

Austrian NANO Initiative
„National cooperative Research and Technological Development in Cluster projects”

PLATON -

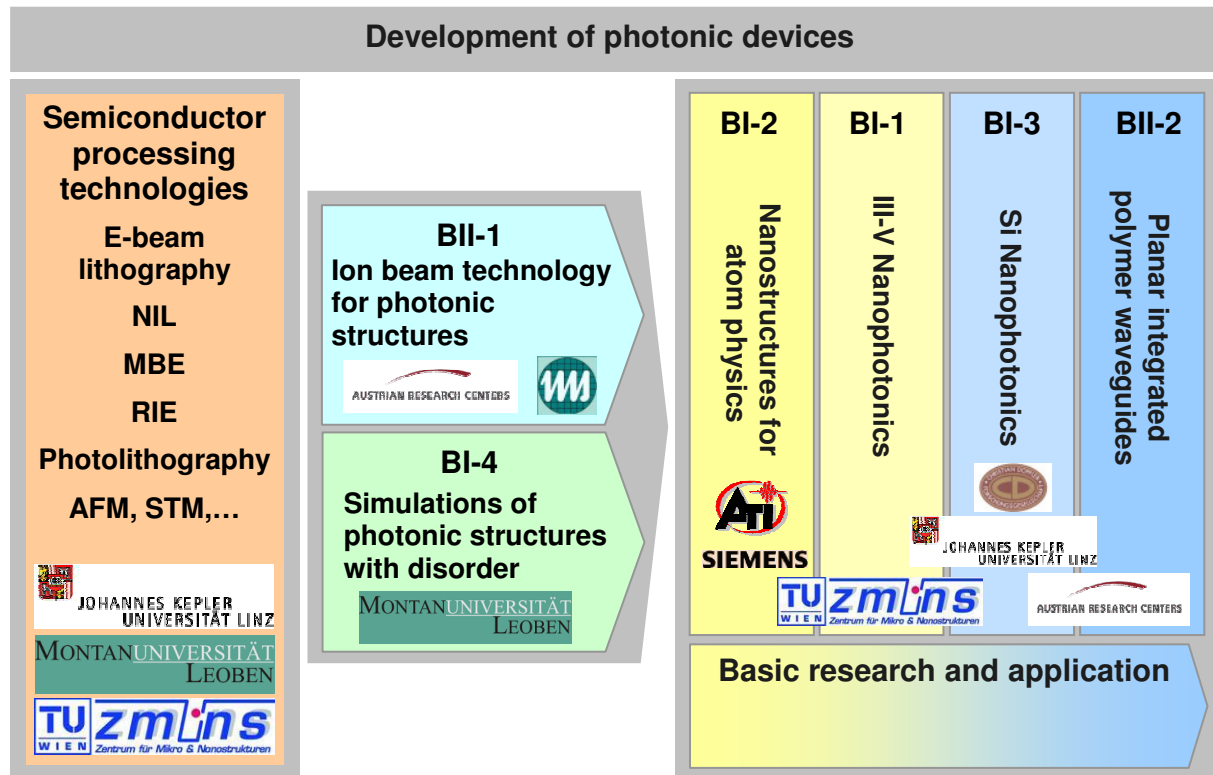
Processing Light-Advanced Technologies for Optical Nanostructures



PLATON merges relevant activities in the field of photonics in order to generate critical masses in Austria. It combines novel technologies for nanopatterning with new photonic device concepts and their applications. The utilization of synergies between the project partners will generate an added-value and ultimately result in an Austrian USP, which is the key to commercialization of photonic devices for specific fields of application.

PLATON comprises six projects, which are planned for four years. The activities in the first two years are:

- (BI-1) III-V Nanophotonics (35N): Cavity design and fabrication of active elements such as quantum cascade devices, development of the epitaxial growth, and integration of quantum dots for III-V opto-electronic device applications.
- (BI-2) Nanostructures for Atom Physics (NAP): Fabrication and integration of photonic structures into atom chips for writing in and reading out quantum information.
- (BI-3) Silicon Nanophotonics (Si-N): New approaches for the implementation of light sources, transfer- and manipulation elements, evanescent wave sensors, and photodetectors in silicon.
- (BI-4) Simulations of photonic structures with disorder (SIM-PHC): Simulation and evaluation of the effects of disorder and deviations from perfect photonic crystal structures on their basic properties and the consequences for applications in photonic devices.
- (BII-1) Ion beam technology for photonic structures (IPhoS): Realization and experimental evaluation of an ion beam Proof-of-Patterning (PoP) tool dedicated for the fabrication of photonic devices.
- (BII-2) Planar integrated polymer waveguides (PolyWaG): Development of a polymer optical waveguide device that functions as a platform for evanescent waveguide sensing applications.



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The overall goal of the Research Project Cluster PLATON (Processing Light – Advanced Technologies for Optical Nanostructures) is the development of new photonic devices for real-world applications. This will be achieved by the implementation of results of basic research with novel nanofabrication technologies, which have a high potential to leverage the commercialization of photonic devices.

Number of RTD projects in the cluster : 6

Overall planned duration

4 years, recent funding period: 2 years

Project volume (total costs)

€ 3.177.668,-

Funding and funding rate

€ 2.239.768,- , Funding rate average 70,5 %, total 100% for Basic research projects (B-I)

Project coordinator

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Project partners

PLATON is a highly multidisciplinary RPC project. It has six scientific and three industrial partners:

- Atomic Institute of the Austrian Universities, Vienna University of Technology
- Center for Micro- and Nanostructures, Vienna University of Technology
- Christian Doppler Laboratory of Surface Optics
- HiTec – Vereinigung High Tech Marketing
- Johannes Kepler University, Linz
- University of Leoben
- Austrian Research Centers GmbH - ARC
- IMS Nanofabrication AG
- Siemens AG



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