

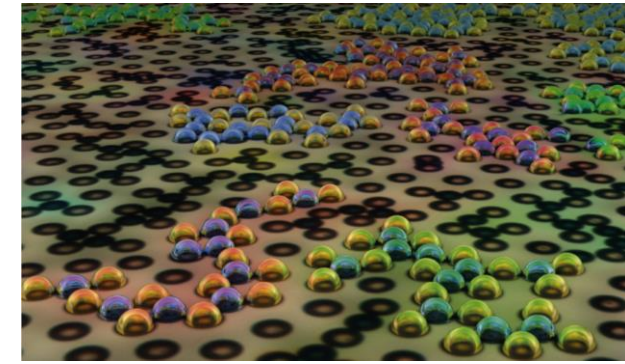
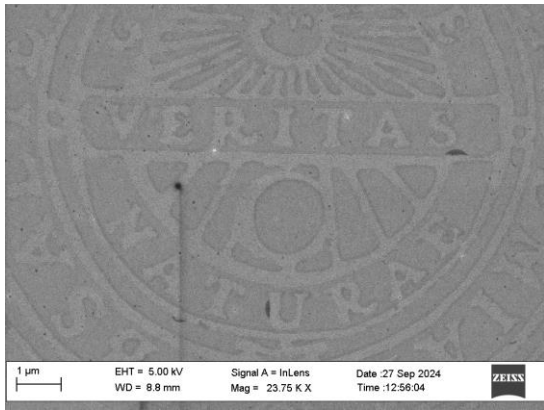
Materials Physics

Staff (2024):

- Program professor (PAP): Daniel Primetzhofer
- Faculty members: Gabriella Andersson, Björgvin Hjörvarsson, Vassilios Kapaklis, Petra Jönsson, Gunnar Pálsson, Petter Ström, Max Wolff
- Ph.D. students: 12 (present: Julia Löfstrand)
- Postdocs: 8 (present: Kristina Komander)
- Researchers (permanent): 4
- Research engineers: shared with FREIA & tandem laboratory



Research focus



Identifying common areas after merging activities from ion physics into materials physics

Main Research Areas		% of program	FTE Faculty	Type
1	Metamaterials* (incl. thin films, metallic glass, optics & nanostructures)	47%	2.2	mixed
2	Magnetism	29%	1.4	mixed
3	Hydrogen in materials	15%	0.9	mixed
4	Soft matter	9%	0.4	mixed

* "Engineered" in a broad sense



Updated Table 3.1 as in KoF24 report

Materials Physics



UPPSALA
UNIVERSITET

Key enablers for research



- Integral (in-house) approach from synthesis to analysis strengthened by unit merger
 - Extensive own lab infrastructure and strong engagement in AM & MyFab (cleanroom) facilities
- External funding from a wide range of research funding bodies + industry
 - Permits to pursue fundamental and applied research connected to societal needs
- Tandem Laboratory – scientific governance of infrastructure
 - National & international facility enabling our research & attracting materials scientist to UU
- Neutron scattering – scientific governance of infrastructure
 - Super ADAM @ILL, SAGA @ESS, platform for neutron scattering + collaborations with other centres
- Strong engagement in teaching – in connection with research
 - Enables attracting students for projects, theses and more



Materials Physics



Program priorities

(KoF24 report summary, Chapters 8-10)

Priority 1 (program): Structure and composition on multiple length-scales for tailored synthesis and physical properties of functional materials

Strengthen the program profile above, as well as the renewal capabilities, by mutually *leveraging the competences of materials physics and ion physics*.

Priority 2 (department): Platform for neutron research (with Applied Nuclear Physics)

Establish a complete concept of *a compact neutron source in Uppsala to strengthen research in materials and applied nuclear physics* and support ITER and the usage of the European Spallation Source.

Priority 3 (faculty): A science platform for studying hydrogen in materials

Strengthen hydrogen research & education by build-up of a new science platform and competence bundling

→ merged in the *department priority “LigHt, an environment for multi-scale characterization of (energy) materials at Ångström laboratory”*

