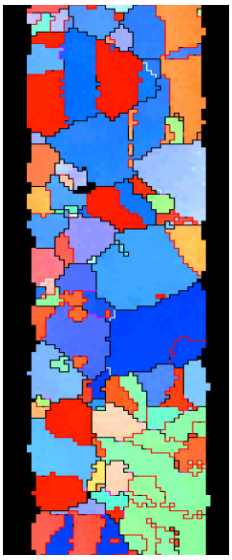
Forschungszentrum Rossendorf

Slovak Physical Society

SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA
Faculty of Materials Science and Technology in Trnava
Institute of Materials Science

Leibniz Institute for Solid State and Materials Research Dresden

Invites you to attend the 2nd Lecture Series



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

Klaus Wetzig

IFW Dresden
Guest Lecturer

presenting

Ion Beam Research in Materials Science

May, 31 – June 4, 2010

Prof. Klaus Wetzig is professor 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" (just under preparation). 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
31.05.2010	Lecture	Coffee break	Lecture	Lunch	Lecture
1.06.2010	Lecture	Coffee break	Lecture	Lunch	Lecture
2.06.2010	Lecture	Coffee break	Lecture	Lunch	Lecture
3.06.2010	Lecture	Coffee break	Lecture	Lunch	Lecture
4.06.2010	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

Part III Materials Preparation with Ions

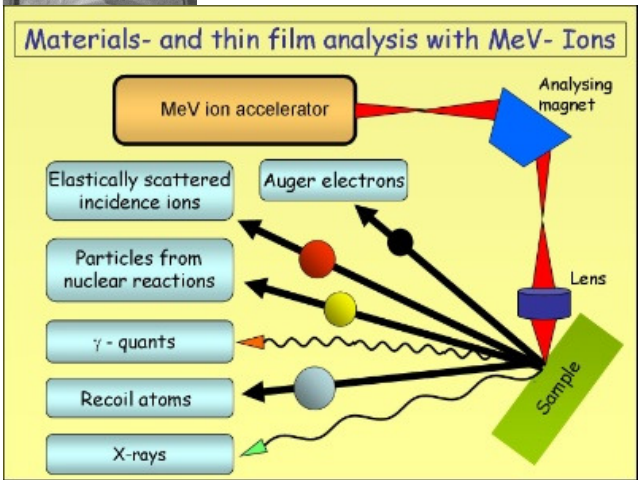
III.1 Ion Beam bombarding Techniques
III.2 Ion bombarded Materials Surfaces

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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