seit 1558

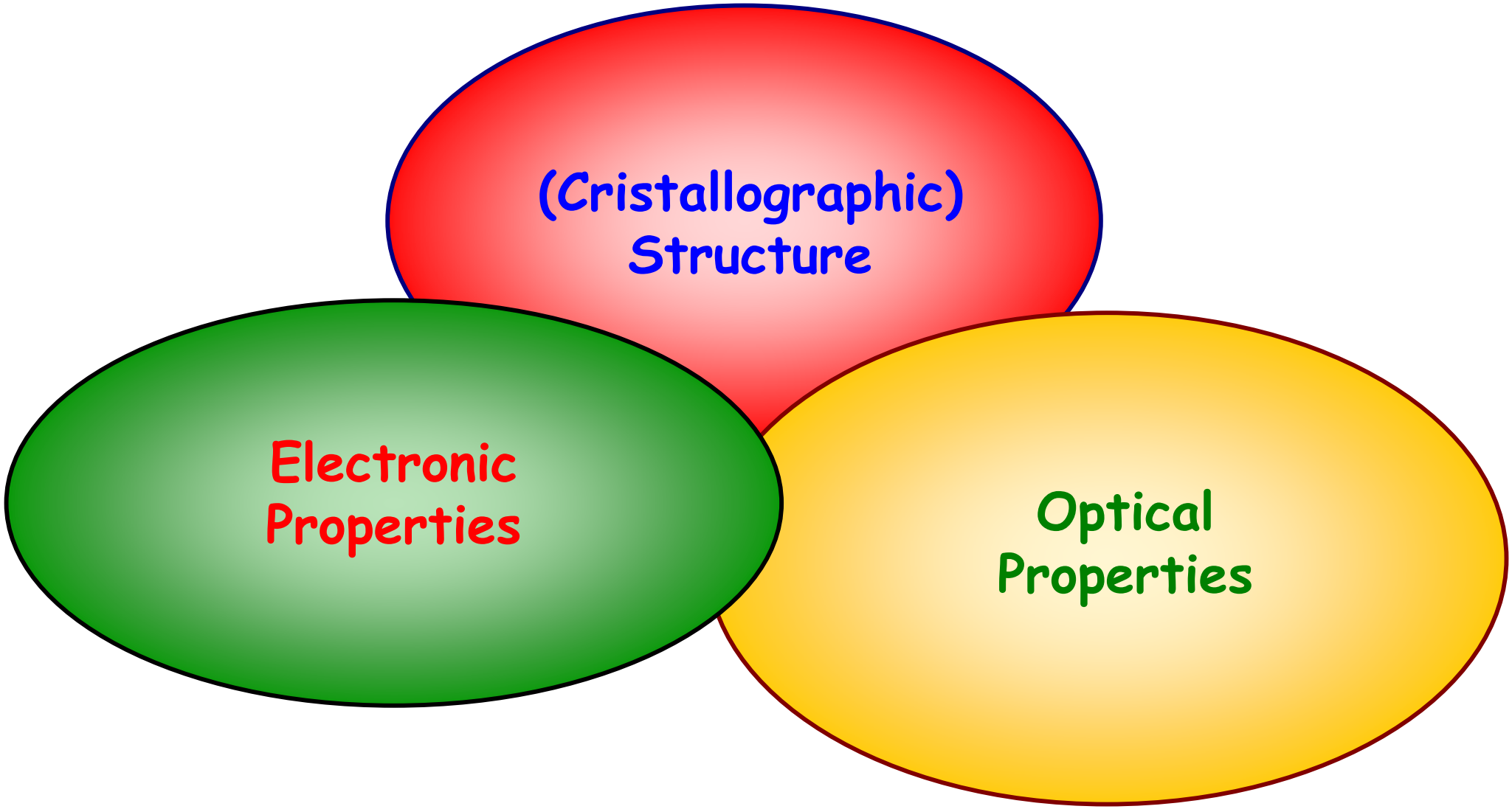
Friedrich-Schiller-Universität Jena

Institut für Festkörperphysik

Vorstellung des IFK

TORSTEN FRITZ

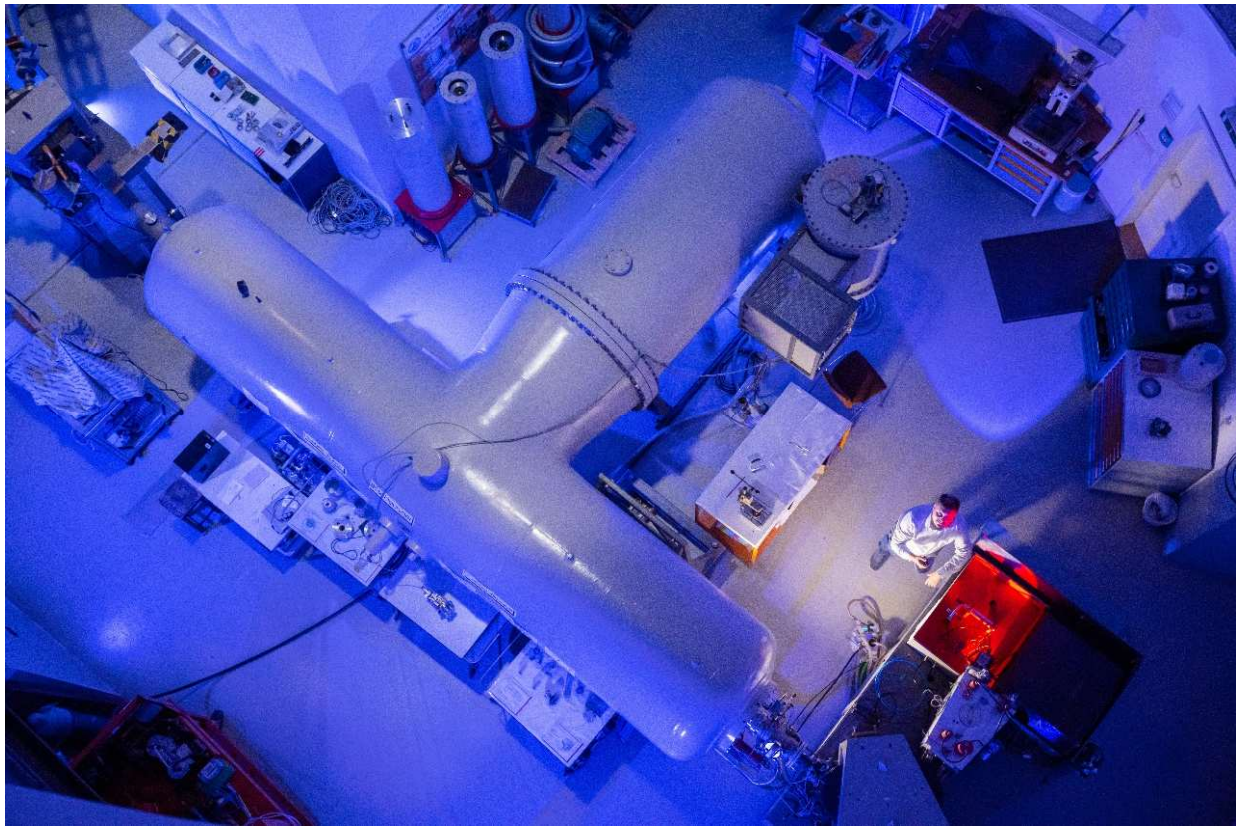
Main Topic: Structure-Properties-Relation



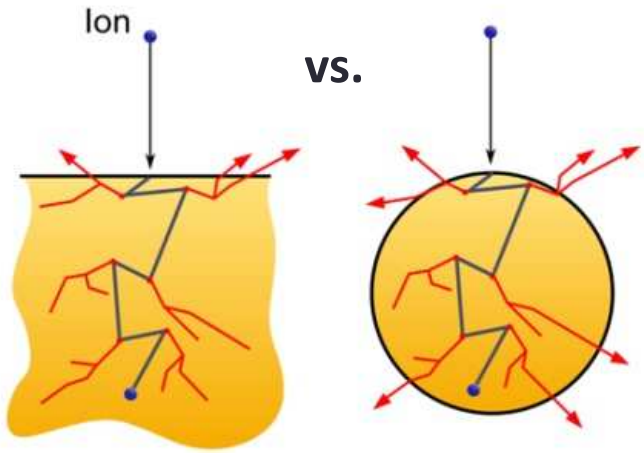
AGs Rotes Haus

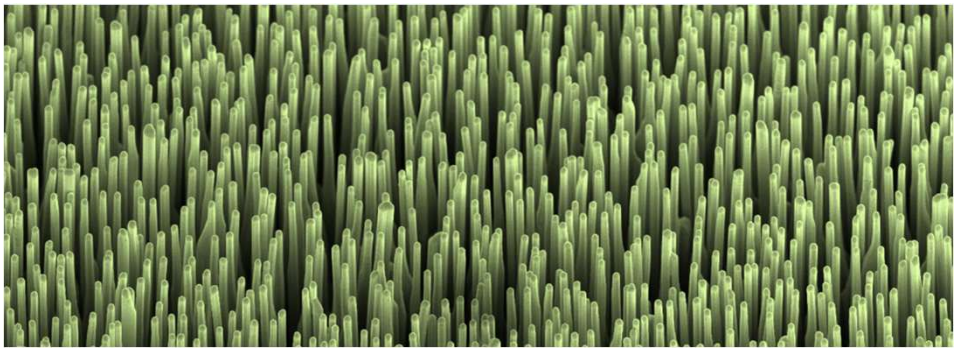
Ion beam physics

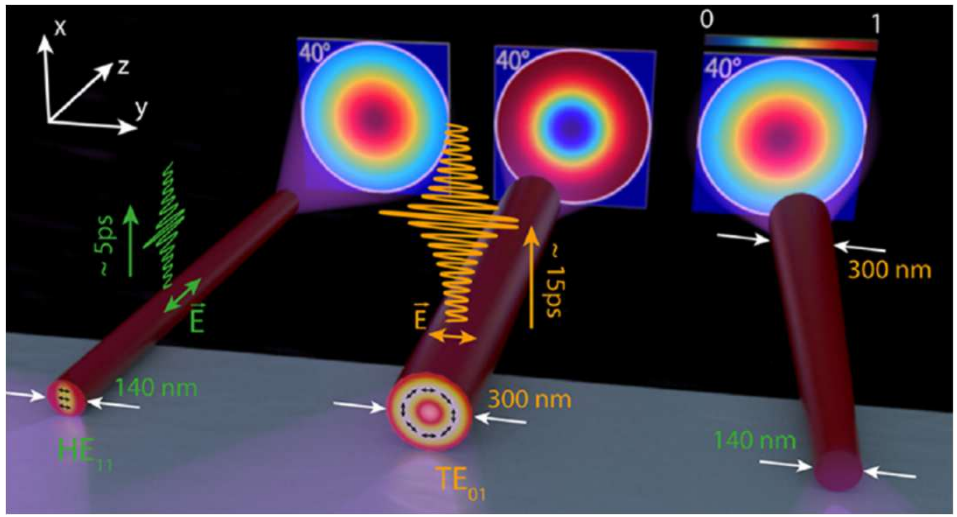
- ion implantation → modification of optical & electrical properties
- ion beam analysis of thin films



- ion-nanostructure-interactions

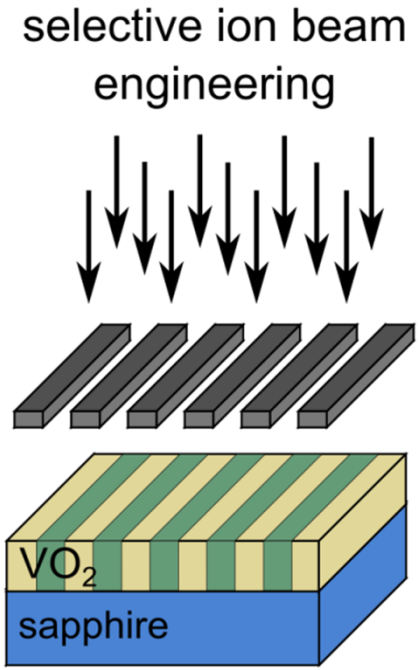


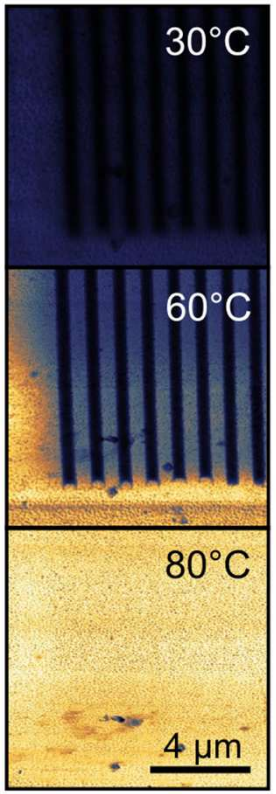




Semiconductor nanowires

- growth & doping
- Lasing & optical properties
- hybridization with 2D materials



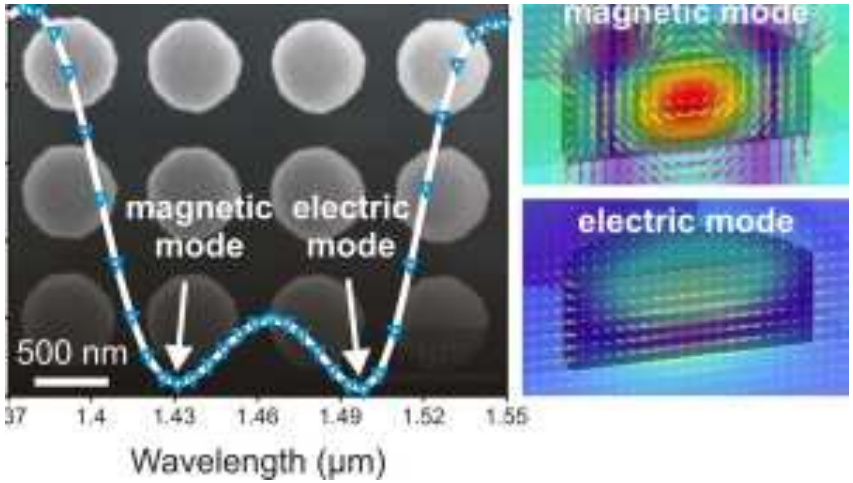


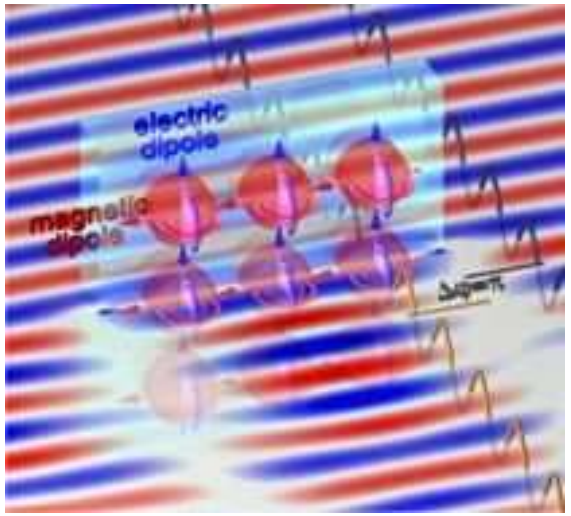
Metasurfaces

- ion beam synthesis
- optical characterization
- devices

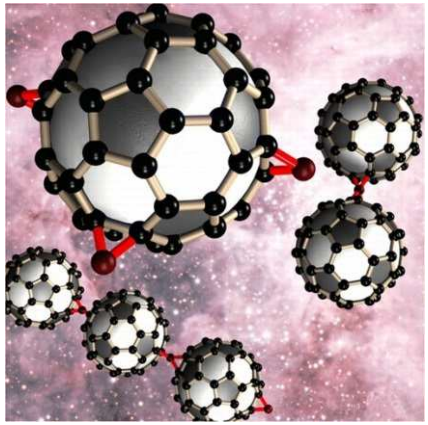
Photonische Nanomaterialien: Prof. Dr. I. Staude

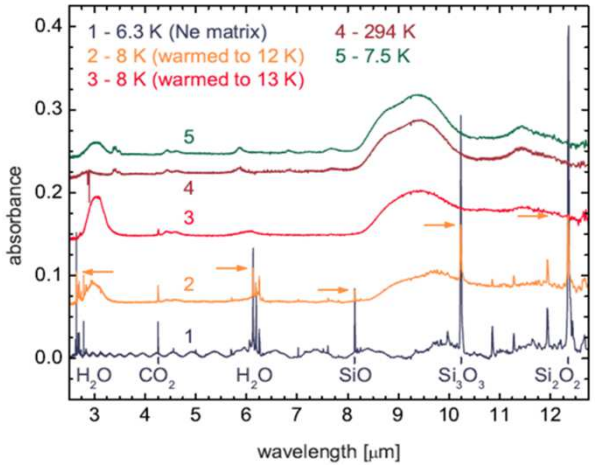
Top-down and bottom-up nanofabrication approaches to experimentally realize **composite photonic systems** able to control the emission, propagation, and absorption of light and all of its properties **at the nanoscale**

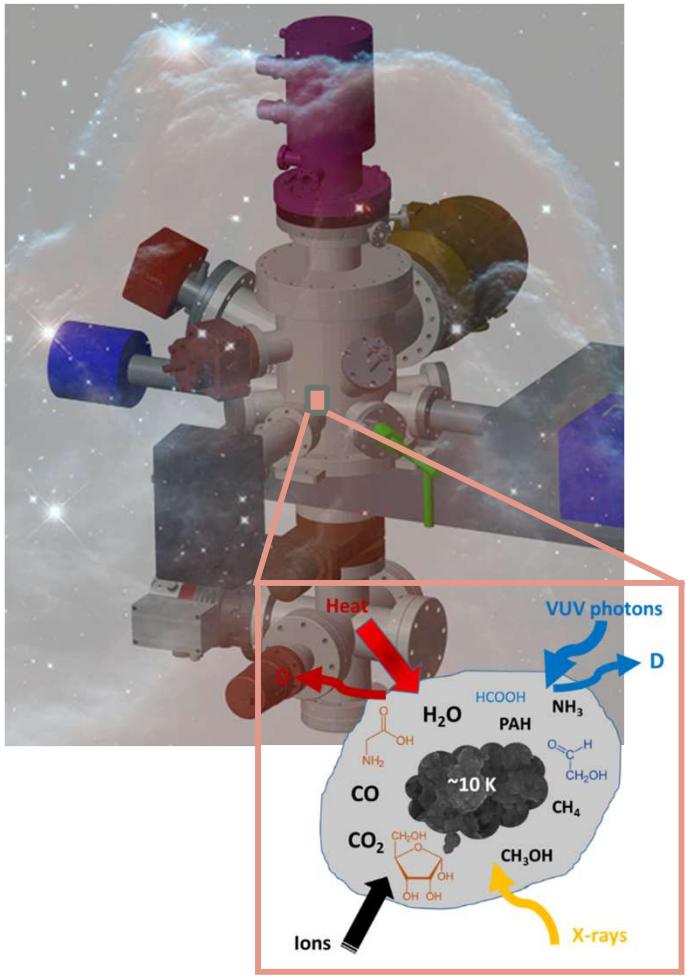


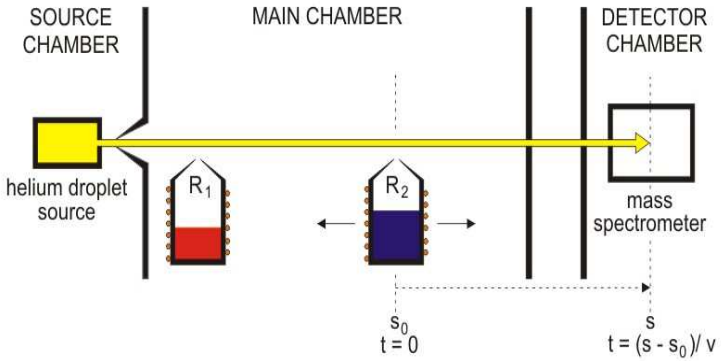


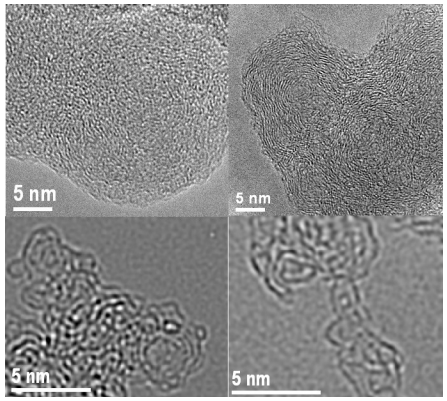
Laboratory Astrophysics: Dr. C. Jäger, Prof. Dr. T. Henning











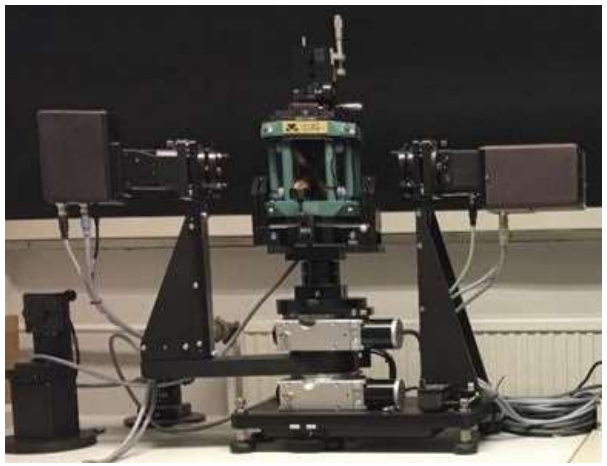
Astrochemistry, spectroscopy and kinetic studies in He clusters

Condensation and evolution of cosmic dust

Astrochemistry in cometary ice layers on cold dust under cosmic conditions

Quantum Detection: Prof. Dr. H. Schmidt

©Sahitya Vegesna



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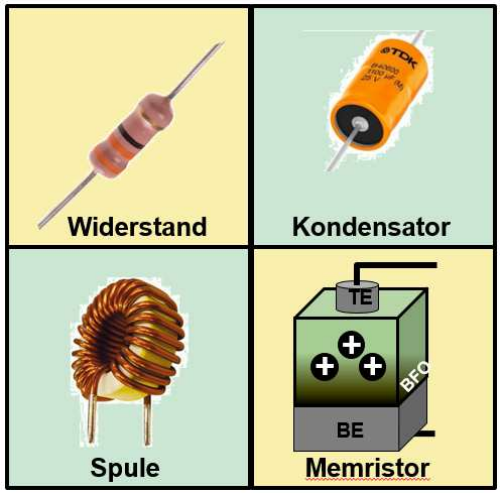
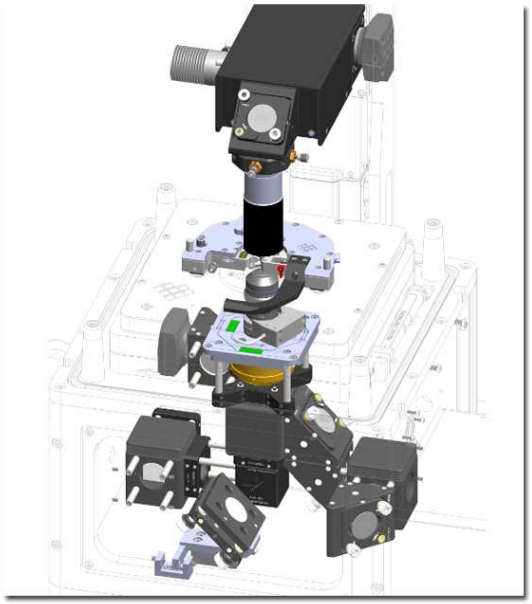
Magnetotransport and magnetooptical properties of thin films

M.Sc. Sahitya Varma Vegesna



Memristive thin films for edge computing

Dr. Nan Du



https://www.moles.washington.edu/maf/research-tools/afm/

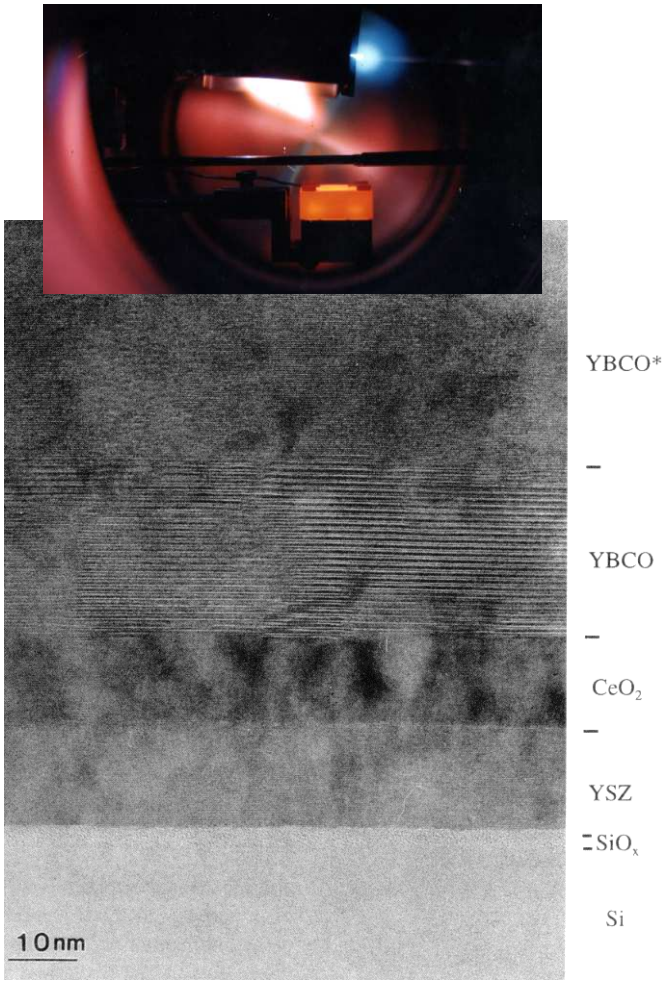
Photoinduced force microscopy for label-free analysis with nm resolution

Dr. Daniel Blaschke

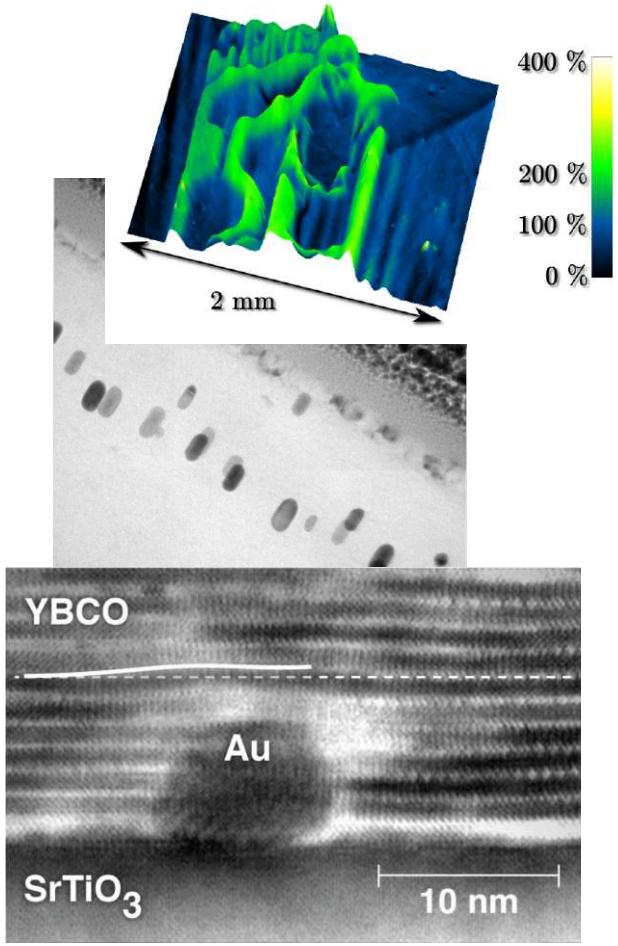
https://redproxy.rz.uni-jena.de/quantendetektion/

AGs Gelbes Haus

Low Temperature and Thin Film Physics: apl. Prof. Dr. F. Schmidl



Thin film preparation

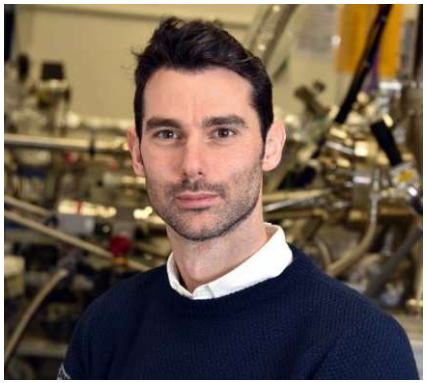


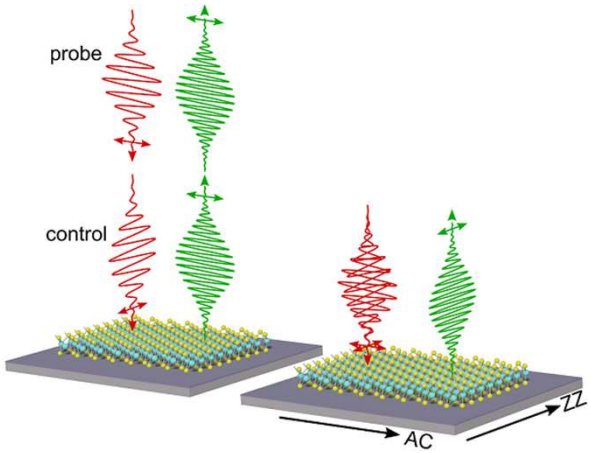
Material modification
by nanoparticle growth

Superconducting
sensor systems

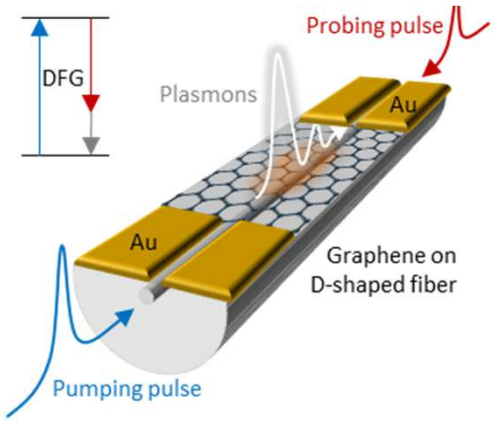
GUFOS Group of UltraFast Optical Spectroscopy

Ultrafast dynamics and nonlinear optics in atomically thin materials and quantum confined systems

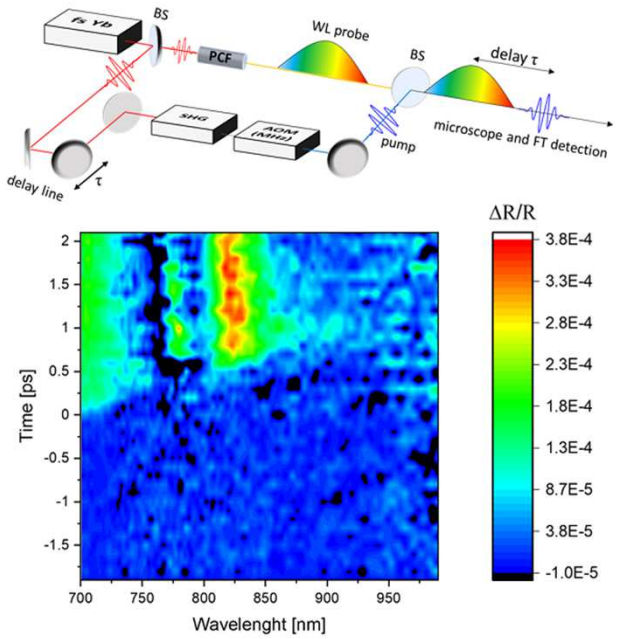




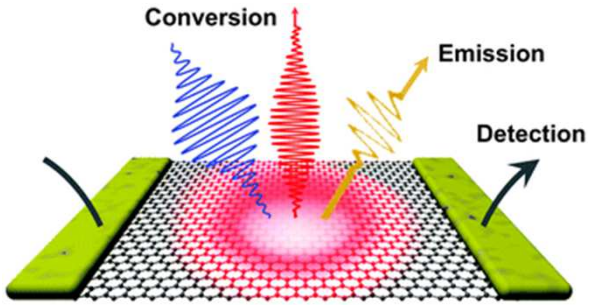
Nonlinear optics and harmonic generation in 2D materials

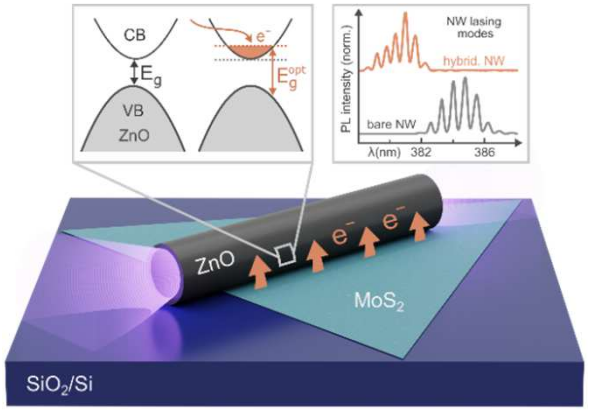


Hybrid low-dimensional devices

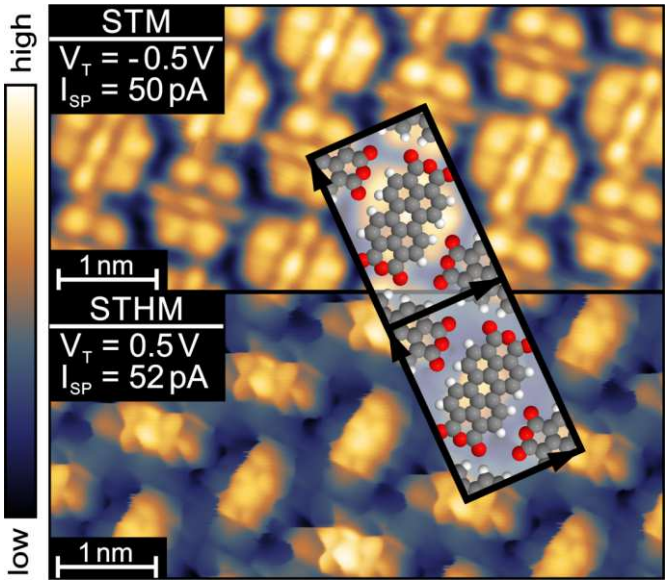


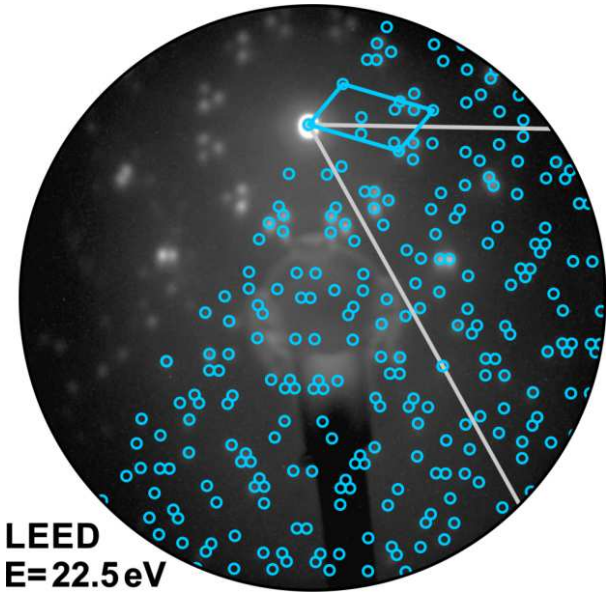
Pump-probe spectroscopy and ultrafast dynamics in quantum confined systems

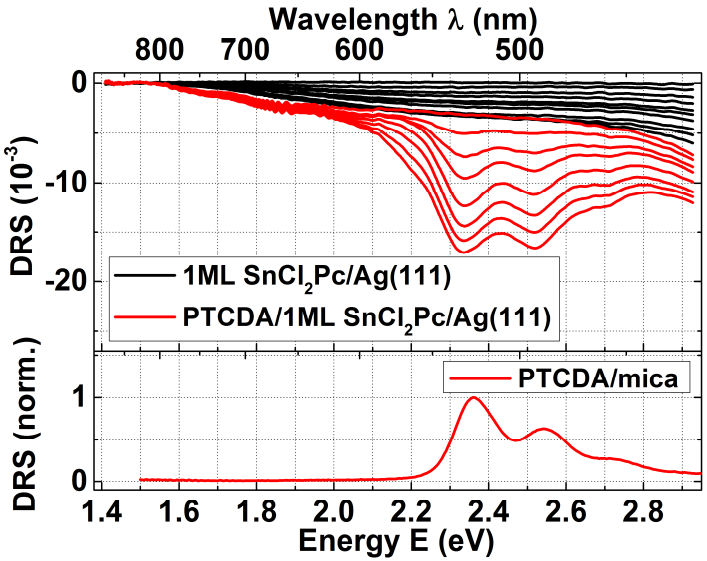




Epitaxial films of organic molecules: structural & optical characterization







Scanning Probe Microscopy (LT-SPM: STM, STHM, AFM)

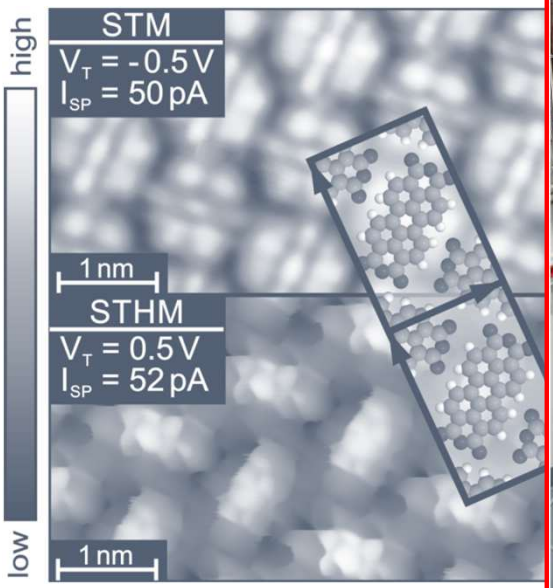
Low-Energy Electron Diffraction (LEED) and High-Energy Electron Diffraction (RHEED)

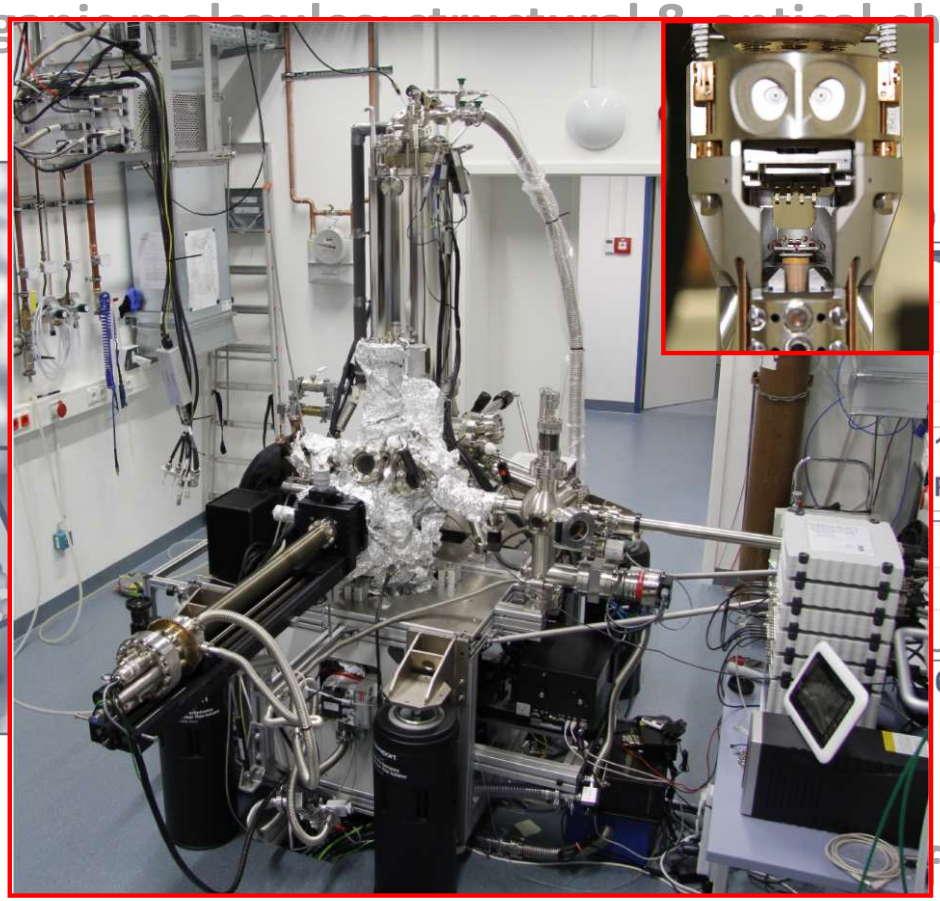
Differential Reflectance Spectroscopy (DRS) and Photoluminescence (PL)

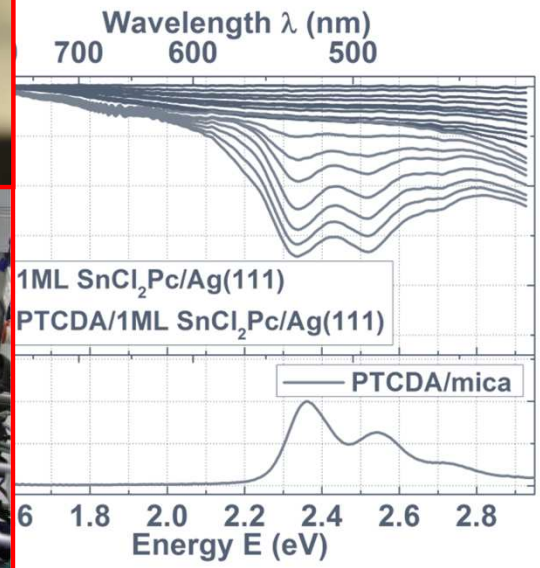
Organic Thin Films: T. Fritz, R. Forker , M. Grünewald, F. Otto

LT-STM/AFM

Epitaxial films of org aracterization



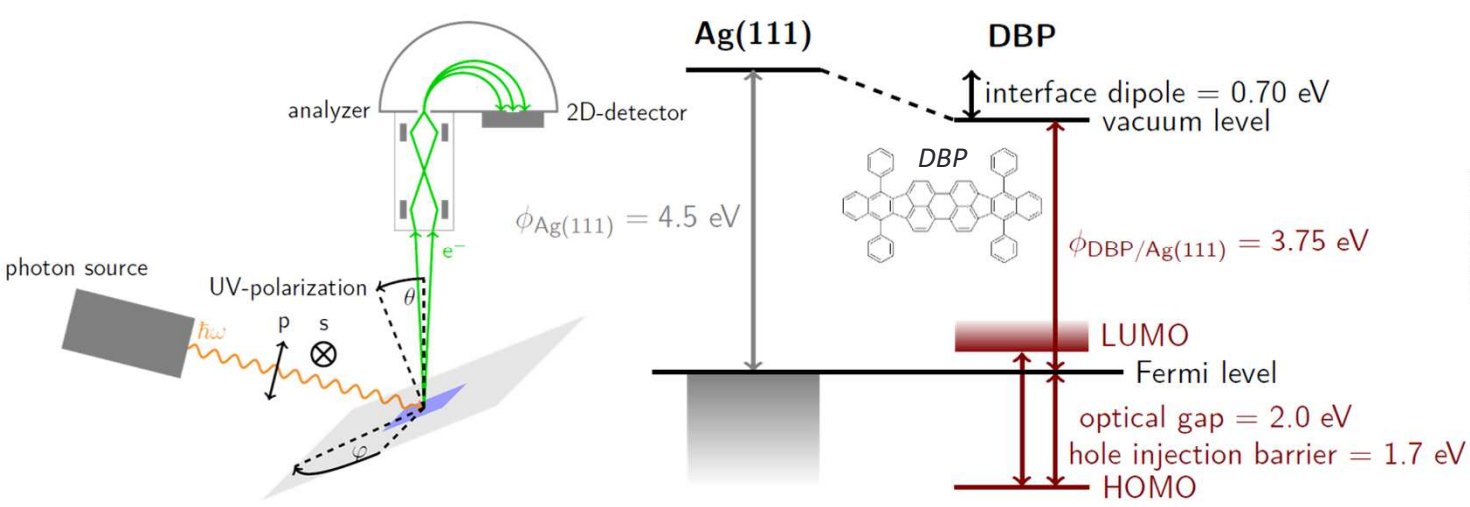


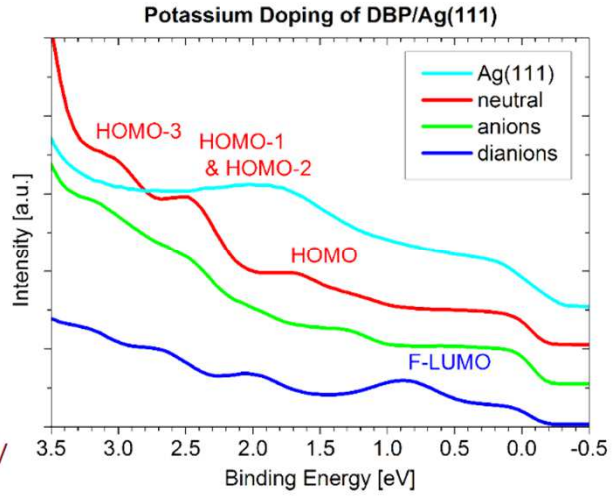


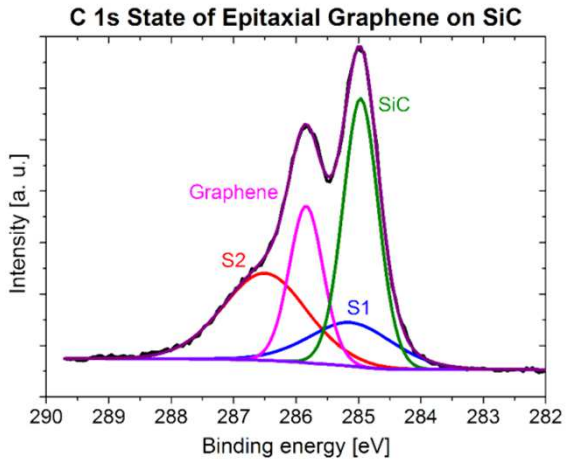
Scanning Probe fferential Reflectance
Microscop opy (DRS) and
STM, STH inescence (PL)

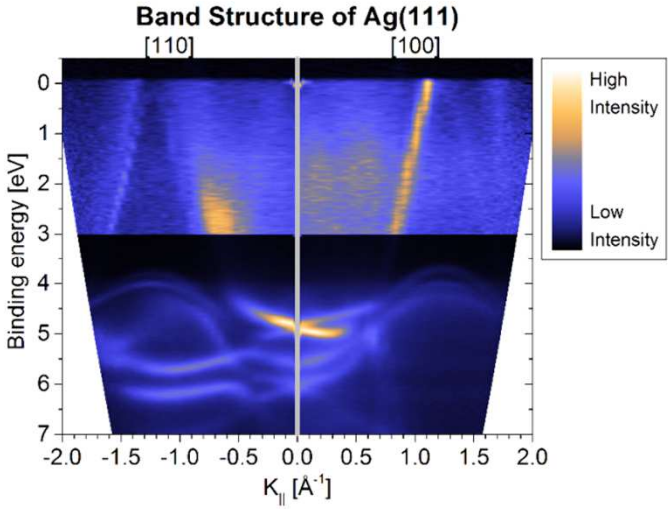
- STM & AFM at ***T* = 1.1 K** (sample + scan head)
- Tyto (owl) scan head
- Methods available:
  STM/AFM, ST(H)M, STS, LEED, DRS, PL, 3 T magnet

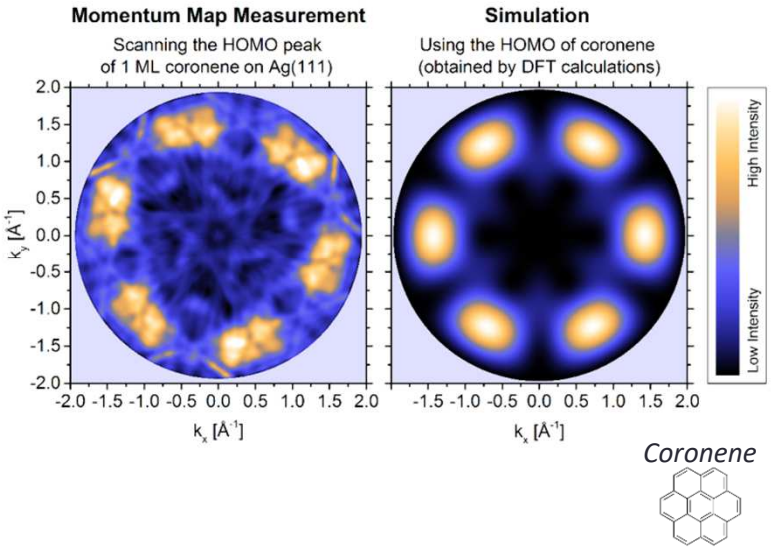
Surface Science: T. Fritz, R. Forker , M. Grünewald, F. Otto







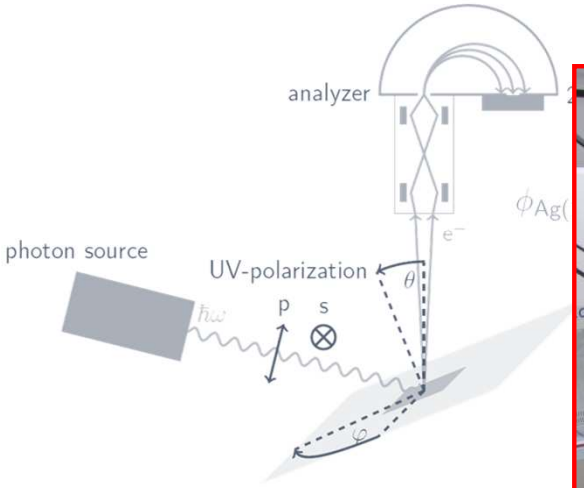


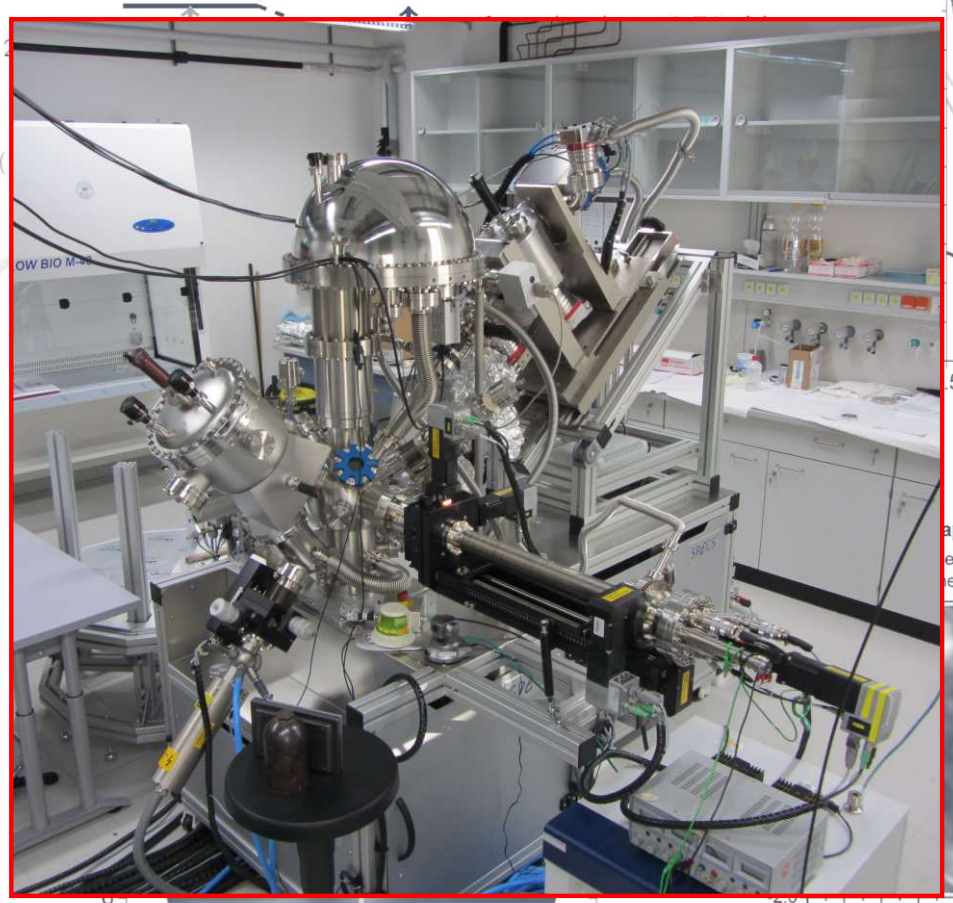


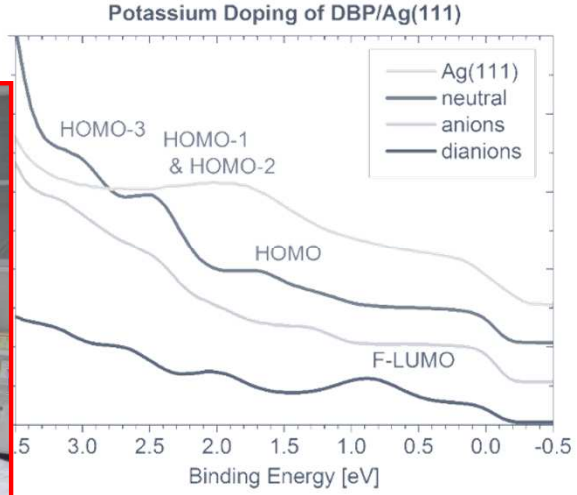
Ultraviolet and X-ray Photoelectron Spectroscopy (UPS, XPS, PMM/POT)

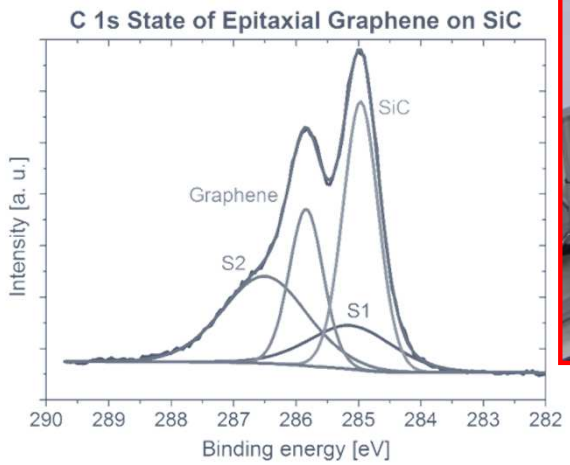
Surface Science: T. Fritz, R. Forker , M. Grünewald, F. Otto

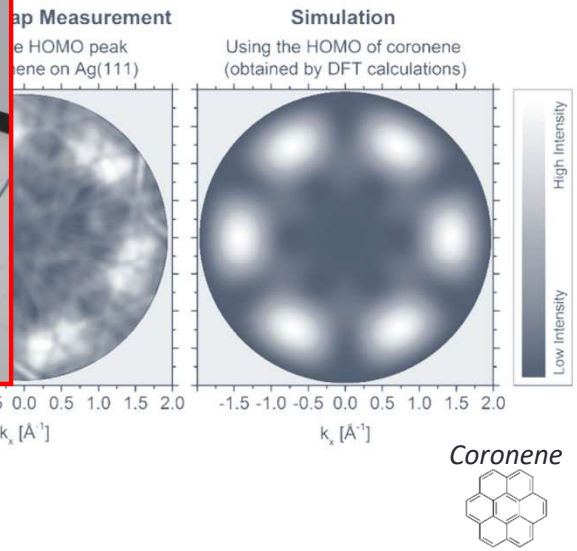
Surface Analytics











Coronene

- Sample temperature $T \geq 20$ K
- Methods available:
  XPS, UPS, ARUPS, AES, PMM

Ultraviolet and X-ray … UPS, XPS, PMM/POT)

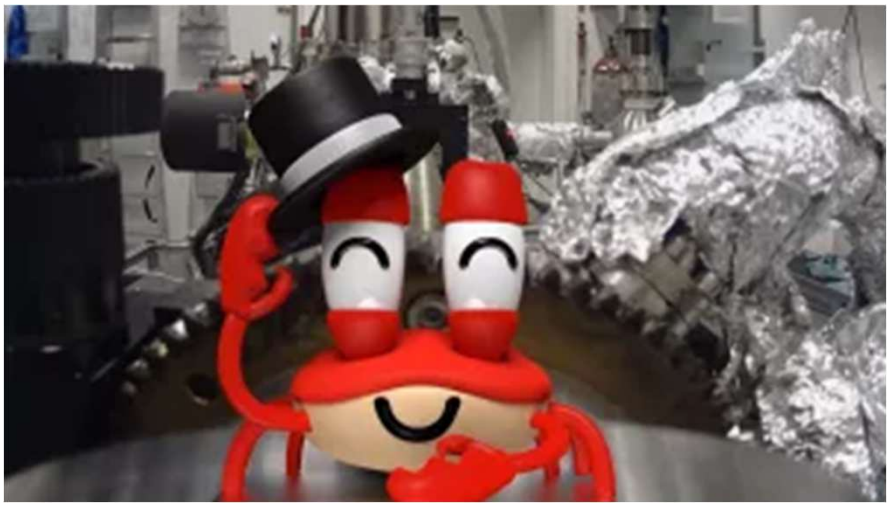
Einladung zum Kennenlernen der AG Fritz

Für den **6. Dezember 2023, ab 16:45 Uhr**, laden wir alle Interessierten herzlich ein, bei Gebäck und Glühwein unsere AG kennen zu lernen!

Neben einer kleinen Einführung in die AG wird es Gelegenheit zu Laborbesuchen und zwanglosen Gesprächen geben.

Ort: Gelbes Haus, Raum 106

Wir bitten bei Interesse um eine kurze Email an
torsten.fritz@uni-jena.de



The End