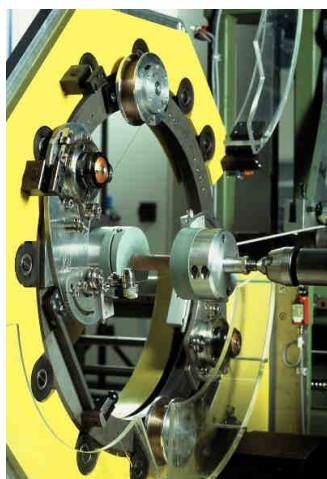


Invites you to attend the 3rd Lecture Series

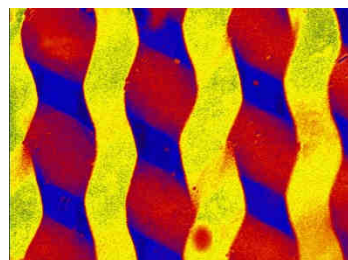


with prof. Dr. rer. nat. habil. Dr. h. c. mult.

Klaus Wetzig

IFW Dresden
Guest Lecturer

presenting



ION BEAMS IN MATERIALS PROCESSING AND ANALYSIS

June 4 - 8, 2012

Prof. Klaus Wetzig is professor emeritus of materials analysis at Dresden University of Technology. Until he retired in 2006, he was simultaneously one of the directors of Leibniz Institute IFW Dresden. He is author and co-author of more than 300 research articles and editor of the monographs "In Situ Scanning Electron Microscopy In Materials Research" (1995), "Metal based Thin Films for Electronics" (2004, second edition 2006) and "Ion Beams in Materials Processing and Analysis" (2012). His research interests include materials analysis and microstructures, especially electron microscopy of functional materials and thin films interaction with irradiation as by ion beams.



Where: **Institute of Materials Science, J. Bottu 25, Trnava, Meeting Room 202**

Faculty of Materials Science and Technology
Slovak University of Technology in Bratislava

Program

	9:00 - 10:30	10:30 - 11:00	11:00 - 12:00	12:00 - 14:00	14:00 - 15:00
4.06.2012	Lecture	Coffee break	Lecture	Lunch	Lecture
5.06.2012	Lecture	Coffee break	Lecture	Lunch	Lecture
6.06.2012	Lecture	Coffee break	Lecture	Lunch	Lecture
7.06.2012	Lecture	Coffee break	Lecture	Lunch	Lecture
8.06.2012	Lecture	Coffee break	Lecture	Lunch	

Outline

Part I Fundamentals

- I.1 Physics of the Ion
- I.2 Ion Sources
- I.3 Ion-Solid State Interactions
- I.4 Properties of emitted Particles

Part II Ion Beam Technology

- II.1 Ion Sources Set-up
- II.2 Ion Accelerator Systems
- II.3 Ion Spectrometers
- II.4 Ion Detectors
- II.5 Ion Implantation Systems

Part III Materials Preparation with Ions

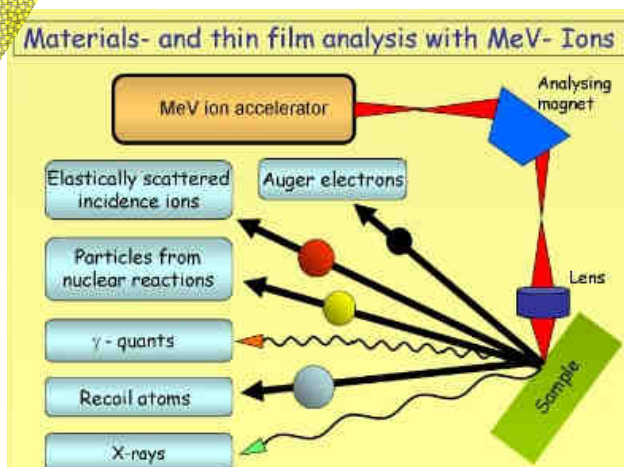
- III.1 Ion Beam bombarding Techniques
- III.2 Typical Preparation Steps
- III.3 Ion bombarded Materials Surfaces

Part IV Ion Beam Materials Analysis

- IV.1 Introduction
- IV.2 RBS and ERDA
- IV.3 PIXE and NRA
- IV.4 SIMS
- IV.5 Ion Imaging Techniques

Part V Selected Materials Applications

- V.1 Surface and Layer Formation/ Modification
- V.2 Ion Beam Analysis in Art and Archaeology
- V.3 Special Applications in Life Science
- V.4 FZD: Center for Application of Ion Beams in Materials Research



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