

Dr. S K Deb, Head ISUD, gave an overview of various beamlines on Indus synchrotron radiation sources. Dr. S N Jha, Convener, EXAFS-TM, 2012, delivered the vote of thanks.

First lecture after the inaugural function was delivered by the Dr. Giuliana Aquilanti (ELETTRA, Italy) on basics of EXAFS technique and its application to material science. In the subsequent technical sessions, there were presentations by scientists on catalytic applications of EXAFS technique including an extensive overview of application of EXAFS in catalysis by Dr. Carmelo Prestipino (CNRS, Rennes, France).

Second day of the meet was focused on EXAFS applications in material science, in which first speaker was from SOLEIL, France who discussed the research carried out at ODE beamline, SOLEIL for high pressure EXAFS and XMCD applications. Other presentations included EXAFS application on magnetic and nano materials and other technologically important materials. Last session had two parallel sessions consisting of experimental demonstrations and data analysis training as well as presentations from various user groups to discuss new proposals suitable for dispersive EXAFS(BL-8) beamline at Indus-2.

The concluding session, held on 28th Sept was presided over by Dr. S Kailas, Director Physics Group, BARC. The prime objective of this interactive session was designated for receiving remarks, viewpoints and feedback from the highly enthusiastic participants. As observed, the participants were very satisfied with the overall arrangements of the meeting, both scientifically as well as interaction point of view. There are also discussions and suggestions catering to the need of emerging requirements for the experimental station of EXAFS beamline like high temperature cell for in-situ EXAFS studies. Dr. Kailas, Director Physics Group, in his concluding remarks emphasized the need for similar theme meeting to enhance the user-base for synchrotron based EXAFS researches in India. Dr. D Bhattacharyya, Secretary, EXAFS-TM, 2012, summarized the proceedings of the theme meeting and thanked all the participants for their overwhelming support.

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## N.8: DAE (Excellence in Science, Engineering & Technology) Awards 2011

The DAE awards scheme was instituted in the year 2006 to recognize outstanding accomplishments and exceptional achievements of the DAE staff, who are engaged in scientific research, technology development, engineering /project implementation, teaching, healthcare and support services. These awards are given annually. The awards for the year 2011 were given on the eve of Founder's Day on October 30, 2012 in BARC. These were presented to the winners by the Chief Guest, Dr. M R Srinivasan, Former Chairman, Atomic Energy Commission. The following scientists/engineers from RRCAT bagged the DAE awards for the year 2011:

### HomiBhabha Science & Technology Award



Dr. T K Sharma, SO/G Solid State Laser Division has been conferred with the Homi Bhabha Science and Technology Award for "Basic research on semiconductor quantum wells and development of Semiconductor Lasers". Under his leadership, significant progress on the development of laser diodes has been made where lasing action at many

different wavelengths varying from 670 nm to 1000nm have been achieved at RRCAT. Furthermore, Dr. Sharma made significant contributions in enhancing the understanding of some novel fundamental physical phenomena related to semiconductor quantum structures e.g. Discovery of the compositional dependence of bowing parameter for highly strained InGaAs/GaAs quantum wells which was otherwise thought to be a constant and explanation of high polarization switching behavior of nitride deep ultraviolet light emitters. He made invaluable contributions on the spectroscopic characterization of quantum structures and also on the characterization of mid infrared semiconductor laser structures by inventing the FTIR-SPS technique. Homi Bhabha Science & Technology Award carries a Cash award of Rs. 5 Lakh, a Citation and a Medal.

### Scientific & Technical Excellence Award



Shri Tushar A Puntambekar, SO/H & Head Beam Diagnostics Section, Accelerator Control and Beam Diagnostics Division has been conferred with the Scientific & Technical Excellence Award for the year 2011 for his contribution in the field of beam







### Special Contributions Award



Shri R C Sharma, SO/F has been conferred with Special Contribution Award for his outstanding contributions in the field of Cryogenics Engineering. He has contributed immensely in the operation and maintenance of Liquid Helium and Liquid Nitrogen plants and their in-house maintenance. He has also played a pivotal role in training his subordinates and cryogenic plant operating staff at RRCAT. Shri Sharma has played an important role in meeting the requirements of liquid helium and liquid nitrogen to its user community at RRCAT. He has also played an active role in the development of indigenous Cryocoolers. Shri Sharma was one of the active members of the team who successfully commissioned a helium liquefier, which is designed and developed indigenously. This achievement, using indigenously developed components, was for the first time in the country. Special Contributions Award carries a cash award of upto Rs. 50,000/-, a Citation and a Medal.

### Group Achievement Award

Group Achievement Award winners receive a medal, a Citation and a cash awards for each group commensurate with the group size and its overall achievement. The following six teams were awarded with Group achievement awards:

1. Capillary Discharge Soft X-ray Laser System: A team of 10 members from Laser Electronics Support Division and Laser Plasma Division, headed by Shri C P Navathe, SO/H & Head, Laser Electronics Support Division was awarded with Group Achievement Award for the year 2011 in recognition of outstanding contributions in the field of Capillary Discharge Soft X-ray Laser System. The Group has carried out outstanding work on building up a high voltage capillary discharge system wherein a current pulse of 40 kA with ~50 ns risetime is passed through an argon gas discharge to produce hot, dense plasma column having lasing conditions to achieve x-ray lasing at 46.9 nm.
2. Development of High Power Solid State RF amplifiers and their deployment in Indus-2 Synchrotron Radiation Source to achieve beam current of 100mA at 2.5 GeV: A team of 44 members headed by Shri P R Hannurkar, Outstanding Scientist

& Head, Radio Frequency Systems Divisions was awarded with Group Achievement Award for the year 2011 in recognition of outstanding contributions for the development of High Power Solid State RF amplifier and their deployment in Indus-1 Synchrotron Radiation Source to achieve current of 100 mA at 2.5 GeV.

3. Development of Non-Evaporable Getter coating Technology for accelerators: A team of 21 members headed by Shri S K Shukla, SO/H & Head, Ultra High Vacuum Technology Division was awarded with Group Achievement Award for the year 2011 in recognition of outstanding contributions for the development of Non-Evaporable Getter coating Technology for accelerators.
4. Development, Installation, Commissioning and Utilization of ADXR, XRF-microprobe and XDSRL beamlines at Indus-2 Synchrotron Source: A team of 53 members headed by Dr S K Deb SO/H and Head, Indus Synchrotron Utilization Division was awarded with Group Achievement Award for the year 2011 in recognition of outstanding contributions for the Development, Installation, Commissioning and Utilization of ADXR, XRF-microprobe and XDSRL beamlines at Indus-2 Synchrotron Source.
5. Design & Development of High Power Laser Facility: Collaborative achievement by Laser & Plasma Technology Division, BARC and Laser System Engineering Section, RRCAT was awarded with a Group Achievement Award for the year 2011 for the deploying and supporting 18 in-house developed copper-vapour-lasers (CVL) at BARC. Configuring the CVLs to produce high average power laser beams and achieving regular operations for pumping a multi-wavelength tunable laser system for Project RIS. The RRCAT team of 24 members was headed by Shri S V Nakhe, SO/H & Head Laser System Engineering Section.
6. Machine Vision based PHWR Fuel Pellet Inspection System: A RRCAT team of 6 members headed by Shri C P Navathe, SO/H & Head, Laser Electronics Support Division was awarded with Group Achievement Award for the year 2011 in recognition of outstanding contributions in the development Machine Vision based PHWR Fuel Pellet Inspection System.