



## DIRECTOR'S DESK...

I am happy that the Editorial Board has put together the second issue of this year's CAT Newsletter and I wish to complement them for their commendable efforts. The issue contains theme articles on two important segments of the activities at CAT. The article on the experience with the RF cavity highlights the capabilities created in the Centre in this area and since RF components and electronics play a major role in all accelerator developments, the contents of this article would be a valuable reference material for future. The article on magnetic materials focuses on the interplay between the deeper scientific understanding and the technological utilization of this class of materials. I would like to complement the authors of these theme articles for their valuable contributions. The issue also contains other areas of development done in the Centre particularly with regard to material processing using lasers and the first results of the 10 MeV accelerator, which we are installing for radiation processing applications. I am also delighted to see a section devoted to the deliberations in the recently held vision meetings, where the young CAT scientific staff played an active and praise worthy role in proposing new scientific projects. The vision exercise, conducted by DAE, on the initiative of Chairman, AEC has given an excellent chance to frame our ideas for future programmes.

CAT has also been contributing to nurturing scientific talent by hosting large number of senior secondary students in and around Indore on National Science Day viz. 28 February 2004. For the students at the higher level, we had organized Young Scientist Research Programme in June 2004, where fifteen graduate and postgraduate students in basic science and engineering, selected from various Universities/ National Institutes in India worked with research teams for six weeks. The response to these activities was overwhelming. I am sure such programmes would be helpful in promoting scientific interest in the younger generation.

I would also like to compliment the Editorial Board for initiating a column by way of highlights of CAT activities in Hindi so as to make them accessible to larger readership. We would be happy to receive any comments or suggestions for improving the newsletter.

**Dr. V.C. Sahni**  
**Director**  
**October 7, 2004**

## EDITORIAL DESK...

It is a great pleasure to take out the July 2004 issue of the Newsletter. The previous issue was well received and some very constructive suggestions were received from the readers, which we have tried to incorporate. Further suggestions for improving the contents and presentations are welcome from the readers. We are sending the Newsletter to almost all the university/college Physics departments in India, different institutions and the individual scientists working in the areas of lasers and condensed matter physics. The mailing list is being updated.

This issue covers the major scientific and technological achievements in Lasers and Accelerator activities in the first half of this year. We have also included the publications from CAT during this period, which will give a broader perspective of the ongoing scientific activities. News related to basic sciences and technological developments are equally appearing in this issue suggest that the centre is putting efforts in both the directions. The major achievement during this period is the setting up of the LINAC for food processing application. Evaluations of Indus-2 quadrupole magnet and beam diagnostic system are reported. Application of lasers for material science processing, industry and basic science are reported.

We are happy to incorporate the Hindi section in this newsletter, which will highlight the scientific activities in Hindi, with the complete report in the respective main English section.

We thank our contributors for this issue and hope they will show their keen interest in the forthcoming issues. To target a larger number of readers the newsletter is also available on CAT web page: [www.cat.ernet.in/newsletter](http://www.cat.ernet.in/newsletter).

The Editorial Board is thankful to Director CAT for his support, timely advice and keen interest in bringing out this issue.

**Editorial Board**  
**October 7, 2004**