Intersectional Symposium Transport and Spectroscopy in Molecular Nanostructures (SYMN)

lead by the Molecular Physics Division (MO)

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The fundamental principles of electronic excitation energy and charge transfer in condensed phase systems are well known since decades. However, based on new and improved methodologies in electronic structure calculations and dynamic simulations together with new experimental results, the insight in these processes has been deepened considerably in recent years. This development mainly originated from the study of novel nano-hybrid systems joining single molecules or supramolecular complexes with semiconducting nanocrystals, quantum dots or metal nano-particles. Even complex biological systems by themselves and their combination with semiconducting or metallic nano-structures attracted considerable interest. The symposium tries to document and foster collaborations between theoretical physicists and chemists as well as experimentalists working in this very interdisciplinary field.

Overview of Invited Talks and Sessions

(lecture room HSZ 01)

Invited Talks

SYMN 1.1	Wed	10:30–11:00	HSZ 01	**Exciton localization and dynamics in molecular aggregates** — •Jasper Knoester
SYMN 1.2	Wed	11:00–11:30	HSZ 01	**Spectroscopy and transport in carbon nanotubes and graphene nanoribbons for electronics and biological applications** — •Oleg Prezhdo
SYMN 1.3	Wed	11:30–12:00	HSZ 01	**Multidimensional Optical Spectroscopy of Biological Complexes** — •Shaul Mukamel
SYMN 1.4	Wed	12:00–12:30	HSZ 01	**Theory of light-harvesting in photosynthetic pigment-protein complexes** — •Thomas Renger, Marcel Schmidt am Busch, M. El-Amine Madjet, Frank Müh
SYMN 1.5	Wed	12:30–13:00	HSZ 01	**How do algae use quantum mechanics to harvest light for photosynthesis?** — •Gregory Scholes

Sessions

SYMN 1.1–1.5	Wed	10:30–13:00	HSZ 01	**Transport and Spectroscopy in Molecular Nanostructures**