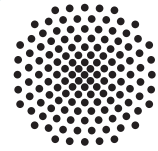


Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme
Fachbereich Physik, Universität Stuttgart

Ansprechpartner: Andreas Schnyder
E-Mail: A.Schnyder@fkf.mpg.de
Telefon: 0711 689-1553



Hybrid

Login data will be announced by e-mail and on the colloquium webpage.

Dienstag, 7. Februar 2023

16.15 Uhr

Hörsaal 2D5

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

The Chemistry of Quantum Materials

Leslie Schoop

Department of Chemistry, Princeton University

Abstract

Quantum materials are hoped to change technology in various aspects. However, most of the desired applications are hindered by the lack of suitable materials. In my group we are using concepts from chemistry to understand, predict and synthesize new quantum materials. In this talk, I will show how we can use charge density waves as a tool to clean up complicated band structures. This results in clean materials with tailored properties. I will also show how we can use chemical exfoliation, a synthesis method that is much more used in energy science to create 2D nanosheets, to synthesize novel 2D quantum materials. Examples are 2D magnets and superconductors, for which our synthesis method allows for large-scale productions of inks to print electronics.