



UNIVERSITÄT
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OPTEXC

invited speaker series

Chirality in Hybrid and Organic Semiconductors: Discovering Novel Material Properties and Mechanisms*

Chiral materials exhibit unique optical, electrical, and structural properties, offering opportunities for innovative applications and fundamental research. While chirality is a universal material property, its effects and underlying mechanisms are typically considered to diverge between crystalline (inorganic) and molecular (organic) systems. This separation inspires exploration of novel functionalities and phenomena towards an unified picture.

In this talk, I will present our recent work on chiral hybrid metal-halide perovskite semiconductors and ordered organic molecular thin films. Specifically, I will discuss how the chiral crystal structure of perovskites influences excitonic electronic states in Rashba-type band structures, revealing new insights into the interplay between chirality and electronic properties. Furthermore, using crystalline chiral organic thin films, I will show results on the formation of excitonic states with unprecedented chiral properties, which hold promise for future optoelectronic applications.



Date: Friday, 31st Oct 2025

Time: 13.00 pm

Room: PNS EG

Prof. Felix Deschler
University of Heidelberg
Germany