



TECHNISCHE  
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# IAP-SEMINAR

## EINLADUNG

Termin: **Montag, 7.11.2011 um 14:00 Uhr**  
Ort: **Technische Universität Wien,  
Institut für Angewandte Physik,  
Sitzungszimmer, Turm C (rote Leitfarbe), 5. OG  
1040 Wien, Wiedner Hauptstraße 8-10**

Vortragender: **Martin Fidler**  
IAP, TU Wien

Thema: **STM study of oxygen adsorption at defect sites at the TiO<sub>2</sub>  
anatase (101) surface**

### Kurzfassung

The adsorption of oxygen at low temperatures (105 K) was investigated by LT-STM on the TiO<sub>2</sub> anatase (101) surface. Tersoff-Haman-STM simulations are in good agreement with our experimental data. Surface oxygen vacancy defects were generated by bombarding the surface with 500 eV electrons at 105 K and analyzed with STM. The interaction between vacancies and oxygen shows interesting results.

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Vortragender: **Daniel Hagleitner**  
IAP, TU Wien

Thema: **Bulk characterization and surface properties of In<sub>2</sub>O<sub>3</sub>(001)  
single crystals**

### Kurzfassung

Indium oxide, In<sub>2</sub>O<sub>3</sub> is an important semiconductor with a wide range of technical applications including Organic Light Emitting Diodes, Organic Photovoltaic Cells, gas sensing, and transparent infrared reflectors. The present diploma thesis comprises a comprehensive bulk and surface investigation of high-quality In<sub>2</sub>O<sub>3</sub>(001) single crystals. The transparent-yellow, cube-shaped single crystals were grown by the flux method. The results of the applied techniques – including four-point-probe measurements, SIMS, XRD, STM, scanning tunneling spectroscopy and photoelectron spectroscopy – will be presented and discussed.

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*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)*