



TECHNISCHE
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IAP-SEMINAR

EINLADUNG

- Termin: **Montag, 7.7.2014 um 16:00 Uhr**
Ort: **Technische Universität Wien,
Institut für Angewandte Physik,
Seminarraum 134A, Turm B (gelbe Leitfarbe), 5. OG
1040 Wien, Wiedner Hauptstraße 8-10**
- Vortragender: **Matthias Batzill**
Dept. of Physics, University of South Florida, Tampa/USA
- Thema: **Graphene interfaces: CVD growth on Ni, Y₂O₃-monolayer,
and interface charge doping**

Kurzfassung

In this presentation I discuss CVD growth and interface properties of graphene studied by electron spectroscopy (XPS, AES, UPS) and microscopy (LEEM, STM). The first part of my talk focuses on (monolayer) graphene growth on nickel surfaces in vacuum by chemical vapor deposition. We discuss the growth modes as a function of growth temperatures and competing carbon containing surface phases and illustrate the synthesis of periodic, linear 1D-defects embedded in graphene.

The second part discusses interfaces between metal/graphene/oxide sandwich structures. We demonstrate that yttria (Y₂O₃) forms a complete wetting layer on metal-supported graphene and may even form a crystalline well-ordered film on graphene. Using x-ray photoemission spectroscopy (XPS) we demonstrate variation in charge doping of graphene depending on the combination of the metal and the oxide between the graphene-layer is sandwiched.

Finally, we show that CVD-grown graphene may be transferred in solution to oxide materials and characterized in UHV with photoemission and scanning tunneling microscopy. Such transferred graphene may form useful graphene model systems, other than the metal-supported graphene, for future surface science studies.

*Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar
(45 min mit anschließender gemeinsamer Diskussion) herzlich eingeladen.*

*U. Diebold e.h.
(Seminar-Chairperson)*

*H. Störi e.h.
(LVA-Leiter)*