

Carl von Ossietzky Universität Oldenburg

Institut für Chemie

Physikalisch-Chemisches Kolloquium

Montag, 06. Mai 2024, 17:00 Uhr, Raum W3 1-156

Prof. Dr. Maria Wächtler

Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau

„Insights into semiconductor nanocrystal based photocatalysis – connecting charge carrier dynamics and activity“

Colloidal nanostructured semiconductor materials are explored extensively as photosensitizers and photocatalysts. To push forward the development of functional materials based on semiconductor nanocrystals, function immanent exciton and charge separation/recombination dynamics in relation to structural parameters need to be understood. Factors like composition, structure and dimensions of the semiconductor particles, the nature of cocatalysts and the type of surface ligands are severely influencing the efficiencies for solar to hydrogen conversion. By applying time-resolved transient absorption and photoluminescence spectroscopy we strive to reveal the connections between structure, charge carrier dynamics and the targeted function. In this presentation, I will give a brief overview on the results of our studies to illustrate this approach.

Weitere Informationen, more information:

<https://chem.rptu.de/ags/ag-waechtler/seite>

Meet the Speaker: 16:30 h Sozialraum AG Wittstock oder W3 1-130 (gegenüber)