



**N-HETEROPOLYZYKLEN ALS
FUNKTIONSMATERIALIEN**



**UNIVERSITÄT
HEIDELBERG**
ZUKUNFT
SEIT 1386

CRC 1249 – Colloquium

10.06.2026

16:15 Uhr, Hörsaal West

Prof. Angela Wittmann

Johannes Gutenberg-Universität Mainz, Fachbereich Physik

Chiralitronics: Exploring the interplay between spins and chirality

Chirality is omnipresent in nature, bridging magnetic and molecular spin phenomena. At the core of this connection lies the chiral-induced spin selectivity (CISS) effect, describing the highly efficient generation of spin polarized currents in chiral molecules. Despite extensive experimental evidence, the underlying mechanisms of CISS remain debated. Here, we explore how chirality is directly linked to the intrinsic magnetic moments in molecules and how molecular design can be harnessed to control spin phenomena at hybrid chiral molecule magnetic interfaces. Our findings pave a pathway towards functional "chiralitronic" devices – turning a fundamental puzzle into a technological opportunity.

Pretalk:

Lars Schneider

(TP B09 Deschler)

*Amplified chiroptical properties of an N-Heteropolycycle in the
crystalline solid*