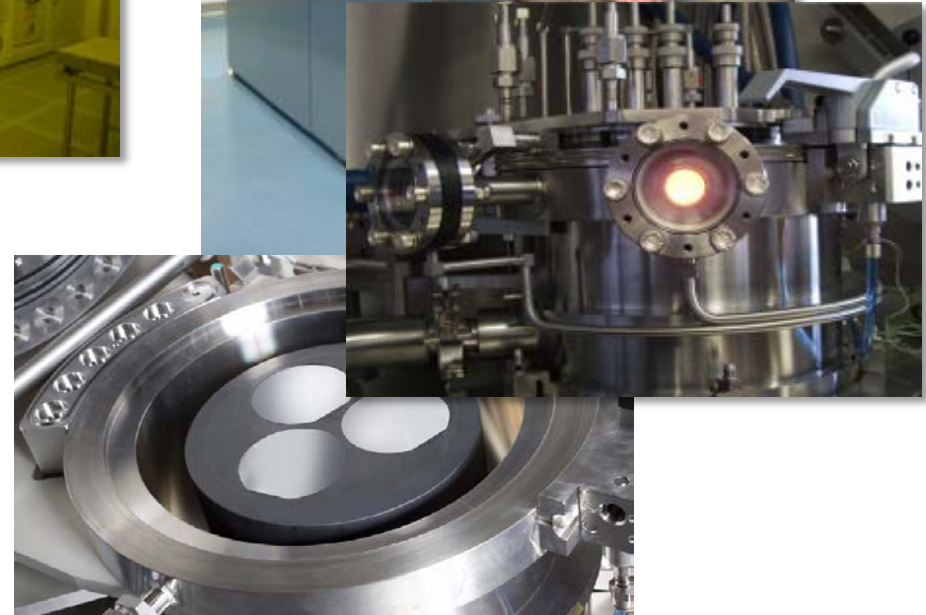


Center of Nanophotonics (CNP) at the Institute of Solid State Physics

Center for NanoPhotonics (CNP)

Epitaxy of Nanostructures:

- Five metalorganic vapor phase epitaxy (**MOVPE**) reactors for the synthesis of III-V materials & nanostructures



Nanodevice fabrication:

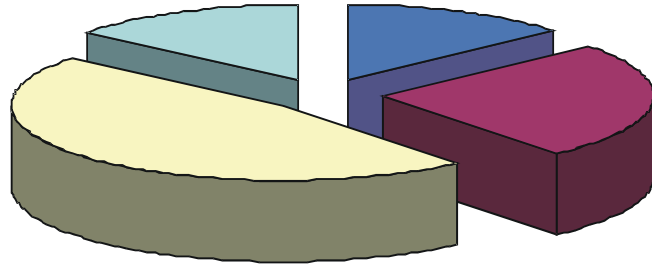
- **Class 10-1000 cleanroom** with 130m² workspace for the fabrication of photonic & electronic devices

CNP – Clean Room Facilities

Low pollution 18m²
Airlock / Entry

Class 10 approx. 17m²
Lithography

130 m² Workspace



Class 1000 approx. 59m²
Plasma / Sputtering

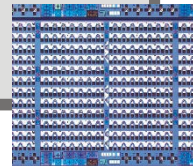
Class 100 32m²
Wet Chemical



Sputtering / Plasma Processing

Wet Chemical Processing

Lithography



Airlock / Entry
Low partical density area

Structural & Chemical Characterization

- XRD tripple crystal X'Pert Pro MRD

Lithographie / Wet Chemical Processing

- Sues mask aligner MA6
- Sues mask cleaner Delta 36T
- Covered-chuck spinner
- Semi-automatic hot plates
- Wet chemical work bench (Lotus System)
- O₂ plasma cleaner (Plasma-finish V15-G)

RTA, Longtime Annealing

- AccuThermo AW 410 RTA

Lapping, Mounting

- Die, ball-wedge and wedge-wedge bonder
- Struers polishing machines

Plasma Processing / Deposition

- SENTECH SI 500 Cluster Tool
 - ICP-RIE SI-500E (Cl-based)
 - ICP-PECVD SI-500D (SiN_x, SiO₂)
- SENTECH RIE SI-591 (F-based)
- Veeco Thermal Evaporation (metals)
- Leybold e-beam Evaporation (metals)
- SiN_x-, SiO₂ -Sputtering

Metrology

- SENTECH Ellipsometer SE400 (632, 1550 nm)
- Surface profiler Ambios XP2
- Inspection microscope Leica INM100
- SEM Zeiss Ultra 55
- Reith Elphy Plus (e-beam lithography)
- AFM Nanoscope III (Digital Instruments)
- AFM Bruker Dimension icon

CNP - Technology Chart

