TECHNISCHE UNIVERSITÄT KAISERSLAUTERN

SPIN+X SFB/TRR 173 Kaiserslautern • Mainz

OPTIMAS light-spin-matter

Einladung zum
Laser- und Quantenoptikseminar

Am Freitag, 28.04.2017, um 10:00 Uhr

Raum 46-387/388

Prof. Dr. Hugo Dil

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SARPES 2.0: information from the photoemission process

Over the last decade spin- and angle-resolved photoemission spectroscopy (SARPES) has grown from a niche technique to a full grown experimental method of choice for a variety of physical problems. At the Swiss Light Source we have had the luxury to shape, and follow, this development from a front row seat. One of the main driving forces of recent progress has been the topological phases of matter where the properties are governed by spin-orbit interaction and spin-polarized surface states are an indication of the topological phase of the bulk material. This is a prime example of spin effects driven by the initial state. However, for an exact understanding of the results one needs to consider the photoemission process itself. This is just one example of a large family of photoemission induced effects. Often such effects are seen as an obstacle to determine the initial state spin polarization, but this overlooks the information which in contained in these processes. In this presentation I will give an overview of what information can be obtained from selection rules and interference processes in spin-polarized and spin degenerate states in solids. This ranges from a local probe of the spin-orbit strength to a determination of the time scale of the photoemission process.

Der Gast wird betreut von JProf. Dr. B. Stadtmüller

GÄSTE SIND HERZLICH WILLKOMMEN!