TAILOR MADE NANOSTRUCTURES FOR YOUR RESEARCH

Customer-specific technology development

nanoplus possesses over 15 years of experience in semiconductor patterning and processing. These technological capabilities can be made available to our customers, allowing them the exploration of the use of new technologies in their products and tools, or the investigation of new device concepts.

For your research in such fields as

- photonics
- plasmonics
- nanoelectronics and
- nanomechanics

we offer tailor made nanostructures for your successful research, using a wide range of technologies including

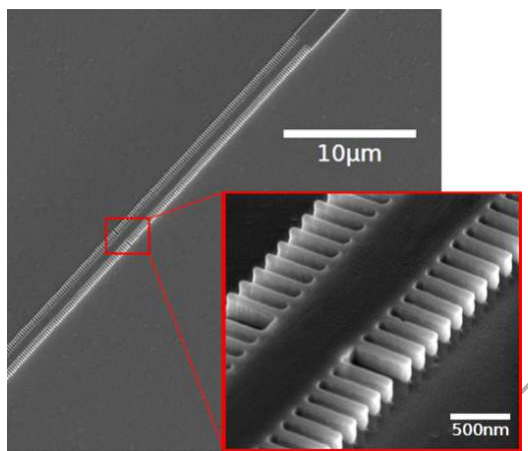
- molecular beam epitaxy of quantum well or quantum dot structures
- electron beam lithography
- dry etching
- metallization, insulation and planarization

Optical and Imprint Lithography

- patterns with dimensions down to 1 µm
- positive and negative resist technology
- nanoimprint techniques

E-Beam Lithography

- state of the art 100 keV high resolution electron beam lithography system with high resolution laser interferometer stage
- nanometer precise patterns over large areas
- precision marks for exact positioning
- patterning of distributed feedback gratings for single mode lasers
- micro- and nanostructures with dimensions down to 10 nm on wafer-like substrates with diameters up to 6″



Semiconductor Processing - pattern transfer into semiconductor materials

- dry and wet etching techniques
- smooth and vertical etched side walls and precise depth control
- available for wide variety of III-V compound semiconductors
- thermal and electron beam based evaporation systems
- sputter coating
- polymer based planarization

Complex multilayer coatings

based on a variety of dielectrics or metals such as SiO_2, TiO_2, Al_2O_3, Si_3N_4, AlN, TiN, BaF_2, Si, Au, Cr, Ni, Pt, and Ti

for the realization of

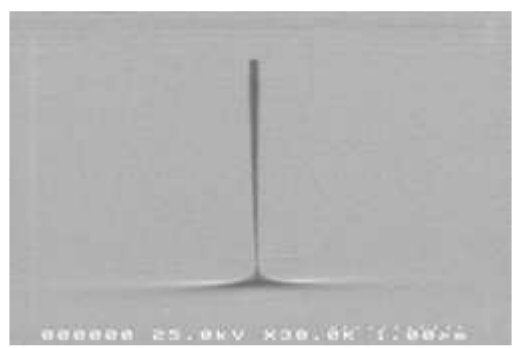
- highly reflective or anti-reflective coatings
- optical filters
- electrical and thermal insulation
- electrical contact layers
- planarization

Deposition technologies:

- ion beam sputtering
- magnetron sputtering
- thermal evaporation
- electron beam evaporation

Advanced analysis of crystalline, electrical, optical and topological material properties

- high resolution X-ray diffraction (HRXRD)
- photoluminescence (PL)
- Fourier transform infrared spectroscopy (FTIR)
- electroluminescence (EL)
- scanning electron microscopy (SEM)
- surface profiling



nanoplus is an ISO 9001 and ISO 14001 certified company.