

# New Lecture: Low Dimensional Materials WS 2020/21

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Current topics in  
Condensed Matter Physics

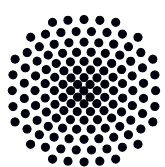
Learn about 2D Materials,  
Spin Chains, Skyrmions,  
Shiba Bands, Majorana Bound States,  
Anderson Model, and so much more

Hands-on experience with Green's  
Functions and the Tight-Binding Model

Many of the systems that are at the forefront of current research are low-dimensional. Some examples are twisted bilayer graphene, single spin systems, Majorana bound states as well as the Kondo effect. They exist by themselves or are created through interactions with a higher dimensional host. The origin of many of these phenomena are rooted in a common Hamiltonian operating in different contexts. In this lecture, we discuss current low-dimensional phenomena and illuminate their origin by means of practical applications of their theoretical foundation, such as the tight-binding model, Green's functions and the Anderson impurity model.

in the Wahlpflichtmodul Quantum Materials  
2 SWS Live-Vorlesung & 1 SWS Übungen

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