Stuttgarter Physikalisches Kolloquium

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

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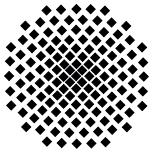

Dienstag, 13. Dezember 2011 | **17.15 Uhr** | **Hörsaal 2 D5**

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

Gastgeber: Prof. Siegfried Dietrich, Max-Planck-Institut für Intelligente Systeme*, Telefon: 0711 - 689-1920

Nanomembranes: Shaping a new nanoworld

Oliver G. Schmidt
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Abstract

In this talk conceptual opportunities and potential applications of inorganic and hybrid nanomembranes are presented. Nanomembranes become extremely flexible if they are not thicker than several tens of nanometers. They can be transferred from one substrate to another and shaped into almost arbitrary geometries such as tubes and helices.
We produce nanomembranes out of semiconductors, metals, magnetic and organic materials and promote new functionalities and nanosystems both on and off the chip. This includes stretchable magnetoelectronic devices, wavelength tuneable single photon sources, novel magnetic helical coils, labin-a-tube systems, hybrid semiconductor/organic heterojunctions, ultra-compact energy storage devices and multifunctional nanojet engines. All these devices and innovations are possible by the mechanical elasticity of the materials and open a rich area of truly interdisciplinary research.

*ehemals Max-Planck-Institut für Metallforschung