



N.2: Interaction meeting on the use of photoelectron spectroscopy

The tenth interaction meeting on the use of Photoelectron Spectroscopy was held on 29th and 30th day of August 2013. The aim of the meeting was to enhance interaction among photoelectron spectroscopy experimentalists, beam line users of Indus-I and to attract new users to carry out their experiments using synchrotron radiation sources (SRS). The program included lectures by the following scientists: Prof. S K Kulkarni, IISER, Pune; Prof. S K Gupta, BARC, Mumbai; Prof. K Maiti, TIFR, Mumbai; Prof. Shikha Verma, IOP, Bhubaneswar; Dr. S R Barman, UGC-DAE CSR, Indore; Dr. Dinesh Topwal, IOP, Bhubaneswar; Dr. V Rama Rao Medicherla, ITER, Bhubaneswar; Dr. R S Singh, IISER, Bhopal and Dr. R J Choudhary, UGC-DAE CSR, Indore.

Additionally, following users of Indus-I photoelectron spectroscopy beam line also gave their presentations. Prof. DG Kuberkar, Saurashtra University, Rajkot; Dr. Alka Deshmukh, Fergusson College, Pune; Dr. Shubha Gokhale, IGNOU, Delhi; Dr. V. K. Dixit, RRCAT, Indore; Dr. Ratnesh Gupta, DAVV, Indore; Dr. Ram Prakash, Mata Vaishnodevi University, Katara and Dr. Soma Banik, RRCAT, Indore.

The meet was inaugurated by Dr. P. Chaddah, Director, UGC-DAE CSR, Indore and Shri. P. R. Hannurkar, Head IOAPDD, RRCAT. The welcome address to participants of the interaction meet was presented by Dr. D. M. Phase, UGC-DAE CSR, Indore. Shri. P. R. Hannurkar, Head IOAPDD, RRCAT gave overview of Indus and other programme of our centre. Dr. P. Chaddah, Director, UGC-DAE CSR shared his view on the theme of this interaction meeting and emphasized on the importance of it. Dr. Shailendra Kumar, co-convenor of this meeting presented the vote of thanks. The meet was attended by 37 participants from different parts of the country and about 7 participants from Indore, 25 participants from UGC-DAE CSR, and 53 participants from RRCAT, Indore.

There were nine invited talks and seven user presentations delivered by the leading experts of photoelectron spectroscopy from different Indian institutes and national research laboratories. The scientific session of the meeting was commenced with the invited talk delivered by Prof. S. K. Kulkarni, IISER, Pune. She discussed the history, basics and the importance of synchrotron radiation in the photoelectron spectroscopy technique. This was followed by a talk by Dr. R. J. Choudhary, UGC-DAE, CSR, Indore, who presented their work on the resonant photoemission using synchrotron radiation source. Prof. S. K. Gupta, BARC introduced hard x-ray photoelectron spectroscopy technique to the participants. Prof. Shikha Verma, IOP, Bhubaneswar

spoke about the use of photoelectron spectroscopy in oxide based semiconductors. Dr. R. S. Singh, IISER, Bhopal presented his work on the electronic structure determination of low dimensional structures. Experimental demonstration at AIPES beam line on Indus-1- to the participants was performed by Dr. D. M. Phase, UGC-DAE, CSR, Indore. Data analysis to the participants was given by Dr. Soma Banik, RRCAT and Komal Bapna, UGC-DAE, CSR. The visit of Indus-I and Indus-II to the participants was conducted by Dr. Shailendra Kumar, RRCAT and Dr. Tapas Ganguli, RRCAT.

On the second day, Dr. S. R. Barman, UGC-DAE, CSR, Indore explained the unraveling nature of collective and single particle excitations by photoemission. Prof. K. Maiti, TIFR, Mumbai explained the physics of some of the Fe-based superconductors. Dr. Dinesh Topwal, IOP, Bhubaneswar spoke about the spectroscopic investigations of Quantum Confinement Effects. Dr. V. Rama Rao Medicherla, ITER, Bhubaneswar explained the Manifestation of disorder in core levels of TM alloys using photoelectron spectroscopy. Thereafter seven presentations of their work by the Indus-I beam line users were also made to the participants to enhance the user base. The theme meeting was concluded by Dr. P. D. Gupta, Director, RRCAT.

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N3: Interaction meeting on X-ray lithography and microfabrication

An interaction meeting on "X-ray lithography and microfabrication" was organized during December 5-6, 2013. Dr. V K Suri, Head Precision Engineering Division, BARC and Dr. S K Deb, Head Indus Synchrotrons Utilization Division were the conveners of the meeting. Around 45 participants from IITs, National research laboratories and Universities attended this meeting. Dr. G S Lodha welcomed all the invited speakers and participants and gave outline of the requirements of such interaction meetings. The interaction meeting was inaugurated by Dr. P D Gupta, Director RRCAT. In his inaugural address Dr. Gupta informed about the rise in the users base for Indus national synchrotron radiation facility and emphasized the role of the theme meetings which are being organized at RRCAT. He reiterated that lithography activity is multi-disciplinary in nature and expressed his cheerfulness by seeing the gathering of many professors and scientists from IITs, universities and research institutes of varying disciplines. Dr. Gupta thankfully acknowledged the support of the office of Principal Scientific