

From the Director's Desk

The 2nd issue of RRCAT Newsletter for the year 2007 has been brought out by the new editorial team most speedily. It covers major progress made as well as the scientific events that took place in the Centre over the past five to six months. It contains notable contributions, like, the fabrication and installation of a new cavity for Indus-1, which has helped improve the performance of the storage ring, a variety of material science studies, besides the progress on technological fronts like the indigenous development of TMPs and evaluating the performance of sextupole magnets with skew quadrupole components for Indus-2. In addition, the work done for transport line of CTF-3 is presented, where we are collaborating with a team at CERN. In the field of lasers, this issue reports the use of lasers supplied by RRCAT for cutting fuel sub assemblies at IGCAR, developments related to Nd:YAG, diode lasers and CVLs, besides use of lasers for material processing activities, laser plasma studies etc. The theme articles cover the use of lasers for nano structured materials research, the progress on Compact Ultrafast Terahertz Free Electron Laser and the developments connected with setting up of short duration laser systems and ultrafast diagnostics. The issue carries reports on the Technology Day Function for 2007, the 7th RRCAT Training School Graduation Function in which Prof. Yash Pal was the Chief Guest, and the visit of Dr. A. P. J. Abdul Kalam to our Centre. There is a report on the Golden Jubilee Graduation Function of BARC Training School, where several staff members of the Centre received Gold Medals from the Prime Minister Dr. Manmohan Singh. The publications in the first half of the year are also included in this issue.

I want to compliment the Editorial Team for bringing out a valuable issue, disseminating information on our ongoing work in the Centre to a wider audience through the forum of this Newsletter.

V. C. Sahni
October 2007

From the Editorial Board

It is a pleasure for the Editorial Board to be able to bring out the second issue of the RRCAT Newsletter for the year 2007. This has been made possible by the excellent cooperation from all the members of RRCAT scientific community. The Editorial Board expresses its sincere gratitude to all of them. In fact, going through the various contributions to the Newsletter by various RRCAT staff members, the Editorial Board feels proud that they are actually part of this vibrant R&D Centre where exciting developments are happening regularly in so many fronts in science and technology.

The "News items" cover latest R&D happenings in the Centre in the field of lasers as well as accelerators. They also cover the socio-scientific events taking place in the Centre. The first two "Theme articles" cover frontline areas of research in the field of lasers (nanotechnology) and accelerators (Free Electron Laser). The third theme article on ultrashort pulsed lasers is actually spearheaded by a young scientist. This article is put under "Young Scientist Forum". We hope to sustain this "Forum" with active participation from the young scientists from the Centre. Please note that the term "Scientist" above includes "Engineers" also, involved in the R&D activities in the areas of engineering science.

From the next year, we hope to bring out the issues in the months of March and September. We will try to include all inputs received from staff members until two months before the above target dates.

Editorial Board
October 2007