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Elixir Computer Science & Engineering 44, 7405-7410 (2012)
5. Gupta P.K.
Biophotonics- studies at RRCAT
99th Indian Science Congress, Bhubaneswar, Jan. 5, 2012
6. Gupta P.K.
Biomedical applications of lasers
ICLASER-2012, Bangalore, Jun. 8, 2012
7. Jain Rajiv
Societal applications of image processing & PIV
Shodh-Samagam 2012, Indore, Apr., 28-29, 2012
8. Kukreja L.M.
Emerging laser materials processing technologies for future industrial applications
DAE- BRNS 20th National Laser Symposium (NLS-20), Chennai, Jan., 9-12, 2012
9. Kukreja L.M.
Laser cladding of WC - inconel 625 on 15-5 PH stainless steel
Aeronautical Development Agency Interaction Meeting on Laser Peening and Cladding for Aerospace Engineering Components, Bangalore, Apr., 30, 2012

B. Invited Talk

1. Banerjee Arup
Collective oscillations in Bose-Fermi mixture
International Workshop on Structure and dynamics of Trapped Gases, Chandigarh, Feb. 2012
2. Banerjee Arup
Properties of trapped Bose gas in large gas parameter regime
International Workshop on Structure and dynamics of Trapped Gases, Chandigarh, Feb. 2012
3. Bartwal K.S.
Structure modification of congruent LiNbO₃ crystals on doping
DAE- BRNS 20th National Laser Symposium (NLS-20), Chennai, Jan., 9-12, 2012
4. Dasgupta R.
Optical tweezers: light for manipulating microscopic world
International Conference on Recent Trends in Physics (ICRTP-2012), Indore, Feb. 4-5, 2012
10. Kukreja L.M.
Laser materials processing
SERC School on Laser Physics and Technology at RRCAT, Indore, Mar., 27, 2012
11. Kukreja L.M.
Ultra-small quantum dots of ZnO
India- Japan Symposium on ZnO Nanocrystals and Allied Materials at Indian Institute of Technology Madras, Chennai, Jan. 9-10, 2012
12. Kumar Shailendra
Role of plasmons in improved photovoltaic devices : nano clusters of Sn and SnO_x in SnO₂ films
International Conference on Recent Trends in Physics (ICRTP), Indore, 2012
13. Mishra S.R.
Future technologies of inertial sensors: atom interferometry based sensors and systems
Structured Training Programme, Trivandrum, June 29, 2012



14. Moorti A.
Laser plasma acceleration activity in India
Workshop on Asian Forum for Accelerators and Detectors (AFAD-2012), Kolkata, Feb. 6-7, 2012.
15. Moorti A.
Laser plasma interaction activities using ultra-short laser pulses at RRCAT, Indore
ASHULA India Meeting, Aurangabad, Jan. 18-20, 2012
16. Naik P.A.
Advanced acceleration schemes using lasers
Asian Forum for Accelerators and Detectors (AFSD-2012), Kolkata, Feb. 6-7, 2012
17. Naik P.A.
Laser plasma interaction studies at ultra-high intensities using Ti:sapphire laser
DAE-BRNS National Laser Symposium (NLS-20), Chennai, Jan. 9-12, 2012
18. Shukla S.K.
Vacuum system of accelerators at Indus complex
Proceeding of International Symposium on Vacuum Science and Technology (IVS-2012), Kolkata, Feb. 15-17, 2012
19. Vora H.S.
Keynote address at inauguration session
Shodh-Samagam 2012, Indore, Apr., 28-29, 2012
3. Agrawal S. K., Mokhariwale A., Mishra R. K., Nakhe S. V.
Development of capacitor charging power supply based on forward converter for copper bromide laser
4. Arora V., Bagchi S., Gupta M., Chakera J.A., Gupta A., Naik P.A., Chaddah P., Gupta P.D.
Study of strain propagation in laser irradiated silicon crystal by time-resolved diffraction of K- α x-ray probe of different photon energies.
5. Ahlawat S., Dasgupta R., Verma R.S., Kumar N.V., Gupta P.K.
Optical forces on microspheres in holographic optical trap arrays
6. Benerji N.S., Singh Amrendra., Varshnay N., Singh Bijendra
Performance characteristics of a compact high repetition rate xenon chloride excimer laser with inbuilt gas flow circulation system
7. Benerji N.S., Singh Amrendra., Varshnay N., Singh Bijendra
Stability issues in high repetition rate Krypton fluoride excimer laser
8. 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.
Demonstration of x-ray lasing in argon capillary discharge plasmas

C. Seminar/Conference Presentation

C1. Proceedings of DAE-BRNS National Laser Symposium (NLS-20), Chennai, Jan., 9-12, 2012

1. Agrawal D.K., Misra Pushkar, Choubey Ambar, Jain R.K., Singh Rajpal, Vishwakarma S.C., Upadhyaya B.N., Oak S.M.
Deep penetration welding of aluminum using high average power pulsed Nd:YAG Laser
2. Agrawal P.K., Tiwari G., Dimo Astajov*, Karnewar A.K., Tiwari P., Nakhe S.V.
Micro-drilling in tungsten sheet using copper vapour laser
9. Bhargava P., Paul C.P., Mishra S.K., Chaterji U., Preamsingh C.H., Mundra G., Kukreja L.M.
Study on distortion behavior during welding of 6 mm thick SS 304 using 2 kW fiber laser
10. Biswal R., Agrawal P. K., Prakash O., Dixit S. K., Nakhe S. V.
A comparative study on pulsed discharge characteristics of HBr additive based advanced and elemental copper vapour laser variants
11. Biswal R., Agrawal P.K., Mishra G.K., Dixit S.K., Nakhe S.V.
A study on the pulsed discharge characteristics of a 100 W class advanced copper laser



12. Biswal R., Agrawal S. K., Agrawal P. K., Mishra G. K., Dixit S. K., Nakhe S. V.
Development of a high specific average output power (70 W/l), high repetition rate (18 kHz) HBr additive based compact advanced copper laser
13. Bundel H.R., Tiwari S., Singh C.P., Deshpande P.P., Bhanage V., Bindra K.S., Navathe C.P.
Automation software for femtosecond laser pulse shaping experiments
14. Chaubey S., Kher S., Saxena M.K., Oak S.M.
Study of temperature effects on CO₂ laser inscribed turnaround point long period fiber gratings for amplitude detection based sensors
15. Choubey Ambar, Jain R.K., Singh Ravindra, Ali S., Agrawal D. K., Singh Rajpal, Saini B.K., Vishwakarma S.C., Misra Pushkar, Upadhyaya B.N., Oak S.M.
Development of 490 W average power long pulse Nd:YAG laser based on diffuse ceramic reflectors
16. Choubey Ambar, Vishwakarma S.C., Misra Pushkar, Jain R.K., Agrawal D.K., Kumar Sajith, Kumar Manoj, Raju A.A., Sah S.K., Bhawsar V., Arya R., Upadhyaya B.N., Oak S.M.
Development of 1 kW average power fiber coupled pulsed Nd:YAG laser
17. Daiya D., Sharma A.K., Naik P.A., Gupta P.D.
Measurement and correction of phase errors in tiled optical system using interferometry
18. Daiya D., Sharma A.K., Naik P.A., Gupta P.D.
Theoretical analysis on far field laser intensity distribution for a tiled pulse compressor system
19. Dighe A., Singh A.J., Gupta P.K., Sharma S.K., Mukhopadhyay P.K., Bindra K.S., Oak S.M.
Studies on near degenerate OPO for the generation of tunable dual wavelength sources
20. Dsouza R.I., Krishna H., Khan K.M., Rao K.D., Majumder S.K., Gupta P.K.
Laser induced fluorescence spectroscopy combined with optical coherence tomography for tissue analysis
21. Gupta P.K., Singh A.J., Sharma S.K., Mukhopadhyay P.K., Bindra K.S., Oak S.M.
Studies on relaxation oscillation for 4F_{3/2} -4I_{9/2} transition in Nd:YVO₄ laser incorporating saturable reabsorption loss
22. Ittoop M.O., Khanna Mansi, Ghodkhe D.V., Pakhre J.S., Reghu T., Kukreja L.M.
FPGA based digital controller for high power DC-DC resonant converter
23. Jain L, Bhanage V.P., Ansari M.A., Maskawade S., Navathe C.P.
Control system for high power laser amplifiers cooling
24. Jain R.K., Choubey Ambar, Agrawal D. K., Vishwakarma S. C., Upadhyaya B. N., Ganesh P., Kaul R., Yadav D. P., Shiroman R., Oak S.M.
Development of vacuum grade leak tight laser welding technique for 3 mm thick titanium
25. Joshi A.S., Abhinandan L., Patwa S.R., Kulkarni A.P., Tripathi P.K., Naik P.A., Gupta P.D.
Towards controlled mass removal by laser ablation for non-contact dynamic mass balancing of ultra-high speed rotating machines
26. Kar S., Debnath C., Verma Sunil, Bartwal K.S., Gupta P.K.
Studies of thermo luminescence properties of LTB crystal and glass
27. Khare Jai, Prem Singh C.H., Misra Pankaj, Kukreja L.M.
Photoluminescence of Ytria stabilized Zirconia nanoparticles synthesized by vapor phase using CO₂ laser
28. Khare R., Shukla P., Shrivastava V. K., Nakhe S. V.
A modeless, tunable dye laser pumped by copper vapor laser
29. Kher S., Sharma R.K., Chaubey S., Das K., Anwar K. *, Oak S.M.
Investigation of different excitation techniques for surface plasmon resonance (SPR) based sensors pipelines
30. Kulkarni A.P., Rajiv K., Mukherjee C., Joshi A.S., Krishnaiah K.V., Jayashankar C.K., Naik P.A., Gupta P.D.
Intensity dependent nonlinear refractive index of glasses doped with different Yb concentrations measured by Boling method



70. Tanwani S., Ashoka H., Sridhar B.S., Singh B., Ansari M.S., Navathe C.P.
PCI based control system for high power laser power supplies
 71. Tiwari S., Bundel H.R., Singh C.P., Deshpande P.P., Bhanage V., Bindra K.S., Navathe C.P.
Automation software for characterization of femtosecond laser pulses using auto-correlation and FROG
 72. Tiwari S.K., Mishra S.R., Ram S.P.
Generation of a Bessel beam of variable spot-size
 73. Upadhyay J., Sharma M.L., Navathe C.P.
Performance of MOSFET based ramp generator
 74. Valecha A., Deshpande P.P., Bhanage V., Navathe C.P.
Precision flash lamp current measurement system
 75. Verma R.S., Dasgupta R., Ahlawat S., Gupta P.K.
Image pattern based selection and sorting of micro particles using holographic optical tweezers
 76. Verma Sunil., Rao K.R. *, Kar S., Bartwal K.S., Gupta P.K.
Solution growth of urea doped L-cysteine hydrochloride monohydrate NLO crystal by conventional and unidirectional techniques and its crystalline and optical characterization
- C2. Proceedings International Symposium on Vacuum Science & Technology and Its Application for Accelerators (IVS-2012), Kolkata, Feb., 15-17, 2012**
1. Bansod T., Sindal B., Kumar K. V., Shukla S.K.*
Evaluation of Ti-Zr-V (NEG) thin Films for their pumping speed and pumping capacity
 2. Kumar K.V., Bansod T.*, Mukharjee C., Singh G., Tiwari P., Sindal B., Shukla S.K.
Characterization of titanium-zirconium-vanadium non-evaporable-getter coated vacuum chambers
 3. Shridhar R., Awasthi S.K., Malviya K.K., Shukla S.K.
Modified vacuum system for 10MeV Linac for ARPF
 4. Sindal B., Kumar K. V., Bansod T., Shukla S.K.
Development and UHV testing of LN2 cooled titanium sublimation pump
 5. Yadav D.P., Kaul R., Ram Sankar P., Kak A., Ganesh P., Shiroman Ram, Singh Rajvir, Singh A. P., Abhinandan L., Kukreja L.M., Shukla S.K.
A study on brazing of glidcop® to OFE copper for application in photon absorbers of Indus-2
- C3 AIP Conference Proceeding, 1447 (56th DAE Solid State Physics Symposium, Kattankulathur)**
1. Dhamgaye V.P., Gowri Sankar B., Garg C.K.*, Lodha G.S.
Commissioning of soft and deep X-ray lithography beamline on Indus-2
 2. Gupta P., Ganguli T., Gupta A., Sinha A.K., Deb S.K., Svec P. Jr.
The influence of isochronal annealing on the crystallization and magnetic properties of Fe_{40.5}Co_{40.5}Nb₇B₁₂ alloy
 3. Jangir R., Ganguli T., Porwal S., Tiwari P., Rai S.K., Srivastava A.K., Mondal P., Deb S.K.
Study the effect of annealing in different environment on the optical properties of β-Ga₂O₃ nanostructures
 4. Khamari S.K., Dixit V.K.
A comparison of inverse spin hall spectra in Pt/III-V hybrid structures
 5. Srivastava H., Ganguli T., Tiwari P., Srivastava A.K., Deb S.K.
Ambient dependence of the phase of nanowires grown by annealing brass
 6. Tiwari M.K., Gupta P., Sinha A.K., Garg C.K. *, Singh A.K., Kane S.R., Garg S.R., Lodha G.S.
Commissioning of a microprobe-XRF beamline (BL-16) on Indus-2 synchrotron source
 7. Tiwari P., Srivastava A.K., Khattak B.Q., Verma S.*, Upadhyay A., Sinha A.K., Ganguli T., Lodha G.S., Deb S.K.
Effect of electron beam irradiation on PMMA films
- C4. Others Seminars/Conference Presentation**
1. Bansod T., Sindal B.K., Kumar K.V., Shukla S.K.
Deposition of non evaporable getter films and their vacuum performance
AIP- Conference Proceedings 1451, 233 (2012)



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
26th National Symposium on Plasma Science & Technology (Plasma-2010), Patna, Dec. 20-23, 2011
3. Dasgupta R.
Optical tweezers: light for manipulating microscopic world
Journal of Physics: Conference Series 365, 2-6 (2012)
4. Ghosh H., Purwar H.*
Orbital, magnetic and superconducting orders in some Fe-based superconductors
AIP - Conference Proceeding 1461, 138 (2012)
5. Ghosh H.
Strong correlations and non-linear optics
AIP - Conference Proceeding 1461, 175-186 (2012)
6. Heera S., Garg P., Chaudhari S., Tomar S.S., Rawat A.
High throughput multilevel anti spam antivirus and email setup with IPV4 and IPV6 support
IEEE Computer Society 4th National Conference on Information and Software Engineering, Chennai, Mar., 9-10, 2012
7. Jain Rajiv, Vora H.S.
An open Source approach in educating particle image velocimetry
99th Indian Science Congress (ISC-2012), Bhubneshwar, Jan., 2012
8. Kamalesh Kumar B.*, Ahmad A.*, Goswami P.*, Subramanian K.S.*, Mistry R.K.*, Prahlad B.*, Jayaraj R.N.*, Joshi M., Deshpande P.P., Navathe C.P., Gupta P.D.
Development of automated machine vision system for surface inspection of PHWR fuel pellets
International Conference on Characterization and Quality Control of Nuclear Fuels (CQCNF-2012), Hyderabad, Feb. 27-29, 2012
9. Kumar Shailendra, Mukherjee C
Role of plasmons in improved photovoltaic devices : nano clusters of Sn and SnO_x in SnO₂ films
Journal of Physics: Conference Series 365, 012008(1-7) (2012)
10. Mehar S.K. *, Sinnarkar D., Jain Rajiv
A comparison of open source E-learning management systems
National Conference on Challenges and Prospective in Engineering, Management & Pharmacy, Indore, Apr., 2012
11. Mehar S.K. *, Sinnarkar D., Jain Rajiv, Vora H.S.
Organizing a web school-learning paradigm simplified with LMS
National Conference on Challenges and Prospective in Engineering, Management & Pharmacy, Indore, Apr., 2012
12. Shinde S.J.*, Toley M.A.*, Nadkarni S.A.*, Sarkar S.K.*, Upadhyay J., Sharma M.L., Navathe C.P.
Enhancement of continuously variable nanosecond electron pulses in LINAC based pulse radiolysis facility
Trombay Symposium on Radiation & Photochemistry (TSRP-2012), Mumbai, Jan. 4-7, 2012
13. Shukla S.K., Sindal B.K., Bansod T., Kumar KVANPS
Development of UHV compatible, cylindrical magnetron sputtering system for NEG coating
Journal of AIP - Conference Proceedings 1451, 218 (2012)

D. Book Chapter

1. Paul C.P., Bhargava P., Kumar Atul, Pathak A.K., Kukreja L.M.
Laser rapid manufacturing: technology, applications, modeling and future prospects
Invited Review Chapter: *Laser in Manufacturing*, Ed. by J. Paulo Davim, ISTE-Wiley, London, 2012, pp. 1-67
2. Soni Rakesh Kumar
Diffusion cooled v-fold CO₂ laser
CO₂ Laser - Optimization and Application, Ed by Dan C. Dumitras, In Tech, Croatia, 2012, pp. 179-208.