TECHNISCHE UNIVERSITÄT WIEN
Vienna University of Technology

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IAP-SEMINAR

EINLADUNG

Termin: **Dienstag, 27.11.2012 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: **Dr. Stefan Facsko**
Institute of Ion Beam Physics and Materials Research,
Helmholtz-Zentrum Dresden-Rossendorf, Dresden/Germany

Thema: **Ion-induced patterns on crystalline Ge(100) and Ge(111)**

Kurzfassung

Low energy ion irradiations of surfaces can induce the formation of patterns with periodicities in the range of tens to hundreds of nanometers. At off-normal angle of incidence between 50° and 70° to the surface normal ripple patterns oriented perpendicular to the ion beam direction are observed. At normal incidence or for incidence angles smaller than 50° smoothing dominates on elemental materials, like Si and Ge. However, in contrast to irradiations at room temperature we found pattern formation on Ge surafces even at normal ion incidence for irradiations at temperatures above 530 K. Depending on the surface orientation checkerboard or isotropic hole patterns with the symmetry of the patterns reflecting the crystal structure of the irradiated surface are observed (Fig. 1).

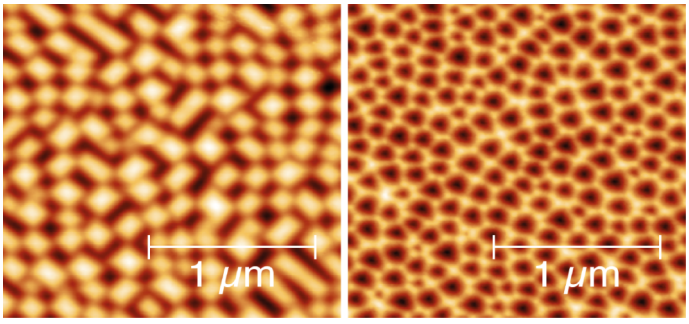

Figure 1. Atomic force microscopy images of ion induced patterns on crystalline Ge (001) (left) and Ge(111) (right) surface.

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

F. Aumayr e.h.
(Seminar-Chairperson)

H. Störi e.h.
(LVA-Leiter)