

## List of publications

1. Poul-Erik Hansen et al., Enhanced Measurement Accuracy for Nanostructures Using Hybrid Metrology, *Frontiers in Physics* (<https://doi.org/10.3389/fphy.2021.791459>)
2. Remi Colom et al., Enhanced Purcell factor for nanoantennas supporting interfering resonances, *Phys. Rev. Research*, (<http://dx.doi.org/10.1103/PhysRevResearch.4.023189>)
3. Tim Käseberg et al., Abbildende Müller-Matrix-Ellipsometrie für die Charakterisierung vereinzelter Nanostrukturen (Imaging Mueller matrix ellipsometry for characterization of non-periodic nanostructures), *Technisches Messen* (<https://doi.org/10.1515/teme-2021-0133>)
4. Mirza Karamehmedovic et al., Steerable photonic jet for super-resolution microscopy, *Optics Express* (<https://doi.org/10.1364/OE.472992>)
5. Felix Binkowski et al., Computation of eigenfrequency sensitivities using Riesz projections for efficient optimization of nanophotonic resonators, *Communic. Phys.* (<https://doi.org/10.1038/s42005-022-00977-1>)
6. Tim Käseberg et al., Mueller Matrix Ellipsometric Approach on the Imaging of Sub-Wavelength Nanostructures, *Frontiers in Physics* (<https://www.frontiersin.org/articles/10.3389/fphy.2021.814559/full>)
7. Petr Klenovsky Interplay between multipole expansion of exchange interaction and Coulomb correlation of exciton in colloidal II–VI quantum dots, *Electron. Struct.* (<https://doi.org/10.1088/2516-1075/ac5b7e>)
8. A. Villegas et al., Identification of model particles mixtures using machine learning assisted laser diffraction, *Photonics* (<https://www.mdpi.com/2304-6732/9/2/74>)
9. T. Ramos-Leite et al., Resonant Plasmonic-Biomolecular Chiral Interactions in the Far-Ultraviolet: Enantiomeric Discrimination of sub-10 nm Amino Acid Films, *Nano Lett.* (<http://dx.doi.org/10.1021/acs.nanolett.2c01724>)
10. András Pálinkás et al., The composition and structure of the ubiquitous hydrocarbon contamination on van der Waals materials, *Nature Communications*, (<https://doi.org/10.1038/s41467-022-34641-7>)
11. Benjamin Kalas et al., Scanning-resonance optical sensing based on a laterally graded plasmonic layer—optical properties of  $\text{Ag}_x\text{Al}_{1-x}$  in the range of  $x = 0$  to 1, *Applied Surface Science* (<https://doi.org/10.1016/j.apsusc.2022.154770>)
12. Tivadar Lohner et al., Disorder and cavity evolution in single-crystalline Ge during implantation of Sb ions monitored in-situ by spectroscopic ellipsometry, *Materials Science in Semiconductor Processing* (<https://doi.org/10.1016/j.mssp.2022.107062>)
13. Matthias Plock Bayesian et al., Target-Vector Optimization for Efficient Parameter Reconstruction *Adv. Theory Simul.* (<https://dx.doi.org/10.1002/adts.202200112>)
14. Mirza Karamehmedovic et al., Imaging with a steerable photonic nanojet probe, *Proc. of SPIE* ([https://doi: 10.1117/12.2633442](https://doi:10.1117/12.2633442))
15. Daniel F. Urrego et al., Quantum-inspired protocol for measuring the degree of similarity between spatial shapes *J. Opt. Soc. Am. A* (<https://doi.org/10.1364/JOSAA.473213>)
16. Tim Käseberg et al., Nanof orm evaluation approach using Mueller matrix microscopy and machine learning concepts, *EPJ Web of Conferences* (<https://doi.org/10.1051/epjconf/202226610007>)
17. P.E. Hansen et al., A virtual microscope for simulation of nanostructures, *EPJ Web of Conferences* (<https://doi.org/10.1051/epjconf/202226610004>)

18. F. Betzet et al., Resonance expansion of quadratic quantities with regularized quasi-normal modes Phys. Status Solidi A (<http://dx.doi.org/10.1002/pssa.202200892>)
19. Töpfer S. et al., Quantum holography with undetected light, Science Advances (<https://www.science.org/doi/10.1126/sciadv.abl4301>)