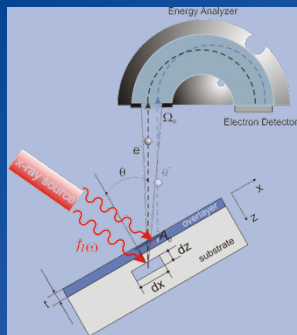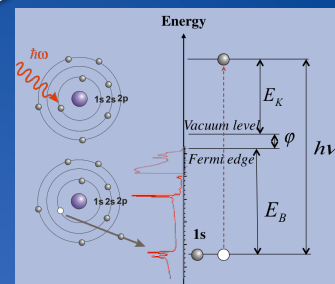# January 16 – 17, 2018 (1.5 Day Course)
Birck Nanotechnology Center Rm1001·9:00am

Introduction to
XPS

What we should know about X-ray Photoelectron Spectroscopy

Course Objectives:

- Learn basic physics principles and limitations of X-ray Photoelectron Spectroscopy (XPS) also know as ESCA (Electron Spectroscopy for Chemical Analysis)
- Learn approaches for qualitative and quantitative analysis of XPS data.
- Learn the types of problems that can be solved with XPS examples
- Perform advanced data analysis: coverage calculation, thin film thickness calculation, etc.

Course Description:

XPS is widely used to determine the chemical composition of a surface (element concentrations, chemical states, lateral and depth distributions, etc.) Nowadays XPS has become a standard technique for the characterization of solid surfaces. The course will teach how and what information can be provided by XPS.

Instructor:

Dmitry Zemlyanov,

PhD, Senior Surface Science Application Scientist, Birck Nanotechnology Center, Purdue University

Day 1 (Jan. 16 @ 9:00am-4:00pm):

At the first day, the basic prince of XPS will be discussed, including qualitative and quantitative analysis. Possible artifacts of the measurements will be analyzed.

Day 2 (Jan. 17 @ 9:00am-1:00pm):

The second day discussion will focus on the XPS data quantification. It will be demonstrated what kind of quantitative information can be extracted from the experimental data (for instance coverage calculation, thin film thickness calculation, etc.).

Participants are encouraged (not mandatory) to bring their laptop to perform some practical calculations (case studies).

Audience:

The lecture is orientated at a general audience. Scientists, engineers, students and technicians who would like a detailed understanding for the use of XPS/ESCA for surface analysis. *Ideally, every group involved in Surface Characterization should have at least one designated student familiar with XPS*

Total 1.5 – Day Cost: $250 (lunch on the first day will be provided)

Registration at: http://bit.ly/1eqIM8U

PURDUE UNIVERSITY
Discovery Park