

# **Estia** a polarised focusing reflectometer for small samples

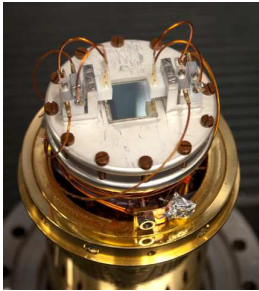
Paul Scherrer Institut  
Switzerland  
Jochen Stahn



University of Copenhagen  
Denmark  
Marité Cardenas



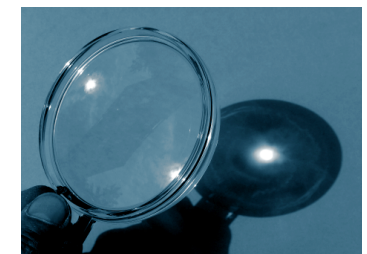
for the investigation of the chemical and magnetic depth-profile near surfaces and of lateral correlations and structures



- functional devices: *spin-valves, spintronics*
- diffusion processes: *Li batteries, corrosion protection*
- multifunctional materials: *interface-coupled electric and magnetic properties*
- towards *real* materials: *raster-scanning of bent, faceted or multi-domain surfaces*

## *burning glass-like* **neutron guide**

- point-to-point imaging
- decoupling of beam size and divergence
  - new operation modes
  - high flexibility
  - low background



## **pushing the limits**

by 2 to 3 orders of magnitude for

- tiny samples ( $< 1 \text{ mm}^2$ )
- fast measurements ( $< 0.1 \text{ sec}$ )
- in-situ studies during growth or manipulation

