



From the Director's Desk...

I am happy to see that the second issue of this year's RRCAT Newsletter is ready to be launched. While earlier I was associated with the newsletter in different capacities, this issue marks the beginning of my association with it as Director of the Centre through this column. At the outset, I would like to express my deep gratitude to the former Directors Dr. D. D. Bhawalkar and Dr. V. C. Sahni for their outstanding contributions to the growth of our Centre. Thanks to their vision and the untiring efforts in translating it into reality, RRCAT is now recognized nationally and internationally for its accomplishments in the development of technology & applications of accelerators and lasers. With the help of all my colleagues, I am sure, the Centre would move forward towards fulfilling the more challenging tasks which lie ahead.

Both Dr. Bhawalkar and Dr. Sahni took keen interest in the publication of this newsletter which first appeared in 1988. It has served the important function of disseminating information about various R&D developments in the Centre to a wide audience. The present issue, as usual, has three theme articles. The article on the development of high current H^- ion source highlights the potential capabilities being created in this area. The ion source is the first step in the development of H^- injector linear accelerator which is being taken up at our Centre. The second article is on diode pumped neodymium doped lasers. These lasers have now become the work-horse for a host of applications in industry, medicine and research. Our Centre has developed considerable expertise in development of these lasers. The article describes various theoretical and technical issues involved in their development and also describes different multi-wavelength diode pumped neodymium doped lasers that have been developed. The article in the young scientist forum focuses on research on thin films and quantum structures of zinc oxide materials which have potential applications in several photonic devices. The R&D reports give a glimpse of the various recent R&D advances in the Centre.

This issue is also the first one from the newly constituted Editorial Board. I wish to express my appreciation of the efforts put in by earlier Editorial Board in making the newsletter come out in time and ensuring high quality of contents. I also wish to congratulate the new Editorial Board for maintaining the high standards.

With best wishes,

P. D. Gupta

From the Editor's Desk....

We are delighted to bring out the second issue of the Newsletter of the year 2009. Since the launch of the last issue, the Centre has marched forward with several new developments. Dr. V.C. Sahni, the former Director, has retired on superannuation and Dr. P. D. Gupta has taken over as the new Director of RRCAT. We congratulate Dr. Gupta on this prestigious appointment and feel honoured to have his brief biography published in this issue.

The Editorial Board of the RRCAT Newsletter has been reconstituted in June 2009. The present issue is the first to appear under its supervision. A few minor changes have been made in the appearance of the Newsletter, particularly in its front cover. Over half the cover now shows the pictures of the Indus accelerator complexes in the background. The RRCAT logo is positioned at the top centre and its backdrop changed from white to blue matching with the colour tone. The fonts of the Newsletter title are made slightly cursive with a colour in soothing contrast to that of the background. However, the internal format of the Newsletter remains the same. As usual, it features three theme articles, one each from the laser and the accelerator program, and the third from a young scientist. In addition, it carries regular reports on various research and development activities in the areas of lasers and accelerators, and their applications. The infrastructure section highlights reports on the accomplishments by the computer and civil wings of RRCAT. The news section provides a comprehensive coverage of the various happenings the Centre has witnessed during this period.

It is our privilege to put together all these expositions. We feel glad to acknowledge the kind support and encouragement of all those who contributed directly or indirectly to bring out the Newsletter on time. We also convey our sincere gratitude to the members of the previous Editorial Board for their help and advice, and hope that they will continue to extend their support and guidance in future too. As always, suggestions and criticisms towards improving the newsletter content are welcome.

Chief Editor