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IAP-SEMINAR

ANNOUNCEMENT

Date: **Tuesday, 19.7.2016**

Time: **16:00 s.t.**

Location: **Technische Universität Wien, Institut für Angewandte Physik, E134**
yellow tower „B“, 5th floor, Sem.R. DB gelb 05 B (room number DB05L03), 1040 Wien, Wiedner Hauptstraße 8-10

Lecturer: **Dr. René Heller**
Helmholtz-Zentrum Dresden-Rossendorf, Dresden/Germany

Subject: **Ion Beam Analysis in a Helium Ion Microscope**

Abstract: Helium Ion Microscopy (HIM) has developed into a frequently used imaging technique within recent years. Using (30keV) He ions provides several advantages over scanning electron microscopy (SEM) such as, a reduced interaction volume, a better imaging resolution as well as a highest field of depth.
Image generation in a HIM is based on evaluating the number of emitted secondary electrons (SE) delivering an excellent topographic contrast. Information on the surface chemistry is barely provided by the SEs. However, the back-scattered He ions carry that information but they are not analyzed in a HIM by default.
This talk will focus on the implementation of Time-of-Flight Back-scattering Spectrometry (ToF-BS) in a HIM as done at the HZDRs Ion Beam Center recently. ToF-BS enables local element analysis with a lateral resolution on the nm scale. In combination with the excellent imaging capabilities delivered by the HIM, this technique provides simultaneous topological and chemical sample characterization.

All interested colleagues are welcome to this seminar lecture
(45 minutes presentation followed by discussion).

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

H. Störi e.h.
(LVA-Leiter)