Physikalisches Kolloquium

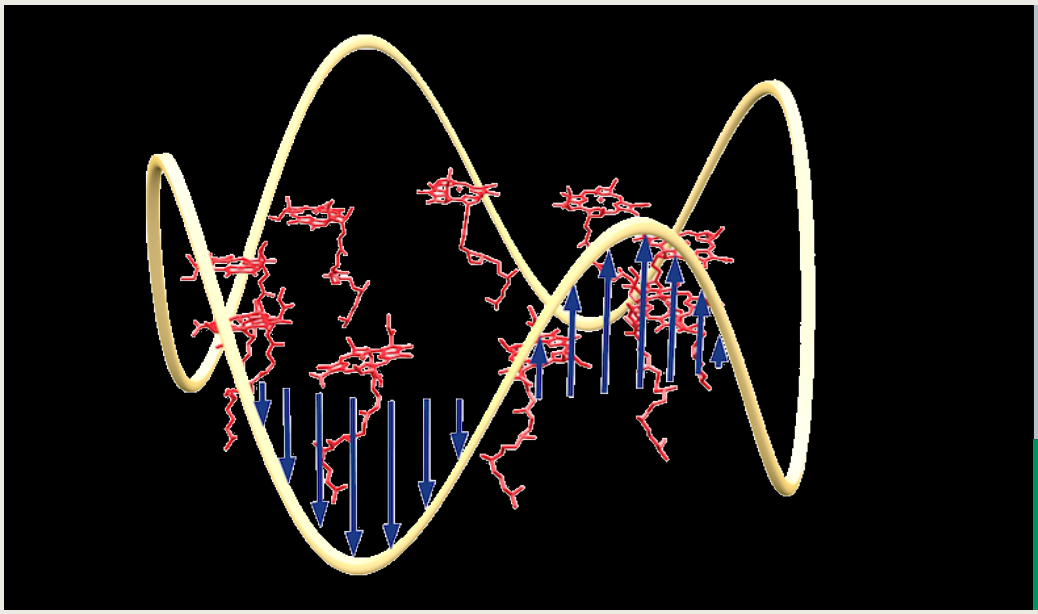
UNIVERSITÄT BAYREUTH
Physikalisches Institut

The Photophysics of Molecular Aggregates

The photophysical properties of molecular aggregates such as the electronic transition energies, transition-dipole moments, and fluorescence lifetimes are distinctively different from the same parameters of the monomers. Thereby, the character of the electronically excited states depends crucially on the electronic coupling of the monomers, which is dictated by the molecular packing. However, in non-ordered samples distinctive spectral signatures that are characteristic for specific structural features might be lost in ensemble-averaged spectra due to the intrinsic heterogeneity of the soft samples. The problem can be mitigated by applying single-molecule techniques.

In a more generic part the talk will introduce the theoretical concepts for describing the electronically excited states of molecular aggregates and then discuss some experimental examples of aggregates with different geometries.

Dienstag, 27. Januar 2026 | 17 Uhr s.t. | Hörsaal H18 (NW II)



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https://www.physik.uni-bayreuth.de/kolloquium