From the Director's Desk

It is a pleasure to see the Issue 2 of RRCAT Newsletter for 2008 so efficiently brought out by the Editorial Board, that gives a good account of several recent activities and achievements of the Centre.

After AERB cleared our application in May 2008 for the operation of Indus-2 at its full design energy, the ring is being run at 2.5 GeV. It is now poised to start a user programme with 2 (of 3) beamlines ready to produce data. In parallel, the new beam diagnostic devices developed recently are being built in larger numbers that will help us better track the electron beam and eventually improve the machine performance. Included in this issue are our studies on the timing control and the bucket filling pattern in Indus-2, design of H^- ion source, 750 kV DC accelerator as well as two theme articles, one describing research with SRS Indus-1 and other covering our involvement in the Large Hadron Collider set up by CERN, Geneva which just saw the first successful beam circulation experiments and won us a lot of praise! It is a matter of deep satisfaction to see that our contributions have been acknowledged both nationally and internationally and I want to compliment all staff members of the Centre.

In the field of lasers, many new activities are reported, such as, the development of CW operation of home-built semiconductor diode laser, new interferometric technique to study magnetic fields in laser-produced plasmas, on the use of Ti:Sapphire laser for enhancing the x-ray yield in water window region etc. Infrastructure developments linked to computers and network are also discussed. A theme article is also included highlighting our activities on diode pumped solid state lasers.

I compliment the Editorial Board Members for their professional approach in bringing out this issue. I hope this pace continues in future also.

V.C.Sahni
September 2008

From the Editorial Board

The RRCAT Newsletter editorial board is pleased to bring out the second issue of the Newsletter of 2008, covering various events of the first half of the year 2008.

Many interesting developments have taken place both in Laser and Accelerator programmes in this period and the news items provide a flavour of such developments.

Indus-1, a synchrotron radiation source with a 450 MeV electron storage ring, has been operational at RRCAT since 1999. This issue of Newsletter contains a theme article entitled "Research activities using the Synchrotron Radiation Source : Indus-1", that summarizes the research programmes currently pursued using Indus-1. We hope that this article will motivate potential synchrotron beam users all over the Indian science community to come forward to do top quality research using the various beamlines of this National Facility. Second theme article titled "Indian involvement in the LHC construciton and physics possibilities that lie ahead" covers our contributions to the Large Hadron Collider set up by CERN, where RRCAT has served as the nodal DAE laboratory.

The other theme article comes under the category of 'Young Scientists Forum', and deals with the study of diode pumped solid state lasers carried out by one of our bright young researchers.

The editorial board would like to express its gratitude to all the staff members of RRCAT and Director, RRCAT, for sustaining their kind help and support in bringing out the Newsletter in time.

We look forward to your feedback to make this Newsletter more useful for disseminating scientific information related to RRCAT to the outside scientific community.

Editorial Board
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