

260079 VO Elements of Nanophotonics

- 1. Introduction**
- 2. Theoretical Concepts**
 - a. Diffraction „wrap-up“**
 - b. Near-field optics**
- 3. Experimental Tools in Nanophotonics**
 - a. Optical Microscopy**
 - b. Optical Tweezers**
 - c. Scanning Probe Techniques**
 - d. Single Emitter Detection**
- 4. Fabrication Tools**
 - a. Epitaxie**
 - b. Chemical synthesis**
 - c. Self-organization**
- 5. Numerical Approaches**
- 6. Optical Metamaterials**
- 7. Plasmonics**
- 8. Quantum-Nanooptics**
- 9. Current Trends**

Literature:

- **L. Novotny, B. Hecht, „Nano-Optics“, Cambridge**
- **S. Maier, „Plasmonics – Fundamentals and Applications“, Springer**
- **P. N. Prasad, “Nanophotonics”, Wiley**
- **S. Kawata, M. Ohtsu, M. Irie, „Nano-Optics“, Springer**
- **additional literature and recent papers during the lecture**