

SONDERSEMINAR
MPQ

am: Friday, May 20, 2011

Uhrzeit: 2 p.m. s.t.

spricht: Arhur Hipke
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Thema: Ultrafast Dynamics of a New, Intrinsically Chiral
Model Bisporphyrin

Ort: Max-Planck-Institut für Quantenoptik,
Herbert Walther-Hörsaal

gez. Prof. T.W. Hänsch

Abstract

Tetrapyrroles and their metallated derivatives are ubiquitous in nature. The unique spectroscopic, photophysical, and photochemical properties of this large family of compounds have resulted in their use in applications as diverse as organic solar photovoltaic cells, photodynamic therapy, oxygen sensors, and molecular electronics. This talk will provide insight into a particularly interesting example of this family, the first, newly synthesized representative of the class of intrinsically chiral porphyrin dimers. Results from comparative femtosecond-resolved transient absorption studies of directly β,β' -linked bis[tetraphenylporphyrinato-zinc(II)] (ZnTPP)₂ and its monomeric subunit ZnTPP will be presented and discussed. The monomer's relaxation process, which is in strong agreement with the literature, differs significantly from the dimer's also multiexponential kinetics. Preliminary interpretations based on this observation as well as on comparisons to similar compounds will be discussed.