



## Publications (July 2006 to Dec. 2006)

### A. Journal Articles

1. Ansari M.S., Singh Bhupinder and Navathe C.P.  
A low jitter variable delay generator for regenerative amplifier in a table top terawatt femto second laser system.  
*Indian Journal of Engineering and Materials Sciences*, vol.13, no.4, p. 269-274, Aug. 06
2. Arora V., Chakera J.A., Naik P.A., Kumbhare S.R., Gupta P.D and Gupta N.K.\*  
Effect of gold on keV x-ray emission yield from laser produced plasma of gold-copper mix-Z targets.  
*Journal of Applied Physics*, vol.100, no.3, p. 033306-1-4, Aug.2006
3. Bajpai A.\*, Bhargava S. \*, Gupta P. K. and Jain N. K. \*  
A study of low level nitrogen laser therapy in the treatment of non-responding tubercular lymphadenopathy and sinuses.  
*Indian Journal of Tuberculosis*, vol. 53, no. 4, p. 229-231, Oct. 2006
4. Bajpai A. \*, Bhargava S. \*, Jain N. K. \* and Gupta P. K.  
Role of low level Nitrogen laser therapy in chronic drug resistant pulmonary tuberculosis  
*Indian Journal of Tuberculosis* vol. 53, no. 3, p. 135-140, July 2006
5. Banik S.\*, Chakrabarti Aparna, Kumar U.\*, Mukhopadhyay P.K.\*, Awasthi A.M.\*, Ranjan R.\*, Schneider J.\*, Ahuja B.L.\* and Barman S.R.\*  
Phase diagram and electronic structure of  $Ni_{2-x}Mn_{1-x}Ga$ .  
*Physical Review B* vol.74, no.8, p.085110-1-7, Aug.06
6. Bhaumik I., Ganesamoorthi S., Bhatt R., Karnal A.K., Sunder R. and Wadhawan V.K.\*  
Effect of rhodium incorporation in  $KTiOPO_4$  single crystals grown from self-flux.  
*Crystal Research & Technology* vol.41, no.12, p.1180-1183, 2006
7. Bose B. and Dube A.  
Interaction of Chlorin p6 with bovine serum albumin and photodynamic oxidation of protein.  
*Journal of Photochemistry and Photobiology B: Biology* vol.85, no.1, p.49-55, Oct.06
8. Chakrabarti A., Kratzer P. and Scheffler M.  
Surface reconstructions and atomic ordering in  $In_xGa_{1-x}A(001)$  films : a density-functional theory study,  
*Physical Review B* vol.74, no.24, p.245328-1-11, Dec.2006
9. Chari R. and Oak S.M.  
Stability monitoring of ultrashort laser pulses using single-mode fibers.  
*Optical Engineering* vol.45, no.9, p.094202-1-8, Sept.2006
10. Dixit, V.K., Ganguli T., Sharma T. K., Kumar Ravi, Porwala S., Shukla V., Tiwari P. and Nath A.K.  
Studies on MOVPE growth of GaP epitaxial layer on Si(001) substrate and effects of annealing.  
*Journal of Crystal Growth* vol.293 no.1, p.5-13, Jul.06
11. Ganeev R A.\*, Singhal H., Naik P. A., Arora V., Chakravarty U., Chakera J.A. and Khan R.A.  
Single-harmonic enhancement by controlling the chirp of the driving laser pulse during high-order harmonic generation from GaAs plasma.  
*Journal of the Optical Society of America B: Optical Physics* vol.23, no.12, p.2535-2540, Dec.2006
12. Ganeev R. A\*, Singhal H., Naik P.A., Arora V., Chakravarty U., Chakera J.A., Khan R.A., Kulagin I.A.\*, Redkin P.V.\*, Raghuramaiah M., and Gupta P.D.  
Harmonic generation from indium-rich plasmas,  
*Physical Review A* vol. 74, p. 063824-, 2006
13. Gardelis S.\*, Androulakis J.\*, Viskadourakis Z.\*, Papadopoulou E.L.\*, Giapintzakis J.\*, Rai S., Lodha G.S. and Roy S.B.  
Negative giant longitudinal magnetoresistance in  $NiMnSb/InSb$ : interface effect.  
*Physical Review B* vol.74, no.21, p.214427-1-5, 2006
14. George J. and Nath A.K.  
Highly efficient diode pumped single longitudinal mode green Laser at 532nm  
*Photonics*, vol. 2, p. 367, 2006
15. Ghosh H.,  
A possible route to the violation of Vavilov-Kasha rule in  $\pi$ -conjugated polymers,  
*Chemical physics letters* vol.426, p.431, 2006
16. Jain B. and Das K.  
Fluorescence resonance energy transfer between DPH and Nile Red in a lipid bilayer.  
*Chem. Phys. Lett.* vol. 433, no. 1-3, p. 170-174, Dec. 06.
17. Jain S.K., Jain A., Sharma D. and Hannurkar P.R.  
Acquisition and analysis of Langmuir probe characterization for ECR plasma.  
*Indian Journal of Physics* vol.80, no.10, p.1011-1015, Oct.2006



18. Jaiswal A., Rawat R.\* and Lalla N.P.\*  
Dominance of magnetic scattering in the electrical-transport of  $Al_{70.5}Pd_{22}Mn_{7.5}$  icosahedral quasicrystal.  
*Journal of Non-Crystalline Solids* vol.352, no.21-22, p.2129-2136, Jul.2006
19. Karnal A.K., Saxena A., Ganesamoorthy S., Bhaumik I., Wadhawan V.K., Bhat H.L.\* and Gupta P.K.  
Nucleation-trap crystallizer for growth of crystals from solutions.  
*Journal of Crystal Growth* vol.297, no.1, p.152-156, Dec.2006
20. Kumar A., Gupta M.K. and Sharma R.P.,  
Effect of ultra intense laser pulse on the propagation of electron plasma wave in relativistic and ponderomotive regime and particle acceleration  
*Laser and Particle Beams* vol.24, p. 403, 2006
21. Kumaran A.S.\*, Babu S.\*, Ganesamoorthy S., Bhaumik I. and Karnal A.K.  
Crystal growth and characterization of  $KY(WO_4)_2$  and  $KGd(WO_4)_2$  for laser applications.  
*Journal of Crystal Growth* vol.292, no.2, p.368-372, Jul.06
22. Late D. J.\*, More M. A.\*, Joag D. S.\*, Misra P., Singh B. N., and Kukreja L. M.  
Field emission studies on well adhered pulsed laser deposited  $LaB_6$  film on W tip,  
*Applied Physics Letters* vol.89, p.123510:1-3, 2006
23. Manhas S., Swami M. K., Buddhiwant P., Ghosh N., Gupta P. K., and Singh K.\*  
Mueller matrix approach for determination of optical rotation in chiral turbid media in backscattering geometry.  
*Optics and Photonics News* vol. 17, no. 12, p. 41 Dec. 06
24. Misra P., Sharma T.K., Porwal S. and Kukreja L.M.  
Room temperature photoluminescence from ZnO quantum wells grown on (0001) sapphire using buffer assisted pulsed laser deposition.  
*Applied Physics Letters* vol.89, no.16, p.161912-1-3, Oct.06
25. Modi M.H., Lodha G.S., Srivastava P., Sinha A.K. and Nandedkar R. V.  
Network compaction and surface deformation in the hydrogenated silicon nitride film upon soft x-ray/VUV illumination.  
*Physical Review B* vol.74, no.4, p.045326-1-6, Jul.06
26. Moorti A., Rao B.S., Naik P.A., Gupta P.D., Romanov I.V.\*, Korobkin Y.V.\* and Rupasov A.A.\*  
Cathode plasma jet pinching and intense X-Ray emission in a moderate-current Laser-triggered vacuum discharge.  
*IEEE Transactions on Plasma Science* vol.34, no.5, p.2419-2425, Oct.2006
27. Mudali K. U.\*, Kaul R., Ningshen S. \*, Ganesh P., Nath A.K., Khatak H.S. and Raj Baldev\*  
Influence of laser surface alloying with chromium and nickel on corrosion resistance of type 304L stainless S.,  
*Materials, Science & Technology* vol. 22, no. 10, p. 1185-1192, 2006
28. Naik S.R., Rai S., Lodha G.S. and Brajpuriya R.  
X-ray reflectivity and photoelectron spectroscopy study of interdiffusion at the Si/Fe interface.  
*Journal of Applied Physics* vol.100, no.1, p.013514-1-6, Jul.06
29. Nayak M., Lodha G.S. and Nandedkar R.V.  
X-ray reflectivity investigation of interlayer at interfaces of multilayer structures: application to Mo/Si multilayers.  
*Bulletin of Materials Science* vol.29, no7, p.693-700, Dec.2006
30. Nayak M., Lodha G.S., Sinha A.K., Nandedkar R.V. and Shivashankar S.A.  
Determination of interlayer composition at buried interfaces using soft x-ray resonant reflectivity.  
*Applied Physics Letters* vol.89, no.18, p.181920-3, Oct.2006
31. Nayak M., Lodha G.S. and Nandedkar R.V.  
Nucleation, growth, percolation, and amorphous to crystalline transition of ultrathin molybdenum films.  
*Journal of Applied Physics* vol.100, no.11, p.113709-1-7, Dec.2006
32. Prakash O., Mahakud R., Dixit S.K. and Nundy U.  
Effect of the spatial coherence of ultraviolet radiation (255 nm) on the fabrication efficiency of phase mask based fiber Bragg gratings.  
*Optics Communications* vol.263, no.1, p.65-70, Jul.2006
33. Prasad Y.B. S.R., Naik P.A., Kumar A. and Gupta P.D.  
Simple interferometer for space and time resolved density measurements of laser produced plasmas.  
*Review of Scientific Instruments* vol.77, no.9, p.093106-1-4, 2006



34. Rajendiran P.  
Quantitative analysis of research publications of Raja Ramanna Centre for Advanced Technology, Indore: a bibliometric study from 1995 to 2004.  
*IASLIC Bulletin* vol. 51, no. 4, p.228-233, Dec. 2006
35. Rajendiran P. and Bhushan Indu,  
Automated library stock verification with barcode and LibSys.  
*DESIDOC Bulletin of Information Technology* vol.26, no.5, p.17-21, Sept.2006
36. Rao R.V.\*, Subba Parvathavarthini N.\*, Pujar M.G.\*, Dayal R.K.\*, Khatak H.S., Kaul Rakesh, Ganesh P. and Nath A.K.  
Improved pitting corrosion resistance of cold worked and thermally aged AISI type 316L(N) SS by laser surface modification,  
*Surface Engineering* vol. 23, no. 2, p. 83-92, 2007
37. Ravi G.\*, Kitamura K.\*, Ganesamoorthy S., Takekawa S.\*, Nakamura M.\*, Liu, Y.\* and Hatano H.\*  
Growth, optical and switching characteristics of ferroelectric pure and Mn doped near SLN crystals  
*Ferroelectrics* vol.332, p.51-55, 2006
38. Roy S.B., Chattopadhyay M.K. and Chaddah P.\*  
Temperature dependence of magnetization in the superconducting mixed state of CeRu<sub>2</sub>: evidence of a first order phase transition.  
*Journal of physics: Condensed Matter* vol.41, no.18, p.9471-9482, Oct.2006
39. Roy S.B., Chattopadhyay M.K., Chaddah P.\*, Moore J.D.\*, Perkins G.K.\*, Cohen L.F.\*, Gschneidner K.A.Jr.\* and Pecharsky V.K.\*  
Evidence of a magnetic glass state in the magnetocaloric material Gd<sub>5</sub>Ge<sub>3</sub>.  
*Physical Review B* vol.74, no.1, p.012403-1-4, Jul.06
40. Roy S.B., Chattopadhyay M.K., Manekar M.A., Sokhey K.J.S. and Chaddah P.\*  
First order magneto-structural transition in functional magnetic materials: phase-coexistence and metastability.  
*Bulletin of Materials Science* vol.29, no.6, p.623-631, Nov.06
41. Sharma A.K., Patidar R.K., Raghuramaiah M., Naik P.A. and Gupta P. D  
Measuring pulse-front tilt in ultrashort pulse laser beams without ambiguity of its sign using single-shot tilted pulse-front auto-correlator  
*Optics Express* vol.14, p.13131, 2006
42. Sharma R.K.\*, Mithal N.\*, Sen S.\*, Jagannath\*, Bhushan K.G.\*, Gadkari S.C.\*, Yakhmi J.V.\* and Sahni, V.C.  
XPS studies on Non-Evaporable Getter (NEG) thin films of Zr and Ti-Zr for possible applications in production of extreme high vacuum (XHV).  
*Bulletin of Indian Vacuum Society* vol.9, no.2, p.11-14, 2006
43. Sharma V.K., Chattopadhyay M.K., Shaeb K.H.B., Chouhan Anil, and Roy S.B.  
Large magnetoresistance in Ni<sub>50</sub>Mn<sub>34</sub>In<sub>16</sub> alloy  
*Applied Physics Letters* vol. 89, 222509, 2006
44. Singh B., Subramaniam V.V., Daultabad S.R. Chakraborty A.  
Compact and efficient second generation kinetically enhanced copper vapor laser at 10 kHz repetition rate.  
*Review of Scientific Instruments* vol.77, no.11, p.116109-1-4, Nov. 06
45. Singh C.P., Kulshrestha V and Roy S.  
High-contrast all-optical switching with Pt:ethynyl complex  
*Optik* vol.117, p.499, 2006
46. Singh G, Bhaumik I., Ganesamoorthy S., Karnal A.K. and Tiwari V.S.  
Growth and characterization properties of the Cr<sub>3+</sub> doped PZN single crystals.  
*Materials Letters* vol.60, p.3307-3310, 2006
47. Singh R.K., Lodha G.S., Sharma V.\*, Prajapati I.A.\*, Subramanian K.P.\* and Bapat B.\*  
Triply charged carbon dioxide molecular ion: formation and fragmentation.  
*Physical Review A* vol.74, no.2, p.022708-1-4, Aug.06
48. Swami M. K., Manhas S., Buddhiwant P., Ghosh N., Uppal A., and Gupta P. K.  
Polar decomposition of 3 x 3 Mueller matrix: a tool for quantitative tissue polarimetry.  
*Optics Express* vol. 14, no. 20, p. 9324 - 9337, Oct. 06
49. Tian Youwei\*, Yu Wei\*, Lu Peixiang\*, He Feng\*, Xu Han\*, Qian Leijia\*, Senecha Vinod K.  
Red shift and broadening of backward harmonic radiations from electron oscillations driven by femtosecond laser pulse  
*Plasma Science & Tech.* vol. 8, no. 4, 2006
50. Tian Youwei\*, Yu Wei\*, He Feng\*, Xu Han\*, Senecha Vinod, Deng Degang\*, Wang Yi\*, Li Ruxin\* and Xu Zhizhan\*  
Electron dynamics and harmonics emission spectra due to electron scillation driven by intense laser pulses  
*Physics of Plasmas* vol. 13, p. 123106, 2006



51. Tiwari V. B., Singh S., Mishra S. R., Rawat H. S. and Mehendale S. C.  
Laser frequency stabilization using Doppler-free bi-polarization spectroscopy  
*Optics Communications* vol.263, p.249, 2006
52. Upadhyay J., Chakera J.A., Navathe C.P., Naik P.A., Joshi A.S., and Gupta P.D.  
Development of single frame x-ray framing camera for pulsed plasma experiments  
*Sadhana* vol.31, p.613, 2006

#### B. Invited Talks

1. Arora V.  
X-ray spectroscopic diagnostics for laser plasma interaction studies  
*21<sup>st</sup> National Symposium on Plasma Science and Technology (Plasma-2006)*, MNIT, Jaipur, December 19-22, 2006
2. Badapanda M.K.  
25 kV, 7 amp high voltage DC Klystron bias power supplies along with Crowbars and detuned filters for 2.5 GeV, Indus-2, synchrotron radiation source  
*CELLS*, p.08193, Bellaterra, Spain, July 2006.
3. Banerji A.  
Beam diagnostic systems  
*Indian Particle Accelerator Conference, InPAC-06*, BARC/TIFR, November 1-4, 2006
4. Bapna S.C.  
Industrial electron accelerators at RRCAT  
*Indian Particle Accelerator Conference, InPAC-06*, BARC/TIFR, November 1-4, 2006
5. Bindra K.S.  
Mechanism of nonlinearity in semiconductor doped glasses  
*6<sup>th</sup> DAE-BRNS National Laser Symposium*, RRCAT Indore, Dec. 5-8, 2006
6. Bindra K.S.  
Ultrafast optical nonlinearities in semiconductor nanoparticles  
*Progress on Tuneable Lasers for Ultrafast Processes and Applications*, IIT Madras, Chennai, Dec. 21-22, 06
7. Chattopadhyay M.K.  
Magnetic and magnetotransport properties of Co doped FeSi  
*51<sup>st</sup> DAE Solid State Physics Symposium*, Barkatullah University, Bhopal, Dec. 26-30, 2006
8. Ganesamoorthy S.  
Growth of large, device quality NLO crystals by flux growth method  
*6<sup>th</sup> DAE-BRNS National Laser Symposium*, RRCAT Indore, Dec. 5-8, 2006
9. Gupta P. K.  
Biophotonics - studies at RRCAT  
*Recent advances in fiber optics and photonics*, IIT Roorkee, Roorkee, August 25 - 27, 2006.
10. Gupta P. K.  
Optical imaging and diagnosis.  
*Eighth International Conference on Optoelectronics, Fiber Optics and Photonics (Photonics 2006)*, University of Hyderabad, December 13-16, 2006.
11. Khardekar R. K.  
Novel hydrogen technologies: a review,  
*International Workshop on Hydrogen Energy*, HS-13, Nov. 5-9, 2006. University of Rajasthan Jaipur. India
12. Kukreja L.M.  
ZnO low dimensional electron systems: a perspective of possibilities  
*Max Planck Institute of Solid State Physics*, Stuttgart, Germany Oct. 16, 2006.
13. Kukreja L.M.  
ZnO nanostructures: a perspective  
*Special lecture under Sonderforschung Bereich 569*, University of Ulm, Ulm, Germany, Oct. 20, 2006.
14. Kukreja L.M.  
Growing nanometer structures with nanosecond lasers  
*National Workshop on Plasma and Laser Processing of Advanced Materials*, University of Pune, Pune, November 7-9, 2006.
15. Kukreja L.M.  
Device grade ultra-thin ZnO quantum wells grown by pulsed laser deposition  
*Intl. Workshop on ZnO and Related Materials*, University of Giessen, Giessen, Germany Oct. 3-6, 06
16. Naik P.A.  
Coherent XUV radiation from laser plasma plumes through high order harmonic generation  
*6<sup>th</sup> DAE-BRNS National Laser Symposium*, RRCAT Indore, Dec. 5-8, 2006





17. Rao K. D.  
Optical coherence tomography.  
**6<sup>th</sup> DAE-BRNS National Laser Symposium**, RRCAT Indore, Dec. 5-8, 2006
18. Singhal H.  
Generation of coherent soft X rays using High Order Harmonics  
**21<sup>st</sup> National Symposium on Plasma Science and Technology (Plasma-2006)**, MNIT, Jaipur December 19-22, 2006
19. Upadhyaya B.N.  
Applications of high power solid-state lasers in nuclear field  
**6<sup>th</sup> DAE-BRNS National Laser Symposium**, RRCAT, December 8-11, 2006.
7. Bhaumik Indranil, Kumar Shailendra, Ganesamoorthy S., Karnal A.K., Gupta P.K. and Wadhawan V.K.,  
Single-crystal growth and photopyroelectric spectroscopy of LiTaO<sub>3</sub>
8. Biswal R., Nayak I.K. and Mittal J.K.,  
Beam characteristics of a copper HyBrID laser
9. Biswal R., Agrawal P.K., Nakhe S.V. and Mittal J.K.,  
Comparative performance studies between copper vapour and copper HyBrID laser
10. Biswas A.K., Ramagopal S.V.\*, Kumar S.\*, Bhagat M.S.\*, Premeisingh C.H. and Nath A.K.,  
Performance of high power transverse flow CO<sub>2</sub> laser with a Super-Gaussian graded phase mirror resonator

### C. Seminars / Conference Presentations

#### C1. National Laser Symposium, NLS-06, RRCAT, Indore, Dec. 5-8, 2006.

1. Abhinandan L., Benerji N.S., Varshnay N., Nundy U. and Bajaj P.N.\*,  
Selective photochemical reaction of <sup>32</sup>SF<sub>6</sub> with H<sub>2</sub>S on irradiation with a TEACO<sub>2</sub> Laser
2. Arora V., Singhal H., Naik P.A., Chakravarty U., Khan R.A., Chakera J.A. and Gupta P.D.,  
Hard x-ray spectroscopy of femtosecond laser produced plasma
3. Arora V., Singhal H., Naik P.A., Chakravarty U., Khan R.A., Chakera J.A., Jain R., Vora H.S. and Gupta P.D.,  
X-ray CCD camera based crystal spectrograph for x-ray spectroscopy of laser produced plasmas
4. Benerji N.S., Varshnay N., Sarangpani K.K., Abhinandan L. and Nundy U.,  
A repetitively pulsed pulser-sustainer transversely excited CO<sub>2</sub> Laser
5. Bhatnagar P., Mukherjee C. and Nundy U.  
KrF Excimer laser induced quarter micron periodic structure on polymer surface
6. Bhatt R., Ganesamoorthy S., Bhaumik Indranil, Karnal A.K. and Gupta P.K.,  
Top seeded solution growth of stoichiometric LiNbO<sub>3</sub> single crystals
11. Bundel H.R. and Navathe C.P.,  
A flashlamp current monitoring system for two-beam Nd: glass laser chain
12. Chakravarty U., Naik P.A., Srivastava H., Mukherjee C., Tiwari M.K., Singhal H., Arora V., Chakera J.A., Nandedkar R.V., Gupta P.D. and Ganeev R.A.\*,  
Nano-particle formation in vacuum using sub-nanosecond laser pulse
13. Choubey A., Agrawal D.K., Tiwari A., Vishwakarma S.C., Jai R.K., Upadhyaya B.N., Nath A.K.,  
Laser based cutting of inclined slots in copper for microwave antenna and coupler applications
14. Choubey A., Upadhyaya B.N., Vishwakarma S.C., Agrawal D.K., Ali S., Jain A.K. and Nath A.K.,  
Real-time focus control in material processing with fiber coupled solid-state lasers
15. Das K., Uppal A. and Gupta P. K.,  
Hyper-Rayleigh scattering and continuum generation of salt induced aggregates of Silver nanoparticles: the effect of cation size (Li<sup>+</sup>, Na<sup>+</sup>, NH<sub>4</sub><sup>+</sup>).
16. Dasgupta R., Ahlawat S., Uppal A., and Gupta P. K.,  
Sorting and Guiding of microscopic objects with evanescent optical field
17. Dixit V.K., Ganguli Tapas, Singh S.D., Pal Suparna, Kumar Ravi, K. Alexander, Kuruvilla Antony, Upadhyaya B.N., Sharma T.K. and Nath A.K.,  
Laser diode processing using shadow mask techniques: a quick turn around method



18. Dixit V.K., Ganguli T., Singh S.D., Pal S., Kumar Ravi, Porwal S., K. Alexander, Sharma T.K., and Nath A.K., Studies on carrier doping of laser diode structures grown using MOVPE
19. George J., Sehgal R. and Nath A.K., Demonstration of 3.4mW SLM UV Laser at 266nm by resonant cavity doubling of diode pumped Nd:YVO<sub>4</sub>/KTP Green Laser
20. Gupta C., Mudgal N.I, Porwal S., Sharma T.K., Bhanage V., Khatwani H. and Nath A.K., Development of automation software for LI characterization facility for laser diode
21. Jagdheesh R., Singh Nageshwar, Ganesh P., Bhagat M.S., Kumar Harish, Kaul R., Vora H.S. and Nath A.K., Influence of active flux on plasma during laser welding of type 304 stainless steel
22. Jain B. and Das K., Fluorescence resonance energy transfer between DPH and Nile Red in a lipid bilayer
23. Jayabalan J., Singh A., Chari R. and Oak S.M., Optimization of white light continuum in the spectral range 500-700 nm
24. Joshi M.P., Rajmohan S., Jain B., Dhama T.S. and Tiwari S.K., On the origin of dual band emission from UV exposed TPD solution
25. Kamal C., Chakrabarti A. and Nath A.K., In search of zeta phase in the cation-rich (001) surface of III-V Phosphides
26. Khanwalkar J., Arya R. and Nath A.K., LCC resonant converter based power supply for high power diode laser
27. Khatak B.Q., Ram Shankar P., Singh N. and Jain A.K., Precise concentration determination of Rhodamine 6G in Dye-Ethylene Glycol system used in Dye lasers by UV-Vis-Spectrophotometer
28. Kheraj V.A. \*, Patel P.K. \*, Panchal C.J. \* and Sharma T.K., Automation of Laser diode characterization facility
29. Krishnan S. \*, Hange V.P. \*, Bindra K.S. and Oak S.M., Development of a battery operated handheld power meter for a cw and pulsed femto second laser
30. Kulkarni A.P., Kamath M.P., Joshi A.S., Tripathi P.K., Jain Shashi and Gupta P.D., Second harmonic conversion of large diameter Nd: Glass laser beam in quadrature
31. Kulkarni A.P., Kumbhare M.N., Kamath M.P., Joshi A.S., Gupta P.D., Balkrishnaiah R. \* and Jayashankar C.K. \*, Measurement of intensity dependent refractive index of flourophaste glass
32. Kumar Ravi, Porwal S., Sharma T.K., Singh S.D., Dixit V.K., Ganguli T. and Nath A.K., High-resolution X-Ray diffraction and photoluminescence correlation as an accurate and nondestructive evaluation technique for InGaAs/GaAs quantum well structures
33. Kumar S., Arya R., Kumar M., Nath A.K., Better handling of reverse recovery charge of switching diode in pulsed power supply for flash lamp pumped solid state Lasers
34. Kumbhare M.N., Pareekh R., Joshi A.S., Mukherjee C., Rajeev K. and Gupta P.D., Effect of oil vapour contamination on the performance of porous silica anti-reflection coatings on optical glass blanks used in high power Nd: glass Laser
35. Mahajan S., Ganesh P., Adhe K.N. \*, Kaul R., Kain V. \*, Prasad R.C. \*, Nath A.K., Laser surface melting of AISI 304 stainless steel for enhanced intergranular corrosion resistance
36. Manhas S., Swami M. K., Buddhiwant P., Ghosh N., Gupta P. K., Nine element Mueller matrix for tissue diagnosis
37. Mishra S.K. and Navathe C.P., A digital detection circuit for mode-locking of Ti-Sapphire laser
38. Mishra R.K., Nayak I. K., Nakhe S.V. and Mittal J.K., Development of semi-sealed off copper Bromide Laser operating on single-phase air cooled solid state pulsed power supply
39. Mudgal N., Sharma T.K., Porwal S. and Nath A.K., Software development for automation of spectroscopy experiments
40. Mukhopadhyay P.K., Sharma H. \*, Sharma S.K., Ranganathan K. and Nath A.K., Pulse parameter studies in a combined end-pumped Nd:YVO<sub>4</sub> and side-pumped Nd:YAG Q-switched laser



41. Mukherjee C., Joseph A.\* and Rajiv K.,  
Tunable thin film fabry-perot filter
42. Mahakud R., Prakash O., Dixit S.K., Gurram S., Vora H.S. and Nundy U.,  
Studies on the interference fringe stability formed by a bi-prism and UV beams of varying spatial coherence width generated from SHG of CVL radiations
43. Pal S., Dixit V.K., Singh S.D., Ganguli T., Kumar R., Porwal S., K. Alexander, Rawat P., Sharma T.K. and Nath A.K.,  
Processing of high power laser diode structures using photolithography and lift-off techniques
44. Patel H. S., Srivastava A., Gupta P. K.,  
A view-based approach for the reconstruction of optical properties of turbid media
45. Patidar R.K., Sharma A.K., Raghuramaiah M., Joshi R.A., Naik P.A. and Gupta P.D.,  
Spatial beam profile characteristic of chirped pulse amplification based Nd: glass table top terawatt laser system
46. Porwal S., Kumar Ravi, Sharma T.K., Singh S.D., Dixit V.K., Ganguli T. and Nath A.K.,  
Spectroscopic investigations of quantum well Laser structures
47. Prakash O., Mahakud R., Dixit S.K., Saxena P., Dubey V.K. and Nundy U.,  
Development of temperature sensor using UV CVL written (255 nm) fiber Bragg gratings
48. Rajiv K. and Mukherjee C.,  
Analysis of thin film based on spectrophotometric and ellipsometric measurements
49. Ram Shankar P., Khatak B.Q., Singh Nageshwar and Jain A.K.,  
Spectrophotometric characterisation of Rhodamine 6G dye used in Dye Lasers
50. Ranganathan K., Misra P., Hedao P. and Nath A.K.,  
Diode-end-pumped, conduction-cooled Nd:YAG slab Laser
51. Rao K.D., Verma Y. and Gupta P. K.,  
Optical coherence tomography. Also in KIRAN- A Bulletin of Indian Laser Association, vol. 17, no.3, p. 69-74, 2006
52. Reghu T., Saha D.D., Ittoop M.O. and Nath A.K.  
A 120kW S. M. P. P. S. for 10kW Transverse Flow CW CO<sub>2</sub> Laser
53. Reghu T., Pakhare J.S., Mandloie V., Gupta C., Sheth S. and Nath A.K.,  
A 50J Thyatron based pulsed power supply for T. E. A. CO<sub>2</sub> Laser
54. Saini V.K., Shrivastava V.K. and Khare R.,  
Observation of anomalous optogalvanic effect in negative glow region of a neon miniature indicator lamp
55. Sharma A.K., Naik P.A. and Gupta P.D.,  
Characteristics of cross-polarized autocorrelation of ultrashort laser pulses
56. Sharma S.K., Mukhopadhyay P.K., Hedao P., Ranganathan K. and Nath A.K.,  
Efficient generation of 100W green laser beam by intracavity frequency-doubling in a diode side-pumped Q-switched Nd:YAG rod Laser
57. Sharma T.K. et al,  
Development of high power quantum well lasers at RRCAT,  
Also in KIRAN- A Bulletin of Indian Laser Association, vol.17, no.3, p. 86, 2006
58. Shrivastava B.B., Bhatnagar P. and Nundy U.,  
Beam homogenization of XeCl Excimer Laser
59. Singh A., Jayabalan J., Mukhopadhyaya P.K., Nath A.K., Chari R. and Oak S.M.,  
Transformation of silver nanodiscs by laser photolysis
60. Singh B., Ansari M.S. and Navathe C.P.,  
Electronic control unit for optical parametric chirped pulse amplification based Laser system
61. Singh B., Daulatabad S.R., Subramaniam V.V. and Chakraborty A.,  
Hybrid resonator for kinetically-enhanced copper vapor laser
62. Singh B., Subramaniam V.V., Daulatabad S.R. and Chakraborty A.,  
120 watt compact and efficient single stage KE-CVL MOPA system
63. Singh B., Subramaniam V.V., Daulatabad S.R. and Chakraborty A.  
94 watt compact and efficient advanced copper vapor laser (KE-CVL) system



64. Singh B., Subramaniam V.V., Daulatabad S.R., Ghodke D.V. and Chakraborty A.,  
Use of multiple dot mirrors in copper vapor laser stable resonator - A new cavity configuration
65. Singh B., Subramanyam V.V., Ghodke D.V., Chaube R., Daulatabad S.R. and Chakraborty A.,  
60 watt copper vapour laser using admixture of neon and hydrogen
66. Singh C.P., Bindra K.S. and Oak S.M.,  
Measurement of nonlinear refraction of various solvents under femtosecond pulse excitation
67. Singhal H., Naik P.A., Arora V., Chakravarty U., Raghuramaiah M., Khan R.A., Kumbhare S.R., Chakera J.A., Gupta P.D. and Ganeev R\*,  
Surface harmonic generation using femtosecond radiation with variable chirp
68. Singhal H., Naik P.A., Chakravarty U., Arora V., Chakera J.A., Khan R.A., Raghuramaiah M., Kumbhare S.R., Gupta P.D. and Ganeev R.\*,  
High order harmonic generation from plasma plumes: tuning of the harmonic wavelength by varying the chirp of the laser pulse
69. Singh S., Krishnan S., Ray A., Tiwari V.B., Rawat H.S. and Mehendale S.C.,  
Development of low level photo-detector
70. Singh S.D., Sharma T.K., Ganguli T., Dixit V.K., Porwal S., Kumar Ravi, Nath A.K.,  
A photo-luminescence study of heteroepitaxial InP layers on Si substrate grown by metal organic vapor phase epitaxy
71. Swami M. K., Manhas S., Buddhiwant P., Ghosh N., Uppal A., Gupta P. K.,  
Quantitative tissue polarimetry using 3x3 Mueller matrix.
72. Upadhyaya B.N., Chaturvedi U., Kuruvilla A. and Nath A.K.,  
Realization of a 2.5 watt diffraction-limited narrow line-width all-fiber Yb-doped CW fiber laser
73. Upadhyaya B.N., Vishwakarma S.C., Jain R.K., Choubey A., Sah S.K., Agrawal D.K., Ali S. and Nath A.K.,  
Development of in-situ laser cutting technique for high pressure feeder coupling studs in pressurized heavy water reactors
74. Upadhyay J. and Navathe C.P.,  
High voltage pulse generators for laser plasma experiments
75. Valecha A., Bhanage V. and Bhujle A.G.,  
Data acquisition system for optical densitometer
76. Vishwakarma S.C., Upadhyaya B.N., Sah S.K., Choubey A., Agrawal D.K., Jain R.K. and Nath A.K.,  
Development of an electronically controlled fiber-optic port selection technique for high power solid-state lasers

**C2. Indian Particle Accelerator Conference, InPAC-06, BARC/TIFR, November 1-4, 2006**

1. Akashdeep, Joshi D.K., Banerji A. and Kotaiah S.  
Optical transition radiation (OTR) study and feasibility of its applications in diagnostics of TL-1, TL-2 and TL-3 at RRCAT
2. Badapanda M.K., Rajput V., Basak S., Tyagi R. and Hannurkar P.R.  
Crowbarless solid state modular HV power supply
3. Bagduwal P. S., Tiwari N., Buhari S.J., Lad M. and Hannurkar P.R.  
Indus-1 RF circular bias control system
4. Bohrey A., Lad M., Hannurkar P.R. and Kotaiah S.  
Optimization of frequency tuning system for Indus-2 RF cavity
5. Dutta S., Rao K.V.S.R., Murthy V. Madhu, Dwivedi J., Bapna S.C. and Shrivastava P.  
Monitoring and improvements in injector microtron
6. Jain A., Sharma D. Kumar and Hannurkar P.R.  
Solid state RF amplifier development at 350 and 700 MHz
7. Jain M. K., Deo R. K., Hannurkar P. R. and Kotaiah S.  
WR2300 waveguide based RF Power splitter for realizing MW RF Load
8. Jain V., Kulshreshtha P.K., Mundra G., Karmarkar M.G. and Kotaiah S.  
Development of efficiently cooled drift tubes for high energy SFDTL RF cavities
9. Koli M., Borage M., Tiwari S. and Kotaiah S.  
DC power supplies for CUTE-FEL beamline magnets
10. Kulkarni N., Prasad M, Mishra D. and Hannurkar P.R.  
3D simulation studies on dipole mode suppressor road in radio frequency quadrupole





11. Kulkarni N., Prasad M., Mishra D. and Hannurkar P.R.  
Tuning port simulation studies on a RFQ
12. Kulkarni N., Mishra D., Prasad M. and Hannurkar P.R.  
Field tuning studies with MAFIA for a RFQ
13. Kumar Abhay and Mishra S.\*  
Dynamic analysis of new Indus-1 RF cavity
14. Kumar Abhay, Petwal V.C., Rao Nageshwar J., Pareek P., Gaud V. and Bapna S.C.  
Qualification of scanning system for electron beam radiation processing facility
15. Kumar A., Senecha V.K. and Kotaiah S.  
Computer simulations to design H<sup>-</sup> ion source
16. Kumar Mukesh, Banerji A. and Kotaiah S.  
Simulation of electrode assembly of INDUS-2 BPI
17. Kumar Rajiv, Tiwari A. K. and Hannurkar P. R.  
Study of variation of gap parameters in Klystron cavities
18. Kumar Ramesh, Mishra D., Prasad M. and Hannurkar P.R.  
Engineering Design of 500 kW CW collector
19. Mishra D., Prasad M., Kulkarni N. and Hannurkar P.R.  
2D simulation study of 4.5 MeV, 350 MHz RFQ
20. Mishra D., Prasad M. and Hannurkar P.R.  
Design of low Beta reentrant superconducting cavity
21. Mundra G., Jain V., Karmarkar M. and Kotaiah S.  
Design and fabrication of a eccentric wheels based motorised alignment mechanism for cylindrical accelerator components
22. Murthy V. M., Dwivedi J., Goswami S.G. Soni H.C., Durand M. H.\* and Quesnel J.P.\*  
Manufacturing and QA of adaptors for LHC
23. Nathwani R.K., Tyagi Y., Joshi D.K., Banerji Anil, Puntambekar T.A. and Kotaiah S.  
Development of beam position stability measurement setup for INDUS-1
24. Pant K.K., Biswas, B., Gupta S., Mehra P., Kale U., Krishnapogal S., Kumar A., Kumar V., Lal S. and Chouksey S.  
Status report on the FEL project at RRCAT
25. Petwal V.C., Rao J.N., Kaul A., Bapna S.C., Mulchandani J.K., Wanmode Y., Pandiyar M., Srivastava P., Jain Akhilesh and Hannurkar P.R.  
Characterization of 10 MeV electron LINAC for radiation processing
26. Pramod R., Kasliwal A., Kuksanov N.K.\* and Bapna S.C.  
Electron beam experiments for qualification of 2.5 MeV/100 kW air-core transformer type industrial accelerator
27. Prasad M., Mishra D., Kulkarni N. and Hannurkar P.R.  
Beam dynamics design and error analysis of 4.5 MeV RFQ
28. Prasad M., Pandiyar M., Kumar R., H. G. Singh and P. R. Hannurkar  
Design of electron Gun for 250 kW CW Klystron,
29. Prasad M., Mishra D. and Hannurkar P. R.  
Design and HOM study of Indus-1 RF cavity
30. Prasad M., Mishra D., Kulkarni N. and Hannurkar P.R.  
Design optimization of 100 MeV SFDTL
31. Ratnakala K.C., Tiwari S.K., Shukla S.K. and Kotaiah S.  
Characterisation of Titanium sublimation pumps used in Indus-2
32. Singh G., Rahim Abdul, Banerji A., Barpande K., Bhatnagar V., Bhujle A.G., Fakhri A.A., Fatnani P., Ghodke A.D., Hannurkar P.R.  
Indus-2: machine performance & Improvement Studies
33. Tyagi Y., Banerji A. and Kotaiah S.  
Analysis of INDUS-2 beam position indicators calibration data
34. Wanmode Y., Shrivastava P. and Hannurkar P.R.  
An S-band loop type dual directional coupler development
35. Yadav D.P., Shroman R. and Shukla S.K.  
Development of RF-shield for bellows in UHV system of Indus-2

### **C3. 21st National Symposium on Plasma Science and Technology (Plasma-2006), MNIT, Jaipur, Dec. 19-22, 2006.**

1. Arora V., Singhal H., Naik P.A., Chakera J.A., Chakravarty U., Khan R.A. and Gupta P.D.,  
Study of thermal and non-thermal x-rays from femtosecond laser produced plasma



2. Chakravarty U., Naik P.A., Srivastava H., Tiwari M.K., Arora V., Singhal H. and Chakera J.A., Nandedkar R.V., Gupta P.D., Rysanyansky A.I.\* and Ganeev R.A.\*,  
A comparative study of indium nanoparticles formed by laser ablation in vacuum and in liquids
3. Kumar Atul and Sharma R.P.,  
Excitation of ion acoustic wave by cross focusing of two laser pulses at relativistic power and particle acceleration
4. Moorti A., Rao B.S., Naik P.A. and Gupta P.D.,  
Low-jitter laser-triggering of a 10 cm long capillary discharge plasma channel
5. Rao B.S., Naik P.A., Khan R.A. and Gupta P.D.,  
Angular distribution of hard x-rays produced from intense laser-solid interaction
6. Singhal H., Arora V., Naik P.A., Chakravarty U., Chakera J.A., Raghuramaiah M., Khan R.A., Kumbhare S.R., Gupta P.D. and Ganeev R.A.\*,  
On the use of ionization induced self defocusing for efficient harmonic generation from plasma plume
7. Singhal H., Arora V., Naik P.A., Chakravarty U., Chakera J.A., Raghuramaiah M., Kumbhare S.R., Khan R.A., Gupta P.D. and Ganeev R.A.\*,  
Enhancement and extinction of single harmonic intensity of high order harmonics
4. Dasgupta R., Ahlawat S., and Gupta P. K.,  
Trapping of micron sized objects near a free liquid surface.
5. Jayabalan J., Singh M. P. and Rustagi K.C.,  
Shape induced nonlinearities in metal nanoparticles
6. Joshi M.P., Raj Mohan S., Tiwari S.K., Dixit V.K. and Dhami T.S.,  
Improved transport and injection of holes using photo-oxidized TPD
7. Kamal C. and Chakrabarti A.,  
Electronics structure of small carbon and silicon nanotubes
8. Patel H. S., Srivastava A. and Gupta P. K.,  
Imaging through turbid media using frequency domain photon migration: effect of object contrast on reconstruction.
9. Sharma A.K., Raghuramaiah M., Patidar R.K., Naik P.A. and Gupta P.D.,  
A tilted pulse-front autocorrelator for spatial-temporal distortion measurements in ultrashort pulse laser beam
10. Sharma M., Verma Y., Rao K.D., Nair R. \* and Gupta P.K.,  
Imaging growth dynamics of tumour spheroids using optical coherence tomography.
11. Singh C.P., Bindra K.S. and Oak S.M.,  
Effect of optical pulse characteristics on analysis of reverse saturable absorption
12. Singh S.D., Ganguli T., Kumar Ravi, Dixit V.K., Porwal S., Sharma T.K., Srivastava H. and Nath A. K.,  
Mosaic structure of heteroepitaxial InP/Si analysed by high resolution x-ray diffraction
13. Srikanth G. and Nath A.K.,  
Inscription of fiber Bragg grating arrays in fibers for distributed fiber optic sensors using a biprism: Analysis
14. Upadhyaya B.N., Chaturvedi U., Kuruvilla A., Shenoy M.R., Thyagarajan K.\* and Nath A.K.,  
Development and simulation of a kilowatt level peak power Q-switched Yb-doped fiber laser
15. Verma Y., Rao K. D., Suresh M. K. \*, Patel H. S. and Gupta P. K.,  
Non-invasive measurement of graded refractive index profile of Zebra fish lens in-vivo using optical coherence tomography.

**C4. 8<sup>th</sup> International Conference on Optoelectronics, Fiber Optics and Photonics (Photonics 2006), University of Hyderabad, Hyderabad, December 13-16, 2006.**

1. Buddhiwant P., Swami M. K., Manhas S., Ghosh N., and Gupta P. K.,  
A Fourier transform based approach for determination of size and refractive index of red blood cells from light scattering measurements.
2. Chari R., Suvith V.S.\* and Oak S.M.,  
Ultrashort pulse laser stability monitoring using fibre nonlinearity
3. Chaubey S., Joshi P., Kishore J., Kumar M., Nath A.K. and Kher S.,  
Highly sensitive in-fibre long period grating for temperature monitoring



## C5. Other Seminars / Conference Presentations

1. Ahlawat S., Dasgupta R. and Gupta P. K.,  
Laser assisted formation of three-dimensional colloidal cluster near a charged surface and its long range trapping action.  
**Saratov Fall Meeting**, Saratov, Russia. September 26-29, 2006
2. Alsous M.B.\*, Mukhopadhyay P.K. and Nathan T.P.S.  
Study of simultaneous Q-switching and modelocking in a solid state laser with saturable absorber  
**Proc. SPIE**, vol. 6054, 9, p. 60540A-1-3, 2006
3. Bhawsar V. and Arya R.,  
Micro-controller based reference waveform generator for Nd:YAG Laser  
**National Symposium of Instrumentation (NSI-31)**, MITS, Gwalior, October, 12-15, 2006
4. Chaube R. and Singh B.,  
Thermo - mechanical analysis of a copper vapor laser  
**Proceeding of National conference on Trends Advances in Mechanical Engineering TAME**, Dec 9-10, 2006, p. 147-151
5. Ding Y.\*, Emma P.\*, Huang Z.\* and Kumar V.,  
Optical klystron enhancement to SASE x-ray FELs  
**Proceedings of FEL Conference**, vol. 29, 2006
6. Dixit V.K., Sharma T.K., Ganguli T., Singh S.D., Kumar R., Porwal S., Nath A.K., Karmakar B.\*, Shah A.P.\* and Arora B.M.\*,  
Transport properties of two dimensional electron gas for  $Al_{0.4}Ga_{0.6}As/GaAs$  heterojunction  
**51<sup>st</sup> Department of Atomic Energy Solid State Physics Symposium**, Bhopal, Dec. 26-30, 2006.
7. Dubey V. K., Saxena P., Sharangpani K.K. and Vora H.S.,  
EMI immune precision analog signal transmitter unit for CVL System  
**National Symposium on Instrumentation NSI-31**, Institute of Technology & Management, Gwalior, Oct. 12-15, 2006
8. Ghosh N., Uppal A., Majumder S. K., and Gupta P. K.,  
Monitoring of UVA-induced apoptosis in MCF-7 cells by light-scattering measurements  
**Proc. SPIE**, vol. 6163, p. 616314, 2006
9. Gilankar S.G. and Kush P.K.,  
Status of indigenously developed closed cycle refrigerator based cryopump of 1000 Lit/s pumping speed  
**21<sup>st</sup> National Symposium on Cryogenics**, NPL, New Delhi, Nov. 22-24, 2006
10. Gupta P. K., Kush P.K. and Tiwari Ashesh,  
Some critical aspects of designing the J-T heat exchangers for helium liquefier / refrigerators  
**21<sup>st</sup> National Symposium on Cryogenics**, NPL, New Delhi, Nov. 22-24, 2006
11. Ingale A., Dixit V.K., Shukla V. and Mukherjee C.,  
Raman spectroscopy and structure : nano-porous GaP  
**International conference on Raman Spectroscopy (ICORS-06)**, Yokohoma, Japan, Aug. 20-25, 2006
12. Ingale A. and Ganguli T.,  
Electronic and phonon Raman scattering in ZnSe/GaAs near Eo gap  
**International conference on Raman Spectroscopy (ICORS-06)**, Yokohoma, Japan, Aug. 20-25, 2006
13. Jain V., Prasad M., Hannurkar P.R. and Kotaiah S.,  
Coupled field analysis of INDUS-2 cavity for different coolant temperatures to study frequency shift  
**Proceedings of NCFMFP2006 (33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics and Fluid Power)**, IIT Bombay, Dec. 06
14. Jayashankar C.K., Balkrishnaih R., Venkatramu V., Joshi A.S.\*, Spaghini A. and Bettinelli M.,  
Luminescence characteristics of  $Nd^{3+}$  doped K-Ba-Al fluorophosphates laser glasses  
**Sixth International Conference on F-Elements**, Polish Academy of Sciences, Worclaw, Poland , September 4-9, 2006
15. Joshi M.P., Raj Mohan S., Tiwari S.K., Dhama T.S., Shripathi T.\*, Deshpande U.P.\*, Singh M.K. and Ghosh H.,  
Broad-band visible emission from UV-exposed TPD solution  
**Asian Soc. For Information Display (ASID) Symposium**, New Delhi, 2006.
16. Joshi P.,  
Tellurite glass : a new host for fibre optic devices  
**National Symposium on Science & Technology of Glass/Glass-Ceramics**, BARC, Mumbai, Sept. 15-16, September 2006
17. Joshi P., Chaubey S., Kishore Jai, Kher S. and Nath A.K.,  
Glass fibre temperature sensors.  
**National Symposium on Science & Technology of Glass/Glass-Ceramics**, BARC, Mumbai, Sept. 15-16, 2006



18. Joshi P., Chaubey S., Naidu Aparna and Kher S.,  
Fibre optic sensors based on in-fibre gratings  
*National Conference on Sensors and Actuators: Emerging Technological Challenges (NCSA-06)*, Kolkata Dec. 21-22, 2006
19. Kak A. and Jain A.K.,  
Fabrication technique of vertical double walled crystal growth for KDP Crystals 15th National seminar of ISSG, IIT, Chennai, July 5-7, 2006.
20. Kak A. and Jain A.K.,  
Fabrication of sealed off copper bromide laser tube for dye laser pumping  
*15<sup>th</sup> National seminar of ISSG*, IIT, Chennai, July 5-7, 2006.
21. Kamal C. and Chakrabarti A.,  
Study of electronic and geometric structure of ultra-small nanotubes of semiconducting materials  
*International Conference on Laser and Nanomaterials (ICLAN)*, Nov 30 -Dec 2, 2006 Calcutta University, Kolkata
22. Kamalesh Kumar B.\*, Lakshminarayana A., Kulgod S.V.\* and Deshpande P.P., Palod S., Singh V.P., and Hemantha Rao G.V.S.\*,  
Vision systems for inspection of nuclear fuel components,  
*Proceed. NDE2006*, Hitec City, Hyderabad, Dec 2006.
23. Kaul Rakesh, Ganesh P., Singh N., Jagdheesh R., Bhagat M.S., Tiwari P., Kumar H., Verma A.\*, Pawan R.\*, Vora H.S. and Nath A.K.,  
Active flux laser beam welding of austenitic stainless steel sheets,  
*National Welding Seminar*, Chennai, 2006.
24. Khardekar R.K.,  
Novel hydrogen technologies: a review *International Workshop on Hydrogen Energy, HS-II*, University of Rajasthan Jaipur, Nov. 5-9, 2006.. India
25. Khare J., Kaul R., Ganesh P., Kumar Harish, Jagdheesh R. and Nath A.K.,  
Laser beam shaping for micro-structural engineering during laser surface melting,  
*National Welding Seminar*, Chennai, 2006.
26. Kohli D.K., Khardekar R.K. and Singh R.,  
Glass micro-container based hydrogen storage scheme  
*International Workshop on Hydrogen Energy*, Nov. 5-9, 2006. University of Rajasthan Jaipur.
27. Krishnagopal S., Biswas B., Chouksey S., Gupta S.K., Kale U., Kumar A., Kumar V., Lal S., Mehta P., Nerpagar P. and Pant K.K.,  
FEL activities in India'  
*Proceedings of FEL Conference*, vol. 496, 2006
28. Kumar Rajiv, Tiwari A. K. and Hannurkar P. R.,  
3D Simulation of a Re-entrant Cavity with Tunability,  
*National Symposium on Vacuum Electron Tubes & Devices*, Oct. 2006
29. Kumar V. and Kim Kwang-Je,  
Optimization of parameters of Smith-Purcell BWO',  
*Proceedings of FEL Conference*, vol. 67, 2006
30. Kumar V. and Kim Kwang-Je,  
Analysis of Smith-Purcell BWO with end reflections,  
*Proceedings of FEL Conference*, vol. 71, 2006
31. Manhas S., Swami M. K., Buddhiwant P., Ghosh N., Gupta P. K. and Singh K.\*,  
Muller matrix approach for determination of optical rotation in chiral turbid media in backscattering geometry,  
*Proc. SPIE*, vol 6163, p. 61630W, 2006
32. Mohanty S., Mohanty K. and Gupta P. K.,  
RBCs under optical tweezers as cellular motors and rockers: microfluidic applications,  
*Proc. SPIE*, vol. 6326, p. 63262E, 2006
33. Mukherjee C., Joseph A., Rajiv K. and Nundy U.,  
Design and development of tunable thin film febry perot filters,  
*8<sup>th</sup> International Conference on Optoelectronics, Fiber Optics & Photonics (Photonics 2006)*, Hyderabad, Dec. 13-16, 2006
34. Nautiyal\*, Bindra K.S., Oak S.M. and Bisht P.B.\*,  
Generation of tunable femtosecond pulses with the noncollinear optical parametric amplifier fabricated at IIT Madras  
*National Conference on Progress on Tunable lasers for Ultrafast Process and Applications*, IIT Madras, Chennai, Dec. 21-22, 2006
35. Prakash Om, Mahakud R., Dixit S.K. and Nundy U.,  
Role of spatial coherence of UV beam ( 255 nm ), in C-Band Fibre Bragg Grating writing  
*Optics & Photonics Conference*, San Diego, California, Aug. 13-17, 2006



36. Rawat A., Vyavahare P.D.\* and Ramani A.K.\*, Enhanced DSR with secured multi-path route discovery and concurrent data transmission  
**14<sup>th</sup> International Conference on Advanced Computing and Communication (ADCOM 2006)**, NIT Surathkal, 20-24 December 2006.
37. Saxena P., Vora H.S., Mishra G.K., Abhinandan L., Narassimha Rao K.\* and Nundy U., Design and evaluation of feedback control for stability of a metal vapour laser  
**International Conference on Lasers and Nanomaterials ICLAN**, Univ. of Calcutta, Nov. 30-Dec.2, 2006
38. Shaeb K.H.B., Sharma V.K., Chattopadhyay M.K. and Roy S.B., Large magnetoresistance in the ferromagnetic shape memory alloy Ni<sub>54</sub>Fe<sub>19</sub>Ga<sub>27</sub> Proceedings of the **DAE Solid State Physics Symposium**, vol. 51, p. 873, 2006
39. Sharma A, Panwar C.B., Arya R. and Nath A.K., Design of a high frequency SMPS powering laser diode  
**National Symposium of Instrumentation (NSI-31)** MITS, Gwalior, October 12-15, 2006
40. Sharma D.K., D.K. Jain D.K. and Hannurkar P. R., Supervisory-control system for 10MeV Electron LINAC  
**Conference of Indian society of instrumentation (NSI-31)** Oct 2006.
41. Sharma V.K., Chattopadhyay M.K., Majumdar S. and Roy S.B., Magnetization study of ferromagnetic shape memory alloy Ni<sub>54</sub>Fe<sub>19</sub>Ga<sub>27</sub> Proceedings of the DAE **Solid State Physics Symposium**, vol. 51, p. 833, 2006
42. Singh I.J., Rao J.P., Sharangpani K.K, Vora H.S. and Nundy U. Scalable audio visual annunciator for laser parameter  
**National Symposium on Instrumentation NSI-31**, Institute of Technology & Management, Gwalior, Oct. 12-15,2006
43. Swami M. K., Manhas S., Buddhiwant P., Ghosh N., Uppal A., and Gupta P.K., Quantitative tissue polarimetry using 3x3 Mueller matrix.  
**Saratov Fall Meeting**, Saratov, Russia, September 26-29, 2006.
44. Tiwari A.K., Kumar R. and Hannurkar P. R. Simulation of a multibeam Klystron Cavity  
**National Symposium on Vacuum Electron Tubes & Devices**, Oct. 2006
45. Yakovenko A.A. \*, Kinnibrugh T.L. \*, Kosilkin I.V. \*, Lu Y. \*, Dube A., Rybalkina EY. \*, Sammeth D.M. \*, Antipin M.Y. \* and Timofeeva T.V. \*, Structure and properties of cytotoxic arylidenepiperidones.  
**The 19<sup>th</sup> Rocky Mountain Meeting of American Chemical Society**, Oct. 14-18, 2006, Tucson, AZ, USA

Note : Authors with '\*' mark are from other institutions

#### Seminars at RRCAT during July 2006 to Dec. 2006

1. Closed orbit correction and orbit stabilization scheme for the 6 GeV Synchrotron Light Source PETRA III, by G.K. Sahoo, DESY, Hamburg, Germany, on 13-7-2006
2. Eye injuries and their prevention by Dr. S.K. Parwani, CHRC, Indore, on 3-8-2006
3. Inelastic scattering of hard x-rays: measuring phonons and electronic excitations by Prof. Abhay Shukla, University of Pierre et Marie Curie, Paris, on 7-8-2006
4. Cars and roads in the CELL city by Dr. M.P. Singh, LPAS, RRCAT, on 21-9-2006
5. Microstructural engineering of type 304 stainless steel through laser surface melting for enhanced intergranular corrosion resistance, by Rakesh Kaul, ICLS, RRCAT, on 9-11-2006
6. Gas phase photoionisation experiments at Indus-1 by Dr. Bhas Bapat, PRL, Ahmedabad, on 23-11-2006
7. Compact ultrafast terahertz Free Electron Laser by Dr. K K Pant, RRCAT, on 30-11-2006
8. First principles electronic structure and design of materials for spintronic applications by Dr. Indra Dasgupta, IIT, Mumbai, on 12-12-2006
9. Static speckle experiments with white synchrotron radiation by T. P.Sant, Univ. of Siegen, Germany, on 21-12-2006
10. Bremsstrahlung x-ray dosimetry studies at high energy electron accelerator environments for personnel protection by G. Haridas, RRCAT, on 28-12-2006