

Physikalisches Kolloquium

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Elastic Tuning and Response of Electronic Quantum Phases

Critical elasticity, superelasticity, nematicity with extreme lattice softening, or strain-tuning of charge order, magnetism and superconductivity are a few of the fascinating recent developments in condensed matter physics that demonstrate the extreme electronic sensitivity of quantum materials to elastic deformations. Such phenomena are desirable to create, for instance, new functionalities that enable interfacing between mechanical and electronic properties.

In this talk I will present some examples and discuss how, in a joint collaboration between theorists and experimentalists, we tailor advanced quantum materials with exceptional mechanical responsiveness by a combination of theoretical materials' design, and novel approaches to mechanically manipulate and control electronic systems.

Montag, 17.01.2022, 16:15 Uhr
zoom video conference