Nano-Optics: From Classical to Quantum

1. Classical light
2. Classical light-matter interaction
4. Optical coherence and fluctuations
5. Density matrix formalism
6. Open quantum systems (Decoherence)
7. Evanescent fields
8. Plasmonics
9. Polaritons in van der Waals materials
10. Strong-coupling
11. Ultrafast spectroscopy
12. Nonlinear optics
13. Two-dimensional electronic spectroscopy
14. Electron-based spectroscopy
15. Mixed light-electron spectroscopy
16. Photoemission from nanomaterials
17. Quantum light and quantization of the radiation field
18. Macroscopic quantum electrodynamics
19. Quantum dynamics in nanoscale systems
20. Energy transfer
21. Charge transfer
22. Entanglement in nanoscale systems
23. Quantum light sources
24. Quantum information

Lectures
27.10.2021 ~ 22.02.2022
Wednesdays 10:15h ~ 11:45h
Fridays 10:15h ~ 11:45h

Exercises
Tuesdays 10:15h ~ 11:45h

For those who want to attend this lecture: please send an email to: talebi@physik.uni-kiel.de