

Collaboration in Novel Accelerator Technology by contributing to LINAC 4 projects. It is a very crucial technology for achieving self reliance in DAE's program of development of pulsed proton LINAC for Spallation Neutron Source.

2. **Laser Plasma Interaction Studies at Ultrahigh Intensities:** A team of nineteen members of the Laser Plasma Division was awarded with "Group Achievement Award for the year 2010" in recognition of outstanding work on laser matter interaction studies in the ultra-short pulse, ultra-high intensity regime using a 10 TW, Ti:sapphire laser system. Dr. P. A. Naik, Head Laser Plasma Division, received the award on behalf of the team. The group has performed a number of front-ranking investigations which include : high-order harmonic generation from plasma plumes, electron acceleration to tens of MeV energy by laser wake-field acceleration technique, time resolved x-ray diffraction using femtosecond bursts of x-rays, 2.45 MeV fusion neutron generation from CD₂ target, MeV x-ray generation with fast electrons etc., in addition to development of several x-ray and particle (electron, proton, and neutron) diagnostics with high spatial and temporal resolutions.
3. **Indus-I Reflectivity Beamline Utilization:** A team of twenty five members, from Indus Synchrotron Utilization Division and Laser Electronics Support Division, was awarded with "Group Achievement Award for the year 2010" in recognition of their outstanding contribution in constantly upgradation of beamline to fulfill the challenging requirements of the users. Dr. G. S. Lodha, Head X-ray Optics Section, received the award on behalf of the team. The team has fostered a vibrant VUV/soft X-ray research community in India. The beamline is operated as a national facility for materials, atomic and molecular science research. The beamline is used for interface studies in thin films, optical response of materials in VUV/soft X-ray region, calibration of optics and detectors and gas phase photo ionization processes. This is a significant contribution towards effective utilization of Indus-I Synchrotron Radiation Source.
4. **Indigenous development of Helium Liquefier:** A team of twenty four members was awarded with "Group Achievement Award for the year 2010" in recognition

of their outstanding contribution in successful liquefaction of helium using indigenous helium liquefier. Shri P. K. Kush, Head Cryo-engineering and Cryo-module Development Section, received the award on behalf of the team. The liquefaction of helium was achieved with the indigenous design and development of cryogenic expansion devices, suitable heat-exchangers and other auxiliary components. The work demonstrated the engineering capabilities of highly complex and advanced technology and it is particularly of great importance as very less technical details are available in open literature because of its strategic and commercial interests.

N.5: Best Poster Award during 26th National Symposium on Plasma Science & Technology (Plasma-2011)

The poster entitled "Hole Size Effect in Hard X-ray Emission from Intense Laser Irradiated Nanoholes" by U. Chakravarty, V Arora, J. A. Chakera, P. A. Naik, H. Srivastava, P. Tiwari, A. Srivastava, and P. D. Gupta, presented at the 26th National Symposium on Plasma Science & Technology (Plasma-2011) held in Birla Institute of Technology, Mesra, Patna Campus during December 20 - 23, 2011 won the "Best Poster Prize". The award carried a cash prize of Rs. 5000 and a certificate given by the Plasma Science Society of India.

N.6: RRCAT family wishes happy and healthy life on superannuation

Dr. Shrikant C. Mehendale, Outstanding Scientist and Head, Laser Physics Applications Division, retired on superannuation on July 31, 2011. Dr. Mehendale joined BARC in the year 1973 after graduating from the 16th batch of BARC training school. He received his Ph.D. degree in Physics from the University of Mumbai in 1984 for his research work in the field of nonlinear optics. He was a postdoctoral visitor at Herriot Watt University, Edinburgh, UK from 1984 to 1986 and shifted to RRCAT in 1988. His research interests included laser physics, nonlinear optics and laser atom cooling.

