



A. Journal Articles

1. Ajimsha R.S., Das A.K., Singh B.N., Misra P., Kukreja L.M.  
Correlation between electrical and optical properties of Cr:ZnO thin films grown by pulsed laser deposition  
*Physica B: Condensed Matter* **406**, 4578-83 (2011)
2. Arora V., Singhal H., Naik P.A., Gupta P.D.  
Conversion efficiency and spectral broadening of the K- $\alpha$  line emitted from planar titanium targets irradiated with ultra-short laser pulses of high intensity  
*Journal of Applied Physics* **110**, 083305-8 (2011)
3. Bhatt R., Ganesamoorthy S., Bhaumik I., Karnal A.K., Bhagavannarayana G.\*, Gupta P.K.  
Effect of annealing in Li-rich ambient on the optical absorption and crystallinity of Er doped LiNbO<sub>3</sub> crystals  
*Journal of Optoelectronics and Advanced Materials* **13**, 245-250 (2011)
4. Bhaumik I., Kumar S., Ganesamoorthy S., Bhatt R., Karnal A.K., Raja sekhar B.N.  
Resonant Raman scattering in single crystal of congruent LiTaO<sub>3</sub>: effect of excitation energy  
*Solid State Communications* **151**, 1869-1872 (2011)
5. Bhaumik I., Bhatt R., Ganesamoorthy S., Saxena A., Karnal A.K., Gupta P.K., Sinha A.K., Deb S.K.  
Temperature-dependent index of refraction of monoclinic Ga<sub>2</sub>O<sub>3</sub> single crystal  
*Applied Optics* **50**, 6006-6010 (2011)
6. Biswal R., Mishra G.K., Purbia G.S., Agrawal P.K., Prakash O., Dixit S.K., Mittal J.K.  
A comparative study on thermal lensing characteristics of low (500 C) and high (1500 C) temperature variants of copper vapor laser  
*Optical Engineering* **50**, 084202-8 (2011)
7. Chatterjee S., Pavan Kumar Y.  
Measurement of the surface profile of an axicon lens with a polarization phase-shifting shearing interferometer  
*Applied Optics* **50**, 6057-6062 (2011)
8. Chattopadhyay M.K., Sharma V.K., Chouhan A., Arora P., Roy S.B.  
Combined effect of hydrostatic pressure and magnetic field on the martensitic transition in Ni<sub>49</sub>CuMn<sub>34</sub>In<sub>16</sub> alloy  
*Physical Review B* **84**, 064417-9 (2011)
9. Devadas K.M.\*, Rahul S.\*, Thomas S.\*, Varghese N.\*, Vinod K.\*, Syamaprasad U.\*, Pradhan S.\*, Chattopadhyay M.K., Roy S.B.  
Transport properties of sealed MgB<sub>2</sub>/Fe/Ni multifilamentary wires heat treated in air  
*Journal of Alloys and Compounds* **509**, 8038-8041 (2011)
10. Dhamgaye V.P., Lodha G.S., Kane S.R.  
Beam position measurements of Indus-2 using x-ray beam position monitor  
*Nuclear Instruments and Methods in Physics Research A* **659**, 525-527 (2011)
11. Gaur A.\*, Gaur P.\*, Sharma D.\*, Sharma D.K.\*, Singh N., Malik B.P.\*  
Study of transmittance dependence closed-aperture Z-scan curves in the materials with nonlinear refraction and strong absorption  
*Optik*, (2011)
12. Ghodke D.V., Chatterjee K.\*, Fernandes B.\*  
Modified soft switched three-phase three level, Dc-Dc converter for high power applications having extended duty cycle range  
*IEEE Transactions on Industrial Electronics* **99**, (2011)
13. Gupta Pooja, Gupta A.\*, Shukla A.\*, Ganguli T., Sinha A.K., Principi G.\*, Maddalena A.\*  
Structural evolution and the kinetics of Cu clustering in the amorphous phase of Fe-Cu-Nb-Si-B alloy  
*Journal of Applied Physics* **110**, 033537 (2011)
14. Gupta P.D.  
Laser applications in Indian nuclear power programme.  
*Energy Procedia* **7**, 560-576 (2011)
15. Idir M.\*, Cywiak M.S.\*, Morales A. M.\* Modi M.H.  
X-ray optics simulation using Gaussian superposition technique  
*Optics Express* **20**, 19050-19060 (2011)
16. Jain B., Gupta P.K., Das K., Uppal A.  
Photodynamic action of rose Bengal silica nanoparticle complex on breast and oral cancer cell lines  
*Photochemistry and Photobiology* **87**, 1146-1151 (2011)
17. Jain S.\*, Jain D.\* Kumar Abhay  
Comparative evaluation of stress in canine retained mandibular overdentures with three attachment designs: a 3D finite element analysis  
*Journal of the Indian Dental Association* **5**, 791-793 (2011)



18. Jangir R., Ganguli T., Tiwari P., Porwal S., Srivastava H., Rai S.K., Khattak B.Q., Oak, S.M.  
Synthesis and characterization of Ga<sub>2</sub>O<sub>3</sub> nanostructures grown on GaAs substrates  
*Applied Surface Science* **257**, 9323-9328 (2011)
19. Jayabalan J.  
Origin and time dependence of higher-order nonlinearities in metal nanocomposites  
*Journal of the Optical Society of America B: Optical Physics* **28**, 2448-2455 (2011)
20. Khan A.F.\*, Yadav R.\*, Mukhopadhyaya P. K., Singh Sukhvir\*, Dwivedi Charu\*, Dutta V.\*, Chawla S.\*  
Core shell nanophosphor with enhanced NIR visible upconversion as spectrum modifier for enhancement of solar cell efficiency  
*Journal of Nanoparticle Research* **13**, 6837-6846 (2011)
21. Khandelwal A., Sharma V.K., Sharath chandra L.S., Arora P., Chattopadhyay M.K., Roy S.B.  
The magnetic properties across the martensitic transition in the Co<sub>38</sub>Ni<sub>34</sub>Al<sub>28</sub> alloy  
*Journal of Magnetism and Magnetic Materials* **323**, 1-6 (2011)
22. Kumar Shailendra, Mukherjee C., Dixit V.K., Singh S.D., Jha S.N.  
Ultraviolet photoelectron spectroscopy of nano In clusters Schottky barriers on sputtered InP  
*Applied Surface Science* **258**, 143-146 (2011)
23. Kuroda D.G.\*, Singh C.P., Peng Z.\*, Kleiman V.D.\*  
Exploring the role of phase modulation on photoluminescence yield  
*Faraday Discussions* **152**, (2011)
24. Lal Shankar, Pant K.K., Krishnagopal S.  
A novel scaling law relating the geometrical dimensions of a photocathode radio frequency gun to its radio frequency properties  
*Review of Scientific Instruments* **82**, 123304-10 (2011)
25. Lalasangi A.S.\*, Akki J.F.\*, Manohar K.G.\*, Srinivas T.\*, Raikar P.\*, Kher S., Raikar U.S.\*  
Highly sensitive cadmium concentration sensor using long period grating  
*Sensors and Transducers* **131**, 52-60 (2011)
26. Late D.J.\*, More M.A.\*, Sinha S.\*, Dasgupta K.\*, Misra Pankaj, Singh B.N., Kukreja L.M., Bhoraskar S.V.\*, Joag D.S.\*  
Synthesis and characterization of LaB<sub>6</sub> thin films on tungsten, rhenium, silicon and other substrates and their investigations as field emitters  
*Applied Physics A: Materials Science and Processing* **104**, 677-685 (2011)
27. Louie Frobel P.G.\*, Suresh S.R.\*, Mayadevi S.\*, Sreeja S.\*, Mukherjee C., Muneera C.I.\*  
Intense low threshold nonlinear absorption and nonlinear refraction in a new organic-polymer nanocomposite  
*Materials Chemistry and Physics* **129**, 981-989 (2011)
28. Mane M.L.\*, Dhage V.N.\*, Shirsath S.E.\*, Sundar R., Ranganathan K., Oak S.M., Jadhav K.M.\*  
Nd:YAG laser irradiation effects on electrical properties of polycrystalline Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub>  
*Journal of Alloys and Compounds* **509**, (2011)
29. Mane M.L.\*, Dhage V.N.\*, Ranganathan K., Oak S.M., Jadhav K.M.\*  
Influence of Nd:YAG laser irradiation on AC impedance and dielectric properties of lithium ferrite  
*Radiation Effects and Defects in Solids* **166**, 435-444 (2011)
30. Manekar M.A., Roy, S.B.  
Very large refrigerant capacity at room temperature with reproducible magnetocaloric effect in Fe<sub>0.975</sub>Ni<sub>0.025</sub>Rh  
*Journal of Physics D: Applied Physics* **44**, 242001-5 (2011)
31. Misra N.L.\*, Kumar S.S.\*, Dhara S.\*, Singh A.K., Lodha G.S., Aggarwal S.K.\*  
A comparative study on determination of uranium and thorium in their mixed oxides by EDXRF using tube and radioisotope X-ray sources  
*X-Ray Spectrometry* **40**, 379-384 (2011)
32. Nath S.K., Dhawan R., Rai S., Lodha G.S., Sokhey K.J.S.  
Structural and superconducting properties of ion beam sputtered Nb thin films and Nb/Cu bilayers  
*Physica C: Superconductivity and its Applications* **472**, 21-28 (2011)
33. Pandit P., Satapathy S., Sharma P.\*, Gupta P.K., Yusuf S.M.\*, Sathe V.G.\*  
Structural, dielectric and multiferroic properties of Er and La substituted BiFeO<sub>3</sub> ceramics  
*Bulletin of Materials Science* **34**, 899-905 (2011)
34. Parihar A.\*, Dube A., Gupta P.K.  
Conjugation of chlorin p 6 to histamine enhances its



- cellular uptake and phototoxicity in oral cancer cells  
*Cancer Chemotherapy and Pharmacology* **68**, 359-369 (2011)
35. Potukuchi P.N.\*, Sharath chandra L.S.\*, Chattopadhyay M.K., Kanjilal D.\*, Roy A.\*, Roy S.B.  
Superconducting properties of niobium after electron beam welding  
*Physical Review Special Topics - Accelerators and Beams* **14**, 1-9 (2011)
36. Pradhan G.K.\*, Deb S.K., Ganguli T.  
The phonon percolation scheme for alloys: extension to the entire lattice dynamics and pressure dependence  
*Japanese Journal of Applied Physics* **50**, 1-4 (2011)
37. Prakash O., Mahakud R., Dixit S.K.  
Comparative study on second harmonic conversion and saturation characteristics of three copper vapor laser beams of same average power and different spatial coherence  
*Optical Engineering* **50**, 114201 (2011)
38. Prakash O., Kumar J., Mahakud R., Saxena P., Dubey V.K., Dixit S.K., Mittal J.K.  
Influence of dye gain medium flow on the wavelength jitter and the drift of high repetition rate single axial mode dye lasers  
*Optics & Laser Technology* **43**, 1475-1481 (2011)
39. Prasad Y.B.S.R., Barnwal S., Naik P.A., Chakera J.A., Gupta P.D.  
Chirped pulse interferometry for time resolved density and velocity measurements of laser produced plasmas  
*Journal of Applied Physics* **110**, 023305 (2011)
40. Prasad Y.B.S.R., Barnwal S., Bolkhovitinov E.A.\*, Naik P.A., Kamath M.P., Joshi A.S., Kumbhare S.R., Rupasov A.A.\*, Gupta P.D.  
Study of self-generated magnetic fields in laser produced plasmas using a three-channel polaro-interferometer  
*Review of Scientific Instruments* **82**, 123506 (2011)
41. Rahul S.\*, Varghese N.\*, Vinod K.\*, Devadas K.M.\*, Thomas S.\*, Anees P.\*, Chattopadhyay M.K., Roy S.B., Syamaprasad U.\*  
Combined addition of nano diamond and nano SiO<sub>2</sub> an effective method to improve the in-field critical current density of MgB<sub>2</sub> superconductor  
*Materials Research Bulletin* **46**, 2036-2040 (2011)
42. Rai S.K., Das A., Srivastava A.K., Lodha G.S., Dhawan R.  
Ion beam sputter deposited W/Si multilayers: influence of re-sputtering on the interface structure and structure modification at ultra short periods  
*Applied Surface Science* **257**, 10704-10709 (2011)
43. Rai V.N., Rajasekhar Raja B.N., Tiwari P., Kshirsagar R.J.\*, Deb S.K.  
Spectroscopic studies of gamma irradiated Nd doped phosphate glasses  
*Journal of Non-Crystalline Solids* **357**, 3757-3764 (2011)
44. Ram S.P., Mishra S.R., Tiwari S.K., Mehendale S.C.  
Investigation of atom transfer using a red-detuned push beam in a double magneto-optical trap setup  
*Review of Scientific Instruments* **82**, 126108-3 (2011)
45. Rao S.B., Chakera J.A., Naik P.A., Kumar M., Gupta P.D.  
Laser wake-field acceleration in pre-formed plasma channel created by pre-pulse pedestal of terawatt laser pulse  
*Physics of Plasmas* **18**, 093104-10 (2011)
46. Saini R.K., Srivastava A.K., Gupta P.K., Das K.  
pH dependent reversible aggregation of Chitosan and glycol-Chitosan stabilized silver nanoparticles  
*Chemical Physics Letters* **511**, 326-330 (2011)
47. Satapathy S., Pawar S.\*, Gupta P.K., Varma K.B.R.\*  
Effect of annealing on phase transition in poly(vinylidene fluoride) films prepared using polar solvent  
*Bulletin of Materials Science* **34**, 727-733 (2011)
48. Saxena, P., Dubey, V.K., Singh I.J., and Vora, H.S.  
Programmable driver targets piezoelectric actuators  
*Electronics Design Strategy News* **45**, 45-47 (2011)
49. Selvamani R., Singh Gurvinderjit, Sinha A.K., Tiwari V.S.  
Oxidation state of chromium in (Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub>)<sub>(1-x)</sub> (BiCrO<sub>3</sub>)<sub>x</sub> solid solution; investigated by XAS and impedance spectroscopy  
*Journal of Materials Science* **47**, (2011)
50. Sharma A.K., Patidar R.K., Raghuramaiah M., Naik P.A., Gupta P.D.  
Simple electro-optic technique to generate temporally flat-top laser pulses  
*Optics Communications* **284**, 4596-4600 (2011)



51. Sharma P., Verma Y., Rao K.D., Gupta P.K.  
Single mode fiber based polarization sensitive optical coherence tomography using a swept laser source.  
*Journal of Optics* **13**, 115301-6 (2011)
52. Sharma T.K., Naveh D.\*, Towe E.\*  
Strain-driven light-polarization switching in deep ultraviolet nitride emitters  
*Physical Review B - Condensed Matter and Materials Physics* **84**, 035305-8 (2011)
53. Sharma V.K., Chattopadhyay M.K., Roy S.B.  
The effect of external pressure on the magnetocaloric effect of NiMnIn alloy  
*Journal of Physics Condensed Matter* **23**, 366001-11 (2011)
54. Sharma V.K., Najim M.\*, Srivastava A.K., Varma G.D.\*  
Structural and magnetic studies on transition metal (Mn, Co) doped ZnO nanoparticles  
*Journal of Magnetism and Magnetic Materials* **323**, 1-7 (2011)
55. Singh M.K., Banerjee A.  
Atomic-scale study of vapour growth morphology of crystalline urea  
*Crystal Research and Technology* **46**, 1035-1043 (2011)
56. Singh M.K., Banerjee A., Gupta P.K.  
Role of molecular orientation and surface relaxation on vapor growth shape of molecular crystals  
*Crystal Growth Design*, (2011)
57. Singh S.D., Porwal S., Srivastava A.K., Sharma T.K., Oak S.M.  
Effect of built-in electric field on the temperature dependence of transition energy for InP/GaAs type-II superlattices  
*Journal of Applied Physics* **110**, 123523 (2011)
58. Sinha G., Prabhu S.S.  
Force on a storage ring vacuum chamber after sudden turn-off of a magnet power supply  
*Physical review special topics - Accelerators and Beams* **14**, 102401-12 (2011)
59. Srivastava H., Tiwari P., Srivastava A.K., Rai S., Ganguli T., Deb S.K.  
Effect of substrate texture on the growth of hematite nanowires  
*Applied Surface Science* **257**, 1-7 (2011)
60. Tarafder A.\*, Annapurna K.\*, Chaliha R.S.\*, Karmakar B.\*, Tiwari V.S., Gupta P.K.  
Effects of nano-LiTaO<sub>3</sub> crystallization on the dielectric and optical properties in Er<sup>3+</sup>-doped Li<sub>2</sub>O Ta<sub>2</sub>O<sub>5</sub>SiO<sub>2</sub> Al<sub>2</sub>O<sub>3</sub> Glasses  
*International Journal of Applied Ceramic Technology* **8**, 1031-1041 (2011)
61. Towe E.\*, Sharma T.K.  
Shortwave semiconductor laser: lattice constant is key to group III-nitride-based UV light emitters  
*Laser Focus World* **47**, 52-54 (2011)
62. Tripathi S.\*, Mishra G.\*, Kumar Vinit, Chouksey S., Kumar Ravi  
Pulse requirements for field integral measurements in pulsed wire method  
*Nuclear Instruments and Methods in Physics Research A* **635**, 121-126 (2011)
63. Tyagi Y., Puntambekar T. A.  
An artificial neural network based method for beam position calculation in electron storage ring  
*Elixir Advanced Engineering Informatics* **38**, 4401-4403 (2011)
64. Tyagi Y., Puntambekar T. A., Saxena P., Tanwani S.\*  
Performance evaluation of noise reduction filters on electron beam images  
*Elixir Electrical Engineering* **40**, 5425-5429 (2011)
65. Uppal A., Jain Beena, Gupta P.K., Das K.  
Photodynamic action of rose Bengal silica nanoparticle complex on breast and oral cancer cell lines  
*Photochemistry and Photobiology* **87**, 1146-1151 (2011)
66. Verma D.K.\*, Rajan A., Rawat A.  
Achieving optimized utilization of data centre space and power resources through 3D visualization  
*International Journal of Graphics & Image Processing (IJGIP)* **1**, 12-16 (2011)
67. Verma Y., Gautam M., Divakar Rao K., Swami M.K., Gupta P.K.  
Imaging of human breast tissue using polarization sensitive optical coherence tomography  
*Laser Physics* **21**, 2143-2148 (2011)
68. Yadav R.P., Varde P.V.\*, Chauhan A., Fatnani P.  
Relay feedback-based critical parameter estimation for first order plus dead time type plant in networked control system configuration



*International Journal of Modeling, Simulation, and Scientific Computing* 2, 375-391 (2011)

### B. Invited Talk

1. Chatterjee Sanjib  
*International Conference on Trends in Optics and Photonics (ICONTOP 2011)*, Kolkata, Dec., 7-9, 2011
2. Chouksey S.  
Development of beamline radiation shielding hutch for Indus-2 synchrotron radiation source  
*Proceeding of Conference on Accelerator Radiation Safety (CARS2011)*, Mumbai, Nov., 16-18,
3. Gupta P.K.  
Biophotonics - an introduction  
*DST-SERC School: Lasers, Optical Engineering & Applications*, Kolkata, Dec., 26, 2011
4. Gupta P.K.  
Biophotonics - studies at RRCAT  
*Plenary talk at XXXVI OSI Symposium on Frontiers in Optics and Photonics (FOP 11)*, New Delhi, Dec., 3-5, 2011
5. Gupta P.K.  
Fluorescence spectroscopy for cancer diagnosis  
*National Fluorescence Workshop*, New Delhi, Nov., 15, 2011
6. Gupta P.K.  
Use of optical techniques to manipulate and probe cells intra-cellular objects  
*Indo- UK Workshop on Recent Trends in Nanophotonics*, New Delhi, Sept., 30, 2011
7. Gupta P.K.  
Biomedical applications of lasers  
*National Physical Laboratory*, New Delhi, Sept., 23, 2011
8. Gupta P.K.  
Optical manipulation and spectroscopic investigations on cells/intra-cellular objects  
*HCU-TIFR Discussion Meeting on Modern Optics*, Hyderabad, Aug., 1-3, 2011
9. Haridas G.  
Radiological safety research at Indus accelerator complex  
*Conference on Accelerator Radiation Safety (CARS2011)*, Mumbai, Nov., 16-18, 2011
10. Joshi A.S.  
Glasses for high power lasers  
*International Conference on Speciality Glass and Optical Fiber: Materials, Technology and Devices (ICGF 2011)*, Kolkata, Aug. 4-6, 2011
11. Joshi S.C.  
Present status of infrastructure facilities for SCRF cavity development  
*2<sup>nd</sup> International Workshop on Accelerator-Driven Sub-Critical Systems & Thorium Utilization*, Mumbai, Dec., 11-14, 2011
12. Kukreja L.M.  
Plasmonic properties of densely packed ensembles of gold nanoparticles grown by pulsed laser deposition  
*National Seminar on Plasmonics and Applications at National Physical Laboratory*, New Delhi, July 22-23, 2011
13. Kukreja L.M.  
Photoluminescence and random lasing in quantum dots of ZnO  
*Indo-UK workshop on ZnO at Indian Institute of Science*, Bangaluru, Aug., 29-30, 2011
14. Kukreja L.M.  
Quantum dots of ZnO: how do they grow and how do they glow?  
*Walther – Meissner Seminar of Bavarian Academy of Sciences, Garching*, Germany, Oct., 21, 2011
15. Kukreja L.M.  
Ultra-small quantum dots of ZnO  
*Solid State Physics Colloquium, Ulm*, Germany, Oct., 27, 2011
16. Kukreja L.M.  
Ultra-small quantum dots of ZnO grown by pulsed Laser deposition  
*6<sup>th</sup> DAE-BRNS National Symposium on Pulsed Laser Deposition of Thin Films and Nanostructured Materials (PLD-2011)*, Bangaluru, Nov., 9-11, 2011
17. Kukreja L.M.  
Material processing with lasers  
*Aeronautical Development Authority Seminar*, Bangaluru, Nov., 12, 2011
18. Puntambekar A.M.  
Single-cell SC cavity development in India  
*15<sup>th</sup> International Conference on RF Superconductivity (SRF-2011)*, Chicago, USA, July 25-29, 2011



**C. Seminar/Conference Presentation**

**C1. 6<sup>th</sup> DAE-BRNS National Symposium on Pulsed Laser Deposition of Thin Films and Nanostructured Materials (PLD-2011), Bangaluru, Nov., 9-11, 2011**

1. Ajimsha R.S., Das A.K., Misra P., Kukreja L.M.  
Studies on Structural, optical and electrical properties of Ga doped ZnO thin films grown by buffer assisted pulsed laser deposition.
2. Das A.K., Misra P., Kukreja L.M.  
Semiconductor to metal transition in transparent Al doped ZnO thin films grown by pulsed laser deposition
3. Misra P., Kukreja L.M.  
Correlation of structural, electrical and optical characteristics of pulsed laser deposited ZnO thin films on annealing
4. Rao B.T., Verma S., Gangrade M\*, Ganesan V.\*, Kukreja L.M.  
Factors affecting plasmon resonances in gold and silver nanoparticle films grown by pulsed laser deposition.
5. Sahu V.K., Ajimsha R.S., Das A.K., Saha D.B., Misra P., Kukreja L.M.  
Studies on the electrical characteristics of n-ZnO/p-Si grown by pulsed laser deposition for photodetecting applications
6. Singh B.N., Ajimsha R.S, Das A.K., Misra P., Kukreja L.M.  
Parametric studies on the compositional characteristics of ultra-thin silicon oxo-nitride grown using DC discharge assisted pulsed laser heating
7. Verma S., Rao B.T., Kukreja L.M.  
Surface enhanced Raman scattering from Densely packed gold nanoparticle films grown by pulsed laser deposition

**C2 Conference on Accelerator Radiation Safety (CARS2011), Mumbai, Nov., 16-18, 2011**

1. Haridas.G., Verma Dimple, Sahani P.K., Nayak M.K., Sarkar P.K.\*  
Experimental determination of Bremsstrahlung dose rate due to accidental beam loss in Indus-1 storage ring

2. Verma Dimple, Sahu T. K., Khare M., Dashora S., Khan Saleem, Nayak M.K., Sahani P.K., Haridas G., Sarkar P.K.\*  
Photon and neutron dose evaluation in experimental of Indus-1 synchrotron radiation source
3. Verma Dimple, Nayak M.K., Sahani P.K., Kumar Vijay, Dev Vipin, Sahu T.K., Dashora S., Khare M., Sinhamahapatra D., Haridas.G., Sarkar P.K.\*  
Residual radioactivity measurements at Indus accelerator complex
4. Nayak M.K., Sahani P.K., Khare M., Sahu T. K, Haridas P., Dev Vipin, Dashora S., Dhamgaye V., Haridas G., Sarkar P.K.\*  
Experimental investigation of synchrotron and Bremsstrahlung hazards at lithography beam line of Indus-2 SRS
5. Nayak M.K., Haridas G., Sahu T.K., Dashora S., Nandedkar R.V.\*, Sarkar P.K.\*  
Bremsstrahlung source term determination for 450MeV electrons
6. Sahani P.K., Haridas.G., Sarkar P.K.\*  
Simulation of absorbed dose rate due to synchrotron radiation and shielding thickness for radiation safety at Indus-2 using FLUKA
7. Sahani P.K., Haridas.G., Sarkar P.K.\*  
Simulation of photo neutron spectra due to incident high energy electrons on tungsten target using FLUKA
8. Khan Saleem, Nayak M.K., Haridas.G., Sarkar P.K.\*  
Evaluation of ozone concentration for a white beam line hutch at Indus-2 synchrotron Radiation Source
9. Dev V., Nayak M.K., Sahani P.K., Verma Dimple, Khare M., Kumar Vijay, Khan Saleem, Sahu T. K, Dashora S., Sinhamahapatra D.\*, Haridas G., Sarkar P.K.\*  
Radiation safety during the commissioning trials of synchrotron radiation beamlines of Indus-2

**C3 26<sup>th</sup> National Symposium on Plasma Science & Technology, Patna, Dec. 19-22, 2011**

1. Arora V., Bagchi S., Khan R.A., Gupta M., Chakera J.A., Gupta A., Naik P.A., Chaddah P., Gupta P.D.  
Study of shock wave propagation in silicon crystal by picosecond time resolved x-ray diffraction



2. Barnwal S., Prasad Y.B.S.R., Nigam S., Aneesh K., Naik P.A., Chakera J.A., Sharma M.L., Navathe C.P., Gupta P.D.  
Soft x-ray lasing at 46.9 nm from capillary discharge argon plasma
3. Chakravarty U., Arora V., Chakera J.A., Naik P.A., Srivastava H., Tiwari P., Srivastava A., Gupta P.D.  
Hole size effect in hard x-ray emission from intense laser irradiated nanoholes
4. Chakravarty U., Singh M.P., Naik P.A., Gupta P.D.  
Multiple electric field resonances in laser irradiated nanoshells
5. Kumar M., Singhal H., Naik P.A., Chakera J.A., Raja S., Gupta P.D.  
Measurement of the spatial coherence of high order harmonic radiation from ultrashort laser produced plasma plumes
6. Rao B.S., Naik P.A., Chakera J.A., Bagchi S., Khan R.A., Gupta P.D.  
Generation of stable electron beam from laser wake-field acceleration
7. Tayyab M., Chakera J.A., Bagchi S., Kumbhare S.R., Gaud V., Shinde R.S., Naik P.A., Gupta P.D.  
Development of a Thomson parabola ion spectrometer for characterization of laser accelerated proton / ion beam
4. Hannurkar P.R., Jain Akhilesh, Lad M.R., Kumar Ramesh, Tiwari N., Singh Gurnam, Gupta P.D.  
Development of high power solid state RF amplifiers and their deployment in Indus-2 synchrotron radiation source,  
*INSAC 2011*, Hyderabad, Nov., 25, 2011
5. Hannurkar P.R., Singh Gurnam, Shukla S.K., Thakurta A.C., Puntambekar T.A., Fatnani P., Prabhu S.S., Navathe C.P., Jain Akhilesh, Lad M.R., Kumar Ramesh, Badapanda M.K., Tiwari N., Gupta P.D.  
Operation of Indus-2 with the support of high power solid state RF amplifiers,  
*ADS 2011*, Mumbai, Dec., 12-15, 2011
6. Jain Akhilesh, Sharma Deepak, Gupta Alok, Tiwari A., Rao N., Sekar V., Lad M.R., Hannurkar P.R., Gupta P.D.  
Development of 650 MHz solid state RF amplifier for proton accelerator  
*ADS 2011*, Mumbai, Dec., 12-15, 2011
7. Jain Rajiv, Vora H.S.  
A novel technique to visualize low speed free surface flow with PIV  
*National Symposium on Instrumentation (NSI-36)*, Bareilly, Oct., 20-22, 2011
8. Joshi A.S.  
Determination of self generated magnetic fields and the plasma density using cotton mouton polarimetry with two color probes  
*Inertial Fusion Science and Applications (IFSA-11)*, Bordeaux, France, Sept., 12-16, 2011
9. Joshi A.S., Kamath M.P., Sharma A.K., Raghuramaiah M., Patidar R.K., Ansari M.S., Sridhar N., Chandra R., Navathe C.P., Naik P.A., Gupta P.D.  
Development of a two arm, high energy, high power laser for laser-plasma research in India  
*Inertial Fusion Science and Applications (IFSA-11)*, Bordeaux, France, Sept., 12-16, 2011
10. Joshi S.C., Senecha V.K., Kumar V., Shrivastava P., Puntambekar T.A., Hannurkar P.R., Gupta P.D.  
Status report of development of high current front end H- injector linac for SNS  
*2<sup>nd</sup> International Workshop on Accelerator Driven Sub-Critical Systems & Thorium Utilization*, Mumbai, Dec., 11-14, 2011
11. Khan K.M., Krishna H.\*, Rao K.D., Majumder S.K., Gupta P.K.  
Depth-sensitive Raman spectroscopy combined with

#### C4. Others Seminars/Conference Presentation

1. Chakera J.A., Tayyab M., Kumar M., Naik P.A., Gupta P.D.  
Observation of neutrons in the interaction of high intensity laser pulses with solid targets  
*Inertial Fusion Science and Applications (IFSA-11)*, Bordeaux, France, Sept., 12-16, 2011
2. Chaubey S., Kher S., Oak S.M.  
Radiation and taper tuning of long period grating for high sensitivity strain measurement  
*7th Workshop on Fibre and Optical Passive Components (WFOPC)*, July, 13-15, 2011
3. Hannurkar P.R., Jain Akhilesh, Lad M.R., Kumar Ramesh, Badapanda M.K., Tiwari N., Sharma Deepak, Gupta Alok, Tiwari A., Bagdual P.S., Rao N., Upadhyay R., Arora R., Prasad M., Sekar V., Gupta P.D.  
Development of 505.8 MHz solid state RF amplifiers at RRCAT  
*ADS 2011*, Mumbai, Dec., 12-15, 2011



- optical coherence tomography for analysis of layered tissue  
*Proceedings of Frontiers in Optics & Photonics (FOP-II)*, Delhi, 2011
12. Khan K.M., Krishna H.\* , Majumder S.K., Gupta P.K.  
Raman spectroscopy for the detection of antibiotic in honey  
*Proceedings of Frontiers in Optics & Photonics (FOP-II)*, Delhi, 2011
  13. Krishna H\*, Majumder S.K., Sidramesh M.\*, Chaturvedi P., Gupta P.K.  
Studies on the influence of tobacco habit on the fluorescence spectra of healthy oral mucosa  
*Proceedings of Frontiers in Optics & Photonics (FOP-II)*, Delhi, 2011
  14. Kumar A., Senecha V.K.  
Cusp loss width in multicusp negative ion source: a rigorous mathematical treatment  
AIP Conference Proceedings, 1390, 150-164 (2011)  
*2<sup>nd</sup> International Symposium on Negative Ions, Beams and Sources*, Takaya City, Japan, Nov., 16-19, 2011.
  15. Kumar M., Modi M.H., Singhal H., Chakera J.A., Gupta R.K., Naik P.A., Lodha G.S., Gupta P.D.  
Measurement of absolute diffraction efficiency of a variable line spaced grating using reflectivity beamline  
*56<sup>th</sup> DAE Solid State Physics Symposium*, Kattankulathur, Dec., 19-23, 2011
  16. Misra P., Das A.K., Sahu V.K., Saha D.B., Ajimsha R.S., Kukreja L.M.  
Natural chlorophyll impregnated nanocrystalline ZnO films for dye-sensitized solar cell application  
*Proc. 1<sup>st</sup> International Conference on BioInspired Materials for Solar Energy Utilization (BIOSOL 2011)*, Crete, Greece, Sept., 12-17, 2011
  17. Naik P.A., Rao B.S., Gupta P.D.  
Advanced acceleration schemes  
*2<sup>nd</sup> International Particle Accelerator Conference (IPAC-2011)*, San Sebastian, Spain, Sept., 5-9, 2011
  18. Naik P.A., Arora V., Bagchi S., Prasad Y.B.S.R., Barnwal S., Gupta P.D.  
Laser induced shock studies at RRCAT, Indore  
*23<sup>rd</sup> AIRAPT International Conference on High Pressure Science and Technology*, Mumbai, Sept., 26-30, 2011
  19. Puntambekar A.M., Bagre M., Dwivedi J., Shrivastava P., Mundra G., Joshi S.C., Potukuchi P.N.\*  
Superconducting cavities developments efforts at RRCAT  
*2<sup>nd</sup> International Workshop on Accelerator Driven Sub Critical System and Thorium Utilisation*, Mumbai, Dec., 11-14, 2011
  20. Sahu K., Verma Y., Sharma M., Rao K.D., Dube A., Gupta P.K.  
Optical coherence tomography for non-invasive assessment of wound healing response in paeruginosa infected excisional wounds subjected to photodynamic treatment  
*Proceedings of Frontiers in Optics & Photonics (FOP-II)*, Delhi, 2011
  21. Senecha V.K., Jain S.K., Ghodke D.V., Jain V., Srivastava V.K., Mishra D., Vadjikar R.M., Kumar R., Joshi S.C.  
Development of high current pulsed H- ion source and ECR ion source for the injector linac at RRCAT  
*2<sup>nd</sup> International Workshop on Accelerator Driven Sub-Critical Systems & Thorium Utilisation*, Mumbai, Dec., 11-14, 2011
  22. Singh Surendra., Singh V., Tiwari V.B., Mishra S.R., Rawat H.S.  
Effect on metastable Kr atom number density due to magnetic field near extraction region of a RF-driven discharge source  
*3<sup>rd</sup> International Conference on Current Developments in Atomic, Molecular, Optical and Nano Physics*, New Delhi, Dec., 14-16, 2011
  23. Thander P.K., Rajan A., Rawat A.  
Designing high performance computing cluster  
*International Science Congress (ISC-2011)*, Indore, Dec., 24-25, 2011
  24. Toley M.A.\*, Shinde S.J.\*, Nadkarni S.A.\*, Sarkar S.K.\*, Upadhayay J., Sharma M.L., Navathe C.P.  
Capability enhancement of existing LINAC for continuously variable nanosecond pulse radiolysis investigations  
*Theme Meeting on Emerging Trends in Applications of Lasers & Accelerators in Nanomaterials (ETALAN-2011)*, Mumbai, Oct., 20- 21, 2011