

## PHYSIKALISCHES KOLLOQUIUM

**Sommersemester 2023**

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 17:15 Uhr in Präsenz im Röntgen-Hörsaal des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg und online via Zoom statt.**

Link zum Zoom-Raum:

<https://go.uniwue.de/physkolloqzoom>



**12.06.2023**

Prof. Dr. Asger Mortensen

University of Southern Denmark, Center for Polariton-driven Light-Matter Interactions (POLIMA)

### **Mesoscopic electrodynamics in surface-polariton systems**

#### **Abstract**

The electrodynamics of matter and optical phenomena are commonly explored within the framework of classical electrodynamics and semiclassical models for the interactions of light with matter. Materials are commonly assumed homogenous, and light-matter interactions are treated in an intuitive local manner. The plasmonic response of metal nanostructures is one such example, where the understanding of mesoscopic electrodynamics at metal surfaces is, however, becoming increasingly important for both fundamental developments in quantum plasmonics and potential applications in emerging light-based quantum technologies. The seminar will discuss recent examples of nonlocal effects that emerge in surface-polaritonic systems, including metal surfaces, 2D materials, and combinations thereof.

Biography: Mortensen is a full professor & VILLUM Investigator in the Center for Polariton-driven Light-Matter Interactions (POLIMA) and a Chair of Physics in the Danish Institute for Advanced Study, both at the University of Southern Denmark. Previously, he held a full professorship (faculty since 2004) at the Technical University of Denmark (DTU). In addition to his MSc (1998) and PhD (2001) degrees from DTU, he holds higher doctoral degrees from University of Copenhagen (Dr.

Scient., 2021) and DTU (Dr. Tech., 2006). He is a fellow of APS, OSA, SPIE, IOP, and European Academy of Sciences. Currently, he serves the AAAS as an associate editor for Science Advances.

Für die Dozentinnen bzw. Dozenten der Fakultät

PD. Dr. Meyer, Prof. Dr. Klemmt, Dr. Fromm, Dr. Feichtner und Hr. Kögel