

EINLADUNG zum IFP-SEMINAR

New insights into the interlayer transport of transition metal dichalcogenides

László Forró

Stavropoulos Center for Complex Quantum Matter
University of Notre Dame

Host: Neven Barisic (Chair: Andrej Pustogow)
Termin: Mittwoch, 19. Oktober 2022, 16:00 Uhr CEST
Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum DC rot 07 (roter Bereich, 7. OG)

Abstract:

The ascending strategy for functionalizing layered Van der Waals materials is the manipulation of the coupling between atomic sheets to create novel tunable electronic states with exploitable properties. The responsible interactions can be sensitively tested by the interlayer charge transport, which has remained largely unexplored due to associated experimental challenges. By employing focused ion beam (FIB) microfabrication we accomplished a detailed study of the resistivity anisotropy in monocrystalline, bulk Transition Metal Dichalcogenides (TMDs) — like 1T-TaS₂ and 2H-NbS₂. These measurements have revealed number of surprises, which will be reported.

Acknowledgment. Edoardo Martino, Konstantin Semeniuk and Helmuth Berger are acknowledged for their key contributions.