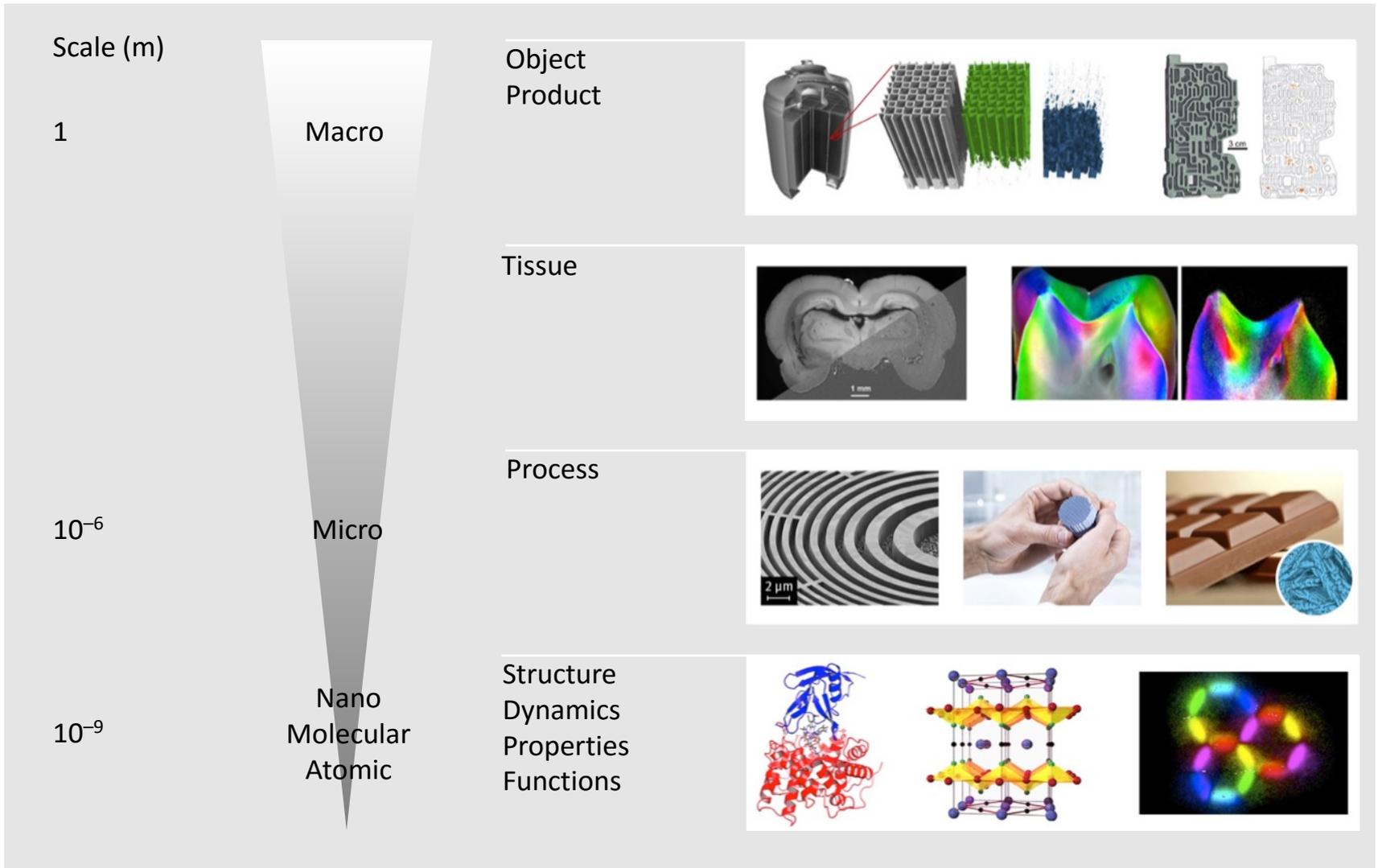
Microscopic
insights into
materials



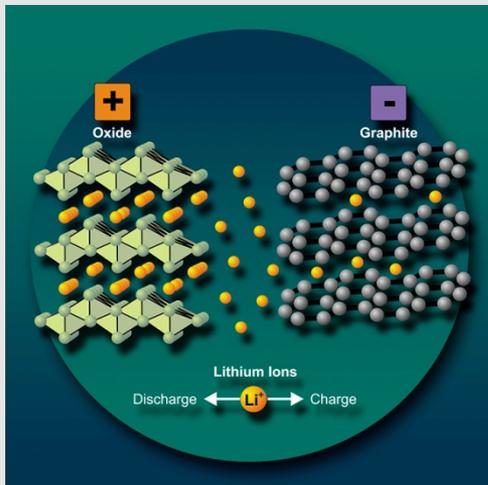
Synchrotron Light Source SLS
Spallation Neutron Source SINQ
Muon Source $S_{\mu}S$



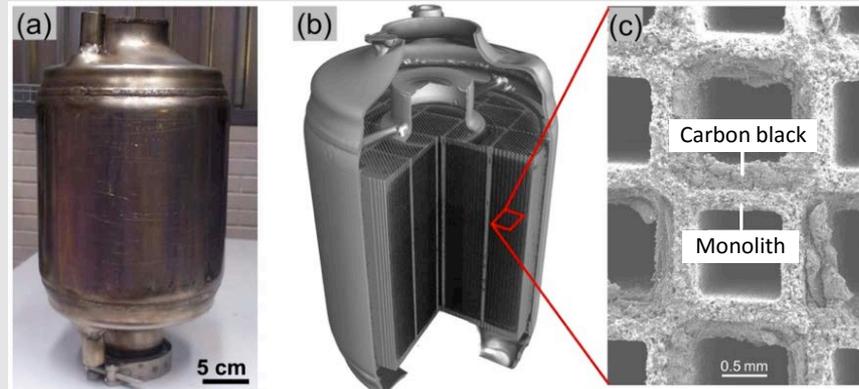
Microscopic insights into materials



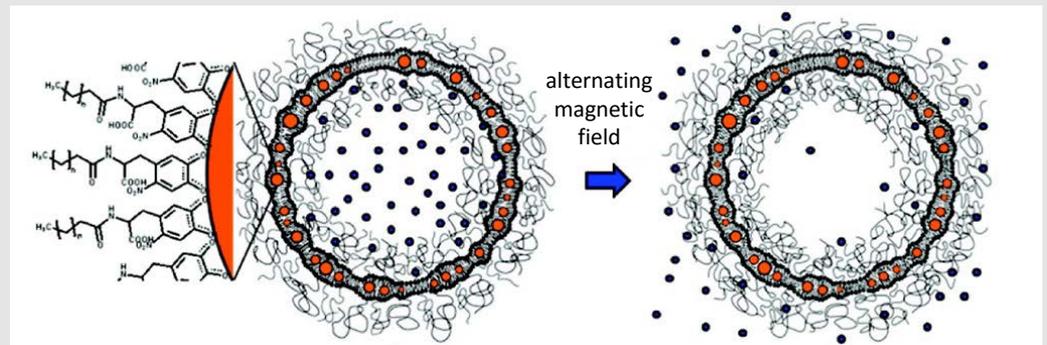
... for **energy** storage:
development of new
materials for batteries.



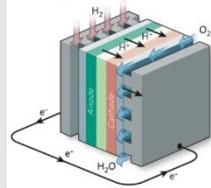
... for the **environment**:
distribution of soot in particle filters.



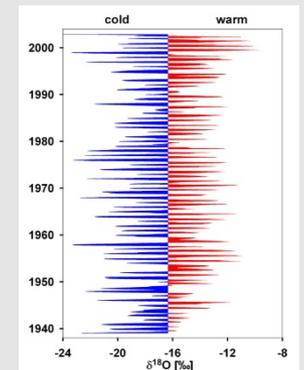
... for **human health**: encapsulation of medical agents
for targeted drug delivery in the body.



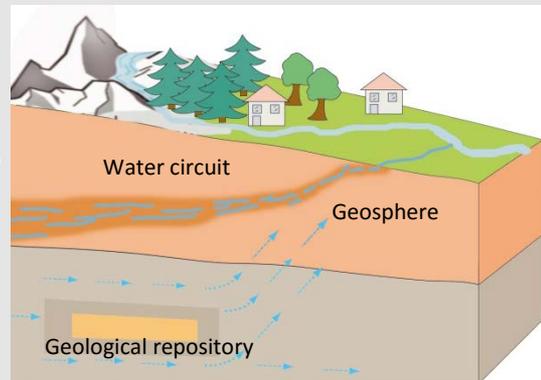
Research for **efficient use of alternative energy carriers** and **energy storage**

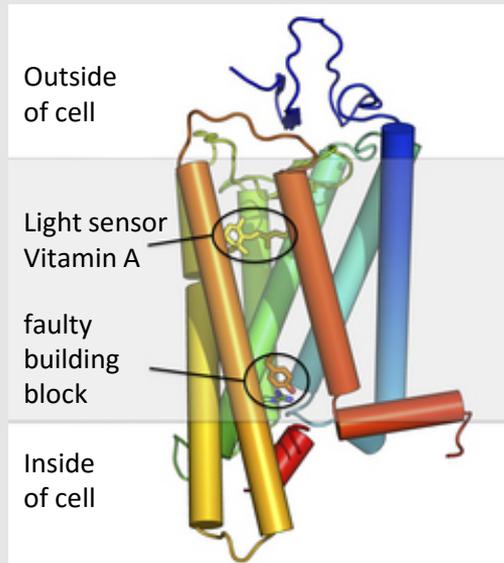


Analysis of **climate data** and **environmental pollution**

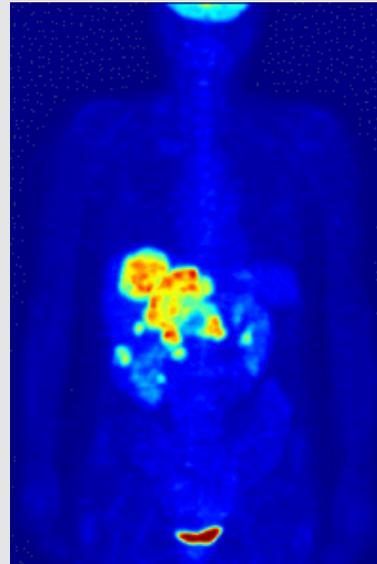


Research on the **security** of nuclear power plants and geological repositories





Structure of proteins
for the targeted
development of new drugs



**Radio
pharmaceuticals**
for the diagnosis
of tumours



Proton therapy for

- destruction of tumours
- protection of healthy tissue

New Large Research Facility SwissFEL

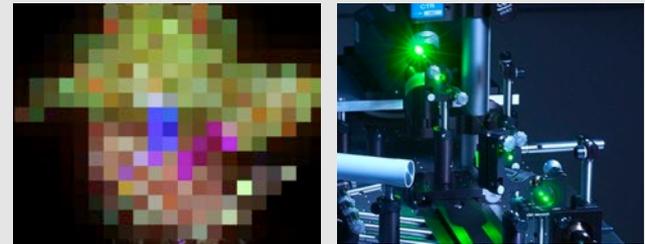
Synchrotron light

fine, slow



Optical laser light

coarse, fast



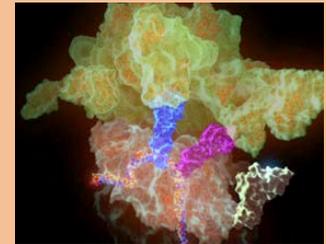
SwissFEL

fine **and** fast at extremely high intensity



a national free-electron x-ray laser for Switzerland

New, direct insights into physical, chemical and biological processes governing our everyday lives



Wir schaffen Wissen – heute für morgen

**Enjoy the day
@ PSI!**

