

R Dubey and R C Sharma, *ibid.*

79. "Development of liquid nitrogen based variable temperature gas purifier for excimer lasers", S G Gilankar and P K Kush, *ibid.*
80. "Theoretical design of reciprocating expansion engine for 80 K and 20 K inlet temperature level", R Ghosh, M D Atray and P K Kush, *ibid.*
81. "Effect of geometric design parameters on the performance of finned tube heat exchangers", M D Atray and P K Kush, *ibid.*
82. "Cryogenic test set up for superconducting sextupole corrector magnets", S C Bapna, C K Ramachandran, A M puntambekar, Anil Thipsay and M G Karmarkar, Invited talk, *ibid.*
83. "Indus-1 Synchrotron Radiation Source", G Singh, DST Meeting/ Workshop on KEK, Japan-India co-operation in Accelerator Science, BARC, Dec.11-12,1997.
84. "Optical Nonlinearities in Semiconductor Quantum Structures"; KC Rustagi, Invited talk, IXth International Workshop on Physics of Semiconductor devices, New Delhi, Dec. 16-20 (1997).
85. "Characterization of Epitaxial ZnSc films grown by pulsed laser deposition", Tapas Ganguli, Alka Ingale, M Vedvyas, P Bhattacharya, LM Kukreja, KP Adhi and KC Rustagi, *ibid.*
86. "Thermal wave propagation through metal insulator silicon capacitor", Shailendra Kumar, P Bhattacharya, and Dinesh K Sharma *ibid.*
87. "Surface photovoltage spectroscopic study of ZnSc films deposited on n-GaAs", Shailendra Kumar, Tapas Ganguli, Tarun Sharma, Pijush Bhattacharya and L M Kukreja, *ibid.*

88. "Characterization of epitaxial ZnSe films grown by pulsed laser deposition", Tapas Ganguli, Alka Ingale, M Vedvyas, P Bhattacharya, LM Kukreja, KP Adhi and KC Rustagi, *ibid.*
89. "Growth of crystalline CdS films on (100) in P by chemical bath deposition", UN Roy, Alka Ingale and KC Rustagi, *ibid.*
90. "Study of chemically deposited crystalline Cds films using surface photovoltage spectroscopy", UN Roy, Shailendra Kumar, P Bhattacharya, Tapas Ganguli and KC Rustagi *ibid.*
91. "Raman and photoluminescence investigations of Epitaxial ZnSc films on n-GaAs(100)", Alka Ingale, Tapas Ganguli, P Bhattacharya, L M Kurkreja, M Vedvyas, K P Adhi and K C Rustagi, DAE Solid State Physics symposium, Cochin, Dec. 27 - 31 1997.
92. "Confined Acoustic & optical plasmas of free standing CdS nanoparticles", Alka Ingale, UN Roy and KC Rustagi *ibid.*
93. "Linear and higher harmonic ac-susceptibility study in Ce(Fe, Ir)<sub>2</sub>", V Sunil Kumar, AK Rajarajan, SB Roy and P Chaddah, *ibid.*
94. "Superconductivity anomaly or peak-effect in CeRu<sub>2</sub> and Bi-2212 : a comparative study Sujeet Chaudhary, S B Roy and P Chaddah, *ibid.*
95. "Magnetic field distribution in thin superconductors in presence of twin boundaries", Mahesh Chandran, *ibid.*
96. "Superconductivity in Nb: effect of Fe-substitution", Sujeet Chaudhary, SB Roy and P Chaddah, *ibid.*
97. "Magnetocaloric effect in La<sub>1-x</sub> Sr<sub>x</sub> CoO<sub>3</sub> system", Sujeet Chaudhary, V Sunil Kumar, SB Roy, P Chaddah, SR Krishna Kumar and DD Sharma, *ibid.*

## OTHER ACTIVITIES / NEWS

### नगर राजभाषा समिति : डॉ. भवालकर अध्यक्ष

नगर राजभाषा कार्यान्वयन समिति, इन्दौर की वर्ष 1997 की छः माही बैठक दिनोंक 5-12-1997 को डॉ. दि.दे. भावलकर, निदेशक, प्र.प्रौ. केन्द्र की अध्यक्षता में संपन्न हुई। इस बैठक में श्री जी.आर. वाधवा, उपनिदेशक (कार्यान्वयन), मध्य क्षेत्र, भोपाल सहित बड़ी संख्या में सदस्य-कार्यालयों के प्रमुखों ने भाग लिया। बैठक में सदस्य-कार्यालयों के कामकाज में हिन्दी प्रयोग की स्थिति की समीक्षा करते हुए अध्यक्ष ने इस बात पर बल दिया कि "न केवल हिन्दी का प्रयोग बढ़ाया जाना आवश्यक है वरन् यह भी आवश्यक है कि सही वर्तनी और सटीक शब्दों का प्रयोग सुनिश्चित हो।" समिति के सचिव श्री सुनील सरवाही ने सदस्य-कार्यालयों से प्राप्त सूचनाओं को विचारार्थ प्रस्तुत किया। राजभाषा विभाग, गृह मंत्रालय द्वारा इन्दौर नगर की राजभाषा कार्यान्वयन समिति की अध्यक्षता का भार अब (जून, 1997 में) प्रगत प्रौद्योगिकी केन्द्र, इन्दौर के निदेशक डॉ. दि.दे.भावलकर को सौंपा गया है। नगर समिति में केन्द्र सरकार के कार्यालयों, निगम एवं उपक्रमों सहित लगभग 75 से अधिक सदस्य-कार्यालय हैं।





### Colloquia held

1. Recent developments in low noise cooling of high-Tc SQUIDS, Prof. Christoph Heiden, University of Gessien, Germany.
2. High resolution core-level photoelectron spectroscopy of molecules, Prof. A M Bradshaw, Fritz-Haber Institute, Germany.
3. Electron spectroscopy of ion-implanted samples, R V Nandedkar, CAT.
4. Surveying and alignment in accelerators, PK Nema, CAT.
5. X-ray correlation spectroscopy; A method for studying particle dynamics, PV Satyam, Argonne National Laboratory, USA.
6. Laser surface modification: experiments and theoretical modeling, Manoj Kumar, CAT.
7. Development of electric vehicle at CAT, Arvind Kumar, CAT.
8. Theory of optical response properties of atoms and molecules: A variation-perturbation approach, Arup Banerjee, CAT.
9. Unusual growth modes in pulsed-laser deposition, LM Kukreja, CAT.
10. Laser installation "Kamerton" and laser-plasma experiments at General Physics Institute (GPI), Dr. A Kilpio, GPI, Russia.
11. Development of microtron and of other cyclic electron accelerators in Romania, Dr S Axinescu, Institute of Atomic Physics, Romania.
12. Optical methods in diagnosis, Dr T Bocher, Laser-und-Medizin Technologie, Germany.
13. Laser material processing, Prof J Majumdar, University of Michigan, USA.

### Eminent Scientist Lecture Series

This year India completed fifty years of its independence. The year also saw CAT completing ten years of its scientific activities. To celebrate these events, a series of lectures by eminent scientists of India was started in the later half of the year and will continue into the next year. So far, the following lectures have been delivered in this series:

1. "Nano-science and nano-technology", Prof K L Chopra, Ex-Director IIT Kharagpur.
2. "Some philosophical aspects of physics", Dr. Raja Ramanna, Member, Rajyasabha and Ex-Chairman, AEC.
3. "Food irradiation and its prospects", Dr D R Bongirwar, BARC.

### Second School on "The Physics of Beams"

The second school on the physics of beams, sponsored by Department of Science and Technology, was held at CAT during Dec 29, 1997 - Jan 9, 1998. The school was aimed at M Sc students and research scholars in the first year of their work, with a view to introduce them to various aspects of the physics and applications of accelerators and high energy particle beams, and to motivate them to take up advanced studies in this area. About 40 students from various universities and research organizations attended the school. During the course of the school, about 40 lectures were delivered by about 15 speakers from various premier institutes working in the area. Scope of topics covered in the school ranged from basic accelerator physics to nonlinear dynamics and quantum effects in accelerators, coherent instabilities in accelerators, free electron lasers and advanced accelerator concepts like laser based acceleration of particles and superconducting accelerators. The school was inaugurated by Dr D D Bhawalkar, Director, CAT who spoke on the current status of R & D activities in the field of physics of beams. The school was organised by Dr S Krishnagopal and Dr R V Nandedkar.

### Snippets

- Mahesh Chandran submitted his Ph D thesis titled "Study of Vortex dynamics in superconductors" to DAVV.
- Shri S Chinnathambi and the Dwarka team from CAT has won respectively the men's individual singles title and the team championship of the XIII DAE inter-unit table tennis meet held at heavy water plant Manuguru during Dec 7-11, 1997.



Dr Raja Rammna delivering his talk.

**CAT NEWSLETTER:** is a publication of

Centre for Advanced Technology,  
CAT,  
Indore (MP) 452 013,  
India.

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