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Scientific Evening Talk

Tuesday, October 30th, 2012, 18.30 h

Magnus-Haus Berlin, Am Kupfergraben 7, 10117 Berlin

ESCA and XPS: 50 Years of using the core electron binding energy shifts

Prof. Dr. Svante Svensson

Department of Physics and Astronomy, Uppsala University (Sweden)

The discussion will be chaired by
Prof. Dr. Wolfgang Eberhardt
Scientific Director, Magnus-Haus

‘Nachsitzung’ with food and drinks in the ‘Remise’, sponsored by the WE-Heraeus-Foundation

RSVP:

http://www.dpg-physik.de/dpg/magnus/formulare/formular_2012-10-30/anmeldung-2012-10-30.html

Svante Svensson (born 1947) is professor in Physics at Uppsala University in Sweden. He made his PhD in Uppsala in the group of *K. Siegbahn* (Nobel Prize 1981). In his thesis he made operative an ESCA instrument that was a prototype for almost all spectrometers since then. After his dissertation he focussed on applying such instruments to the strongly expanding field of Synchrotron radiation science and he has developed beam-lines and new photo-emission instruments. He has been guest professor in Paris and in Berlin. He is author of around 300 scientific papers and is also active in popular science writing where he has covered the subject of modern molecular physics. He is frequently working in Berlin at the synchrotron source BESSY II.

Abstract: When light falls on a material, electrons can be kicked out. This is the photo electric effect discovered 1888 by *H. Hertz*. However, it was very difficult to explain the details. In the glorious year 1905 *A. Einstein* made the correct theoretical description, showing the fundamental quantum behaviour of the interaction between light and matter and the route was open for applications. For the general public one can mention obvious things as cinemas with sound and TV. However, it was very difficult to measure the energies of the electrons emitted with any reasonable precision. Due to lack of technology this could not be done until 1957 when the group of Kai Siegbahn made a break through and modern electron spectroscopy was founded. Today over 15 000 scientific papers are published yearly, based on the use of photoelectron spectroscopy and the talk will give a popular review of the field.

Hauptgeschäftsführer
Dr. Bernhard Nunner

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