

Seminars

Prof. Dr. S. Schintke, HEIG-VD/HES-SO, Switzerland

TOPIC1: Scanning Probe Microscopy

Wednesday 16.10.2019 (2h lecture + homework exercises)

- Scanning probe microscopy - measurement principle & instrumentation:
 - scanning tunnelling microscopy (STM)
 - atomic force microscopy (AFM)

Room C9, 9:30.

Thursday 17.10.2019 (2h interactive lecture with exercises)

- Application examples of scanning probe microscopy
 - case studies on common artefacts, data analysis and interpretation with regard to topography, electronic structure, nanoparticle size.

Room Ruffino (dep. Industrial Engineering 2nd floor), 9:30

TOPIC 2: Plasmonic nanoparticles (Au NPs)

Thursday 17.10.2019 (2h lecture + homework exercises)

- optical properties of AuNPs
- basic synthesis of AuNPs (Turkevich)
- optical methods for sizing of AuNPs:
 - Uv-vis-NIR absorbance spectroscopy
 - Dynamic light scattering

Drawing Room 1, 14:00

Friday 18.10.2019 (2h interactive lecture with exercises & case studies)

- Application examples of AuNPs:
 - sensors
 - biomedical
 - energy
 - catalysis

Room B5, 9:30