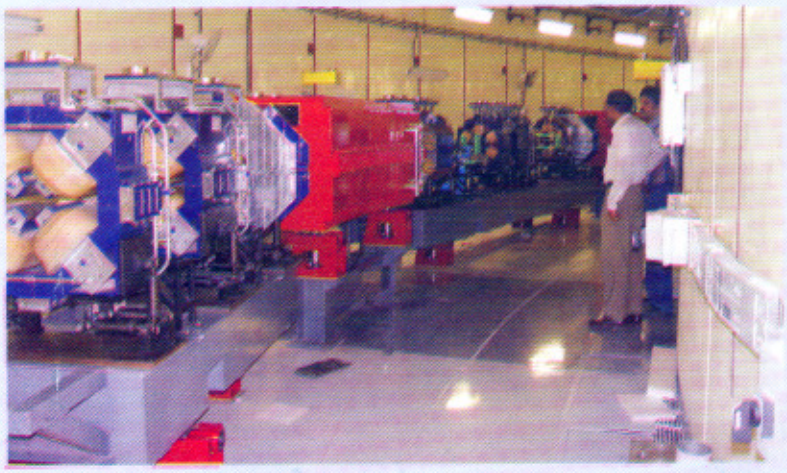
DIRECTOR'S DESK....

I am happy to see that the Editorial Board of CAT Newsletter has compiled another issue, covering most of the activities on which work was done during the year 2003 and was not included in the previous newsletter. Issue contains two theme articles one covering "Table top terawatt laser" by Dr. P.D. Gupta and the other "Laser micromanipulation of microscopic objects" by Dr. P.K. Gupta. The choice of these two articles is motivated by outstanding performance achieved by the staff members engaged in these activities. Dr. P.A. Naik working in the area of laser-produced plasmas was a recipient of Homi Bhabha Science and Technology Award for the year 2003. The team led by Dr. P.K. Gupta had the distinction of finding two of their publications in the year 2003 being judged amongst the best in the area of Biophysics as reported by Optics and Photonics News. I would like to take this opportunity to congratulate the entire staff of the concerned Division and Section for having brought laurels to our centre. The other activity reported in the present newsletter and which was partly covered in the previous newsletter refers to the Indus-2, a third generation Synchrotron Radiation Source of 2.5GeV under construction at CAT. Work on the development of different sub-systems and infrastructure facilities for Indus-2 has notably advanced in the year which has gone by. I would particularly like to acknowledge the contribution of Indian industries viz. Godrej, CMTI and HAL who have contributed to the development of 17 dipoles, 48 quadrupoles and 48 sextupoles, dipole vacuum chambers as well as kickers and septums. Many of these components have already been tested. The RF cavities and the power systems to feed them are also ready and have already undergone low power tests. Tests on the vacuum chambers and some of the other vacuum hardwares are proceeding with speed. The trial installation of the magnets and the vacuum chamber in the Indus-2 annulus ring has also commenced essentially to identify any interface problems and the accompanying photograph shows an octant (i.e. 1/8 part) of Indus-2 in place. Efforts are on to speedily complete tests on all the sub-systems and if things go well we expect the assembly of full Indus-2 by the latter half of the current year.

The Editorial Board of the CAT Newsletter has worked with zeal and great enthusiasm for which I must compliment them. Finally, I look forward to comments or other feedbacks from our readers.

Dr. V.C. Sahni
March 2004



EDITORIAL DESK....

It is a great pleasure to bring out the first issue of the year 2004 of the CAT Newsletter. The previous issue was well received by the readers, and its contents were well appreciated. We have sent the Newsletter to almost all the Physics/Chemistry departments in Indian universities, major scientific institutions as well as many individual scientists working in the areas of lasers and condensed matter physics. We are in the process of updating the distribution list, and would ask suggestions in this regard.

This newsletter covers mostly activities of the second half of the year 2003. However the publication list is for the full calendar year 2003. This publication list would be greatly beneficial to the readers, interested in getting detailed information on the research and development activities being perused in CAT. The theme articles have been chosen to highlight our indigenous development of T^3 laser technology and work being done at the cutting edge on the medical applications of lasers. Indus-1 user base has started increasing. The Physical Research Laboratory group has setup an experimental station for gas phase studies.

There has been a significant surge in scientific activities at CAT. Indus-2, one of the major national facilities in India is taking shape. The sub systems of Indus 2 are very critical and most of them are made in CAT and few of them have been fabricated in select-advanced Indian industrial organisation. There have seen significant progress in DAE-CERN collaboration activity also.

The response for the news items was very good among the working level scientists. In many cases we had to restrict the size of the news item and also in few cases we had to reduce the numbers from the individual group with the promise to include those items in the next issue. We hope for similar response in future as well. We thank our contributors for this issue and hope they will continue their keen interest and cooperation in the forthcoming issues.

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

Editorial Board
March 2004