

## EINLADUNG

zum Vortrag von

**Prof. Dr. Thomas Michely**

II. Physikalisches Institut, Universität zu Köln, Deutschland

### The backside of graphene - Functionalization and new compound materials

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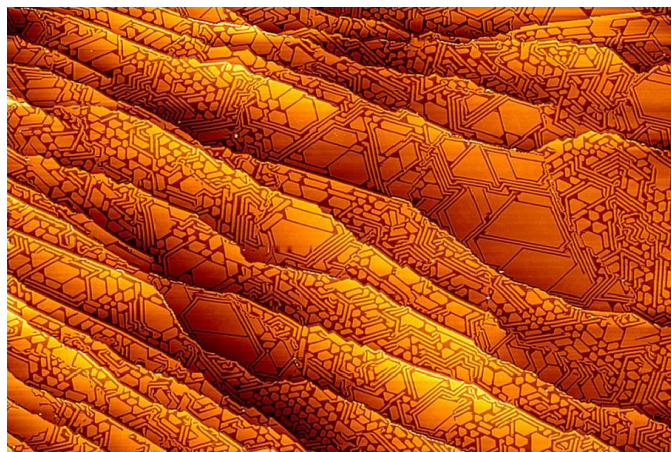
**Dienstag, 27. Jänner 2015, um 17:30 Uhr**

Ort: Lise-Meitner-Hörsaal, Fakultät für Physik, Universität Wien,  
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

*Barrierefreier Zugang: Boltzmannngasse 5, Lift, 3. Stock rechts über den Gang zum Hintereingang des Hörsaals*

#### **Abstract:**

The ease by which graphene is affected through contact with other materials is one of its unique features and defines an integral part of its potential for applications. Through a combination of microscopy, spectroscopy and ab initio calculations it will be demonstrated, that the substrate of epitaxial graphene itself as well as intercalation layers, created by the insertion of atoms under its backside, are efficient tools to change the electronic properties and the interaction of graphene with the environment on its frontside. This enables us not only to functionalize graphene as a template for patterned adsorption of atoms and molecules, but also to arrange defects as a nanomesh or to change the strength in ionic, van der Waals, and chemical binding of adsorbates to graphene



Scanning tunneling microscopy topograph taken at 300 K after intercalation of Eu at 720 K underneath a full graphene layer on Ir(111). The pattern of intercalated Eu islands and stripes results from the interplay of chemically inhomogeneous binding of graphene to the substrate and graphene strain relaxation. Image width is 600 nm.

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Vorsitzender 2014/15: Univ.Prof. Dr. Friedrich Aumayr, TU Wien, Institut für Angewandte Physik