Stuttgarter Physikalisches Kolloquium

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

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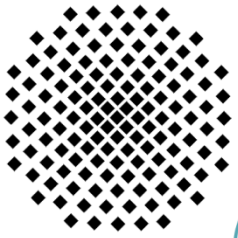

Dienstag, 01. Juli 2014	17:15 Uhr	Hörsaal V 57.01

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

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2D or not 2D?
Two-dimensional nanostructures for sensing and solar energy conversion

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Abstract

A central paradigm of nanochemistry is the rational synthesis, manipulation and assembly of nanoscale building blocks into hierarchical structures with tailor-made properties. Owing to their chemical diversity and wide scope of physical properties, 2D nanostructures lend themselves particularly well as versatile building blocks in miniaturized devices and for the directed self-assembly of hybrid superlattices with engineered functionalities. This talk will review our recent progress in the synthesis of new 2D bulk and nanosheet materials as well as layered heterostructures across different lengthscales, and their emerging applications in photonic sensing and solar energy conversion will be highlighted.