

A. Journal Articles

1. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
A guide to LIGO–Virgo detector noise and extraction of transient gravitational-wave signals
Classical and Quantum Gravity, 37, 055002(1-54) (2020)
2. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Model comparison from LIGO–Virgo data on GW170817's binary components and consequences for the merger remnant
Classical and Quantum Gravity, 37, 045006(1-43) (2020)
3. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Optically targeted search for gravitational waves emitted by core-collapse supernovae during the first and second observing runs of Advanced LIGO and Advanced Virgo
Physical Review D, 101, 084002(2020)
4. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data
Physical Review D, 100, 024004 (2019)
5. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run
Physical Review D, 100, 024017(1-18) (2019)
6. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Binary black hole population properties inferred from the first and second observing runs of Advanced LIGO and Advanced Virgo
Astrophysical Journal Letters, 882, L24 (2019)
7. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs
Physical Review D, 100, 062001 (2019)
8. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
GWTC-1: A gravitational-wave transient catalog of compact binary mergers observed by LIGO and Virgo during the first and second observing runs
Physical Review X, 9, 031040(1-9) (2019)
9. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run
Physical Review D, 99, 122002 (2019)
10. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Search for eccentric binary black hole mergers with Advanced LIGO and Advanced Virgo during their first and second observing runs
The Astrophysical Journal, 883, 149 (2019)
11. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model
Physical Review D, 100, 122002 (2019)
12. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network
Physical Review D, 100, 064064 (2019)
13. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Search for subsolar mass ultracompact binaries in

- Advanced LIGO's second observing run
Physical Review Letters, 123, 161102 (2019)
14. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Searches for gravitational waves from known pulsars at two harmonics in 2015-2017 LIGO data
Astrophysical Journal, 879, 10 (2019)
15. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Tests of general relativity with GW170817
Physical Review Letters, 123, 011102 (2019)
16. Abbott B.P.*, Bhandare R., Dave I., George J., Pai S.A., Pant B.C., Rajan C., Raja S. et al.
Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1
Physical Review D, 100, 104036 (2019)
17. Abhirami S.*, Sharma S., Amaladass E.P.*, Rajitha R.*, Magudapathy P.*, Pandian R.*, Mani A.*
Tuning of charge carrier density by deposition pressure in Sb-doped Bi₂Se₃ thin films
Thin Solid Films, 693, 137689(1-8) (2020)
18. Agarwal C.*, Singh M.*, Sharma R.*, Sagdeo A., Csóka L.*
In situ green synthesis and functionalization of reduced Graphene oxide on Cellulose fibers by Cannabis sativa L. extract
Materials Performance and Characterization, 8, 518-531 (2019)
19. Aggarwal, R., Ingale A.A., Dixit V.K.
Investigations on the origin of strain variation in the zinc-blende phase along the depth of GaP/Si(1 1 1) using spatially resolved polarized and wavelength dependent Raman spectroscopy
Applied Surface Science, 514, 145933 (2020)
20. Ahlawat A., Khan A.A., Deshmukh P., Shirolkar M.*, Li J.*, Wang H.*, Satapathy S., Karnal A.K.
Investigation of magneto-electric effects in (PMN-PT) @ NiFe₂O₄ core shell nanostructures and nanocomposites for non-volatile memory applications
Materials Letters, 261, 127082 (2020)
21. Ahlawat A., Khan A.A., Deshmukh P., Tripathi M.*, Shirolkar M.M.*, Satapathy S., Choudhary R.J., Karnal A.K.
A detailed study of magnetization and magnetoelectric effect in P(VDF-TrFe) based SmFeO₂ nanocomposites
Journal of Materials Science: Materials in Electronics, 30, 17765–17772 (2019)
22. Ahlawat S., Singh A., Sharma S.K., Mukhopadhyay P.K., Singh R., Bindra K.S.
Mechanical abrasion resistant candle soot based superhydrophobic coating over nanosecond laser textured stainless steel
Surface Topography-metrology And Properties, 8, 025007 (2020)
23. Antony A.*, Poornesh P.*, Jedryka J.*, Ozga K.*, Ani A.*, Petwal V.C. et al.
Improved third harmonic nonlinear optical process upon e-beam irradiation in Cl: ZnO thin films
Materials Science in Semiconductor Processing, 114, 105077 (2020)
24. Antony, A.*, Poornesh P.*, Kityk I.V.*, Ozga K.*, Jedryka J.*, Petwal V.C. et al.
Defect engineering, microstructural examination and improvement of ultrafast third harmonic generation in GaZnO nanostructures: a study of e-Beam irradiation
Physical Chemistry Chemical Physics, 22, 4252-4265 (2020)
25. Antony A.*, Poornesh P.*, Kityk I.V.*, Ozga K.*, Jedryka J.*, Philip R.*, Sanjeev G.*, Petwal V.C., Verma V.P., Dwivedi J.
Methodical engineering of defects in Mn_xZn_{1-x}O (x = 0.03, and 0.05) nanostructures by electron beam for nonlinear optical applications: a new insight
Ceramics International, 45, 8988-8999 (2019)
26. Bakthavatchalam M.*, Tiwari M.K. et al.
Morphological and elemental mapping of gallstones

- using synchrotron microtomography and synchrotron x-ray fluorescence spectroscopy
Journal of Gastroenterology and Hepatology, 3, 381-387 (2019)
27. Banait S.M.*, Paul C.P., Jinoop A.N., Kumar H.*, Pawade R.S.*, Bindra K.S.
Experimental investigation on laser directed energy deposition of functionally graded layers of Ni-Cr-B-Si and SS316L
Optics & Laser Technology, 121, 105787(1-9) (2020)
28. Banerjee C., Singh M.P.
Transient and pretransient stages in a field induced phase transition of the vacuum state
Physical Review D, 100, 056016(1-11) (2019)
29. Benarji K.*, Kumar Y.R.*, Paul C.P., Jinoop A.N., Bindra K.S.
Parametric investigation and characterization on SS316 built by laser-assisted directed energy deposition
Journal of Materials: Design and Applications, 234, 452-466 (2020)
30. Banik S., Arya A.*, Sinha A.K.
Direct hybridization gap from intersite and onsite electronic interactions in CeAg_2Ge_2
RSC Advances, 10, 24343-24351 (2020)
31. Banik S., Kumar P.P.
Investigation of electronic structure of transition metal silicides $\text{MnSi}_{1.75}$ and CoSi for enhanced thermoelectric properties
Solid State Communications, 307, 113807(1-6) (2020)
32. Belure A.R.*, Biswas A.K., Raghunathan D., Rishipal, Bhartiya S., Singh R., Rai S.K., Pawade R.S.*, Kamath M.P., Benerji N.S.
Development of super-smooth flat silicon mirror substrates using bowl-feed chemical- mechanical polishing
Materials Today: Proceedings, 26, 2260-2264 (2020)
33. Bera G.*, Surampalli A.*, Mishra A.*, Mal P.*, Reddy V.R.*, Banerjee A.*, Sagdeo A., Das P.*, Turpu G.R.*
Magnetolattice coupling, magnetic frustration, and magnetoelectric effect in the Cr-doped FeVO_4 multiferroic material and their correlation with structural phase transitions
Physical Review B, 100, 014436(1-13) (2019)
34. Bhardwaj K.*, Singh A., Borage M.B., Ajnar D.S.*, Tiwari S.R.
FPGA-based high-resolution DPWM scheme using interleaving of phase-shifted clock pulses.
Journal of the Institution of Engineers (India) B, 101, 153-162 (2020)
35. Bhardwaj T.*, Shukla M.*, Paul C.P., Bindra K.S.
Direct energy deposition- laser additive manufacturing of Titanium-Molybdenum alloy: parametric studies, microstructure and mechanical properties
Journal of Alloys and Compounds, 787, 1238-1248 (2019)
36. Bhardwaj T., Shukla M., Prasad N.K., Paul C.P., Bindra K.S.
Direct laser deposition-additive manufacturing of Ti-15Mo alloy: effect of build orientation induced surface topography on corrosion and bioactivity
Metals and Materials International, 26, 1015-1029 (2020)
37. Bhatt R., Soharab M., Bhaumik I., Verma P.*, Sajith B.K., Saxena A., Karnal A.K.
Effect of reduction on the optical properties of $\text{Sr}_{0.61}\text{Ba}_2\text{Nb}_2\text{O}_7$ single crystals grown by optical floating zone technique
Journal of Alloys and Compounds, 810, 151818(1-8) (2019)
38. Bhaumik I., Soharab M., Bhatt R., Saxena A., Gupta K.*, Karnal A.K.
Anomalous effect of growth ambience on the optical absorption characteristics of Cr-co-doped Nd:YVO_4 crystal
Applied Physics A, 125, 347 (2019)

39. Bhowmik R.N.*, Babu P.D.*, Sinha A.K., Bhisikar A.
High-temperature thermal cycling effect on the irreversible responses of lattice structure, magnetic properties, and electrical conductivity in $\text{Co}_{2.75}\text{Fe}_{0.25}\text{O}_4$ spinel oxide
Inorganic Chemistry, 59, 6763–6773 (2020)
40. Biswal R., Mishra G.K., Agrawal S.K., Dixit S.K., Nakhe S.V.
Studies on the design and parametric effects of a diode pump alkali (rubidium) laser
Pramana: Journal of Physics, 93, 58 (2019)
41. Biswas A.*, Abharana N.*, Rai S., Bhattacharyya D.*
Early recrystallization of Ni/Ti multilayer due to disorder in the Ni layer
Journal of Applied Physics, 127, 165704(1-10) (2020)
42. Bose A., Mondal P., Bhalerao G.M.*, Kokil S.V., Raghavendra S., Joshi S.C., Srivastava A.K., Tewari R.*
Evolution of surface oxides and impurities in high vacuum heat treated Nb: A TEM and TOF- SIMS in-situ study, mechanism and repercussions on SRF cavity applications
Applied Surface Science, 510, 145464 (2020)
43. Chakrabarti A., Bhattacharya J.*, Dutt R.*, Pandey D.*
Unusual magnetic and electronic properties of Al-substituted Ga_2MnNi : an ab initio study
Journal of Magnetism and Magnetic Materials, 490, 165521 (2019)
44. Chandran S., Biswas B., Lal S., Kumar A., Saini R.S., Khursheed M., Gupta S.K., Nerpagar P., Pandit R.K., Pant K.K.
Commissioning and validation of the injector and electron beam transport systems for the IR- FEL at RRCAT
Pramana: Journal of Physics, 93, 1-11 (2019)
45. Chatterjee A., Khamari S.K., Porwal S., Sharma T.K.
Role of ZrO_2 passivation layer thickness in the fabrication of high-responsivity GaN ultraviolet photodetectors
Physica Status Solidi RRL, 13, 1900265 (2019)
46. Chatterjee S.*, Mahapatra S.S.*, Bharadwaj V., Choubey A., Upadhyay B.N., Bindra K.S.
Drilling of micro-holes on Titanium alloy using pulsed Nd:YAG laser: parametric appraisal and prediction of performance characteristics
Proceedings of the Institution of Mechanical Engineers B, 233, 1872-1889 (2019)
47. Chatterjee S.*, Mahapatra S.S.*, Bharadwaj V., Upadhyaya B.N., Bindra K.S.
Estimation of quality characteristics of pulsed Nd:YAG fibre laser welded thin sheet Ti6Al4V
Lasers in Engineering, 46, 111–134 (2020)
48. Chettri P.*, Deka U.*, Rao A.*, Nagaraja K.K.*, Okram G.S.*, Petwal V.C., Verma V.P., Dwivedi J.
Effect of high energy electron beam irradiation on the structural properties, electrical resistivity and thermopower of $\text{La}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ manganites
Physica B: Condensed Matter, 585, 412119 (2020)
49. Choudhary P.*, Saxena P.*, Yadav A.*, Sinha A.K., Rai V.N.*, Varshney M.D.*, Mishra A.*
Weak ferroelectricity and leakage current behavior of multiferroic CoCr_2O_4 nanomaterials
Journal of Superconductivity and Novel Magnetism, 32, 2639–2645 (2019)
50. Christopher B.*, Riya Thomas R.*, Rao A.*, Okram G.S.*, Petwal V.C., Verma V.P., Dwivedi J.
A systematic study on effect of electron beam irradiation on electrical properties and thermopower of $\text{RE}_{0.8}\text{Sr}_{0.2}\text{CoO}_3$ (RE=La, Pr) cobaltites
Physica B: Condensed Matter, 552, 170-177 (2019)
51. Daiya D., Patidar R.K., Moorti A., Benerji N.S., Joshi A.S.
Simple wedge plate based lateral shearing

- interferometry technique for coherent alignment of tiled grating assembly
Optics Communications, 459, 125067(1-7) (2020)
52. Das, A.K., Sahu V.K., Ajimsha R.S., Misra P.
Instability of UV photoresponse in MgZnO thin films and its improvement by MgO capping
Physica Status Solidi A, 217, 2000026 (2020)
53. Das A. K., Sahu V. K., Ajimsha R. S., Misra P.
A model for surface space charge mediated ultraviolet photoresponse in MgZnO thin films and its experimental verification
ACS Applied Electronic Materials, 2, 651–658 (2020)
54. Das D.*, Barman A.*, S. Kumar A.*, Sinha A.K., Gupta M.*, Singhal R.*, Johari P.*, Kanjilal A.*
Synergistic effect of singly charged oxygen vacancies and ligand field for regulating transport properties of resistive switching memories
The Journal of Physical Chemistry C, 123, 26812-26822 (2019)
55. Dev A.S.*, Kumar D.*, Gupta P., Vishwakarma P.*, Gupta A.*
Development of residual stress and uniaxial magnetic anisotropy during growth of polycrystalline Co film
Materials Research Bulletin, 121, 109068(1-6) (2020)
56. Dhal R.*, Lekshmi P.N.*, Das A.*, Chatterji T.*, Sinha A.K., Santhosh P.N.*
Synthesis, structure and magnetic properties of a novel double layered brownmillerite $\text{Ca}_2\text{LaFe}_{1.75}\text{Cr}_{0.25}\text{GaO}_8$
Materials Research Bulletin, 129, 110847(1-8) (2020)
57. Dhamgaye S.*, Gupta N.*, Shrotriya A.*, Dhamgaye V., Gadre R.*
Biological effects of seed irradiation by synchrotron x-ray beam in young bean seedlings
Advances in Biological Chemistry, 9, 88-97 (2019)
58. Dutta S.B.*, Krishna H., Gupta S.*, Majumder S.K.
Fluorescence photo-bleaching of urine and its applicability in oral cancer diagnosis
Photodiagnosis and Photodynamic Therapy, 28, 18-24 (2019)
59. Gahlawat S.*, Singh J., Yadav A.K., Ingole P.P.*
Exploring Burstein–Moss type effects in nickel doped hematite dendrite nanostructures for enhanced photo-electrochemical water splitting
Physical Chemistry Chemical Physics, 21, 20463-20477 (2019)
60. Gangwar, R., Banerjee A., Das A.
Effect of correlation on the properties of 2D spin-polarized dipolar Fermi gas
Journal of Physics B, 53, 035301(1-11) (2020)
61. Ghodke D.V., Khare R.K., Kumar R., Pathak M., Jain S.K., Amban A., Krishnan K.M., Senecha V.K.
Development of a pulsed radio frequency ignited multicusp-free negative hydrogen ion source
Review of Scientific Instruments, 91, 043506 (1-5) (2020)
62. Ghosh A., Ghosh H.
Possible enhancement of superconductivity by Sb doping in rare earth doped 112 compounds: an ab-initio study
International Journal of Environmental Analytical Chemistry, 99, 1-13 (2019)
63. Ghosh H., Ghosh S., Ghosh A.
Doping site identification in 112 iron pnictides through a first-principles core-electron spectroscopic study
Journal of Synchrotron Radiation, 26, 1367 (2019)
64. Ghosh S., Baral M., Kamparath R., Singh S.D., Ganguli T.
Investigations on band commutativity at all oxide p-type NiO/n-type $\beta\text{-Ga}_2\text{O}_3$ heterojunction using photoelectron spectroscopy
Applied Physics Letters, 115, 251603(1-5) (2019)

65. Ghosh S., Baral M., Kamparath R., Choudhary R.J.*, Phase D.M.*, Singh S.D., Ganguli T.
Epitaxial growth and interface band alignment studies of all oxide α -Cr₂O₃ / β -Ga₂O₃ p-n heterojunction
Applied Physics Letters, 115, 061602 (2019)
66. Ghosh S.*, Kumar A.*, Pal A.*, Singh P.*, Gupta P.*, Anand K.*, Gautam U.K., Ghosh A.K.*, Chatterjee S.*
Existence of exchange bias and Griffith phase in (Tb_{1-x}Ce_x)MnO₃
Journal of Magnetism and Magnetic Materials, 500, 166261(1-8) (2020)
67. Ghosh S.*, Sanjeev B.*, Gupta M., Kumar A.B.V.K.*
XAS studies of brain-sponge CNCIZnO nanostructures using polyaniline as dual source for solar light photocatalysis
Ceramics International, 45, 1314 (2019)
68. Gidde R.R.*, Pawar P.M.*, Dhamgaye V.P.
Fully coupled modeling and design of a piezoelectric actuation based valveless micropump for drug delivery application
Microsystem Technologies, 26, 633–645 (2020)
69. Gorey A.*, Jacob P.M.*, Abraham D.T.*, John R.*, Manipadam M.T.*, Ansari M.S., Chen G.C.K.*, Vasudevan S.*
Differentiation of malignant from benign thyroid nodules using photoacoustic spectral response: a preclinical study
Biomedical Physics & Engineering Express, 5, 035017 (2019)
70. Gorey A.*, Vasudevan S.*, Ansari M.S., Bhagat P.*, Phatak S.*, Sharma N.*, Chen G.C.K.*
Development of a compact laser-diode based frequency domain photoacoustic sensing system: application of human breast cancer diagnosis
Review of Scientific Instruments, 90, 114101(1-8) (2019)
71. Gupta R.K., Bhardwaj V.K., Jain R.K., Upadhyaya B.N., Ganesh P., Bindra K.S., Kaul R.
Rejuvenation of inside surface of intergranular corrosion-damaged type 304 stainless steel tube through laser surface melting
Journal of Materials Engineering and Performance, 29, 1600-1608 (2020)
72. Gupta, P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Generation of J-shaped pulses in ultra-long Ytterbium doped mode locked fiber laser
Laser Physics, 30, 065105 (2020)
73. Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Generation of stable clean ultrashort pulses in a simple all-fiber, all-normal dispersion ytterbium-doped mode-locked laser
Applied Optics, 58, 5533-5539 (2019)
74. Gupta R.K., Kumar B.A.*, Choubey A., George R.P.*, Ganesh P., Upadhyaya B.N., Philip J.*, Bindra K.S., Kaul K.
Antibacterial and corrosion studies on nanosecond pulse laser textured 304 L stainless steel surfaces
Lasers in Manufacturing and Materials Processing, 6, 332 (2019)
75. Halder S., Banerjee A.*, Kumar K.*, Kumar R., Vashisht G., Sharma T.K., Dixit V.K.
Anisotropic magnetic properties of excitons in GaAs multiple quantum wells
Superlattices and Microstructures, 137, 106332(1-7) (2020)
76. Hazra D.*, Moorti A., Mishra S., Upadhyay A., Chakera J.A.
Direct laser acceleration of electrons in a high-Z gas target and the effect of threshold plasma density on electron beam generation
Plasma Physics and Controlled Fusion, 61, 125016(1-11) (2019)

77. Hazra D.*, Mishra S., Moorti A., Chakera J.A.
Electron radiography with different beam parameters using laser plasma accelerator
Physical Review Accelerators and Beams, 22, 074701(1-11) (2019)
78. Hiremath G.B.*, Bennal A.S.*, Mirji S., Hosamani M.M., Badiger N.M.*, Tiwari M.K.
Study of the solid-state effect on L₃ subshell fluorescence yield for high Z targets using Indus-2 synchrotron radiation
Canadian Journal of Physics, 98, 470-473 (2020)
79. Hojbota C.L.*, Kim H.T.*, Shin J.H.*, Aniculaesei C.*, Rao B.S., Nam C.H.*
Accurate single-shot measurement technique for the spectral distribution of GeV electron beams from a laser wakefield accelerator
AIP Advances, 9, 085229(1-9) (2019)
80. Jain S.*, Srivastava S.*, Rajput S.*, Singh L.*, Tiwari P., Srivastava A. K, Kumar M.*
Thermally stable optical filtering using silicon-based comb-like asymmetric grating for sensing applications
IEEE Sensors Journal, 20, 3529-3535(2020)
81. Jana A.R., Kumar A., Kumar V., Roy S.B.
Influence of material parameters on the performance of niobium-based superconducting radiofrequency cavities
Pramana: Journal of Physics, 93, 51 (2019)
82. Jana A.R., Kumar V.
Beam optics studies and lattice design of the 1 GeV H injector linac for ISNS
Nuclear Instruments & Methods in Physics Research A, 942, 162299(1-21) (2019)
83. Jena A.K.*, Satapathy S., Mohanty J.*
Magnetic properties and oxygen migration induced resistive switching effect in Y substituted multiferroic bismuth ferrite
Physical Chemistry Chemical Physics, 21, 15854 (2019)
84. Jana D., Chatterjee A., Sharma T.K.
Confirmation of the compensation of unintentional donors in AlGaN/GaN HEMT structures by Mg-doping during initial growth of GaN buffer layer
Journal of Luminescence, 219, 116904 (2020)
85. Jinoop A.N., Kanmani S.S.*, Paul C.P., Palani I.A.*
Post-processing of laser additive manufactures Inconel 718 using laser shock peening
International Journal of Precision Engineering and Manufacturing, 20, 1621-1628 (2019)
86. Jinoop A.N., Kumar V.A.*, Paul C.P., Ranjan R.*, Bindra K.S.
Hot deformation behavior of Hastelloy-X preforms built using directed energy deposition based laser additive manufacturing
Materials Letters, 270, 127737 (2020)
87. Jinoop A.N., Paul C.P., Bindra K.S.
Laser assisted direct energy deposition of Hastelloy-X
Optics and Laser Technology, 109, 14-19 (2019)
88. Jinoop A.N., Paul C.P., Bindra K.S.
Laser assisted directed energy deposition of nickle super alloys: a review
Journal of Materials: Design and Applications, 233, 2376-24000 (2019)
89. Jinoop A.N., Paul C.P., Bindra K.S.
Laser-assisted directed energy deposition of nickel super alloys: a review
Proceedings of the Institution of Mechanical Engineers L, 233, 2376 (2019)
90. Jinoop A.N., Paul C.P., Denny J.*, Nayak S.K.*, Krishna V.*, Bindra K.S.
Laser additive manufacturing (LAM) of Hastelloy-X thin walls using directed energy deposition (DED): parametric investigation and multi-objective analysis
Lasers in Engineering, 46, 15-34 (2020)

91. Jinoop A.N., Denny J.*, Paul C.P., Kumar J.G.*, Bindra K.S.
Effect of post heat-treatment on the microstructure and mechanical properties of Hastelloy-X structures manufactured by laser based directed energy deposition
Journal of Alloys and Compounds, 797, 399-412(2019)
92. Jinoop A.N., Paul C.P., Mishra S.K., Bindra K.S.
Laser additive manufacturing using directed energy deposition of Inconel-718 wall structures with tailored characteristics
Vacuum, 166, 270-278 (2019)
93. Jinoop A.N., Subbu S.K.*, Paul C.P., Palani I.A.*
Post-processing of laser additive manufactured Inconel 718 using laser shock peening
International Journal of Precision Engineering and Manufacturing, 20, 1621 (2019)
94. Kamal C.
Massless Dirac fermions in stable two-dimensional carbon-arsenic monolayer
Physical Review B, 100, 205404(1-11) (2019)
95. Karthick S.*, Shalini S.*, Prabu S.S.M.*, Suhel K.*, Vandan A.*, Puneet C.*, Kumar S.M., Venkatesh R.*, Palani I.A.*
Influence of quaternary alloying addition on transformation temperatures and shape memory properties of Cu–Al–Mn shape memory alloy coated optical fiber
Measurement, 153, 107379 (2020)
96. Karuppasamy. P.*, Kamalesh T.*, Anitha K.*, Pandian M.S.*, Ramasamy P.*, Verma S.
Design and growth of novel organic molecular Quinoline 4-nitrophenol (QNP) single crystals: for nonlinear optical (NLO) applications
Journal of Molecular Structure, 1210, 128036 (2020)
97. Kaur, P.*, Khanna A.*, Singh M.N., Sinha A.K.
Structural and optical characterization of Eu and Dy doped CaWO₄ nanoparticles for white light emission
Journal of Alloys and Compounds, 834, 154804 (2020)
98. Khamari S.K., Mudi P., Porwal S., Sharma T.K.
Detection of optically injected spin polarized electrons in the L-valley of AlGaAs through polarization resolved photoluminescence excitation spectroscopy
Journal of Luminescence, 213, 204 (2019)
99. Khan A.A., Ahlawat A., Deshmukh P., Sharma R.K.*, Velaga S.*, Singh S., Vaish R.*, Karnal A.K., Satapathy S.
Effect of AFM and FM exchange interaction on magnetic anisotropy properties of single domain SmFeO₃ at nanoscale
Journal of Magnetism and Magnetic Materials, 502, 166505(1-10) (2020)
100. Khan A.A., Ahlawat A., Faisal S.M.*, Singh M.K., Karnal A.K., Satapathy S.
Tuning of spin reorientation temperature of SmFeO₃ by doping of Tm³⁺ ion: role of exchange interaction between 4f & 3d electrons
Journal of Alloys and Compounds, 808, 151603(1-11) (2019)
101. Khan K.M., Dutta S.B., Kumar N., Dalal A., Srivastava A., Krishna H., Majumder S.K.
Inverse spatially-offset Raman spectroscopy using optical fibers: an axicon lens-free approach
Journal of Biophotonics, 12, e201900140 (1-9) (2019)
102. Khan K.M., Majumder S.K.
Depth-sensitive Raman spectroscopy of layered turbid media
Asian Journal of Physics, 29, 113 -126 (2020)
103. Khare S.*, Tiwari N., Bagduwal P.S., Lad M.
Design and development of FPGA-based real-time RF cavity simulator using LabVIEW
International Journal of Electronics Letters, 8, 1015–1029 (2020)

104. Kharey P.*, Dutta S.B.*, Manikandan M.*, Palani I.A.*, Majumder S.K., Gupta S.*
Green synthesis of near-infrared absorbing eugenate capped iron oxide nanoparticles for photothermal application
Nanotechnology, 31, 095705 (2020)
105. Kharey P.*, Dutta S.B.*, Majumder S.K., Gupta S.*
Green synthesis of copper nanoparticles and their applications for plasmonic sensing
Asian Journal of Physics, 29, 179-188 (2020)
106. Koner S., Deshmukh P., Khan A.A., Ahlawat A., Karnal A.K., Satapathy S.
Multiferroic properties of $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3/\text{P}(\text{VDF}-\text{TrFE})$ (0-3) nano-composite films
Materials Letters, 261, 127161 (2020)
107. Krishna H., Majumder S.K.
Optical spectroscopy and imaging for diagnosis of oral cavity neoplasia - a review
Asian Journal of Physics, 29, 87-98 (2020)
108. Krishna H., Shrivastava R., Sharma V., Kumawat J., Kumar N., Khan K.M., Sahu K., Nakhe S.V., Majumder S.K.
TuBerculoScope: a portable fluorescence imaging device for point-of-care diagnosis of pulmonary tuberculosis
Asian Journal of Physics, 29, 143-150 (2020)
109. Kumar A.*, Warshi M.K.*, Mishra V.*, Sati A.*, Banik S., Sagdeo A., Kumar R.*, Sagdeo P.R.
Optical spectroscopy: an effective tool to probe the origin of dielectric loss in Cr doped PrFeO_3
Ceramics International, 45, 8585 (2019)
110. Kumar C.*, Das M.*, Paul C.P., Bindra K.S.
Weld quality assessment in fiber laser weldments of Ti-6Al-4V Alloy
Journal of Materials Engineering and Performance, 28, 3048-3062 (2019)
111. Kumar J., Prakash O., Choudhary N., Mahakud R., Dixit S.K., Nakhe S.V.
Role of UV fluence on the thermal regeneration characteristics of fiber Bragg gratings: experiment and analysis
Measurement Science and Technology, 31, 045204(1-10) (2020)
112. Kumar J., Prakash O., Kumar S., Dixit S.K., Bhardwaj Y.K.*, Nakhe S.V.
Effect of gamma radiation dose on the performance of negative-index fiber bragg gratings
Optical Engineering, 58, 057108(1-9) (2019)
113. Kumar M., Biswas A.K., Biswas T., Joshi J., Rana L.B., Yadav R.K., Kaul R.
Maximizing the efficiency of a compact helium-free TEA CO_2 laser: experimental results and theoretical simulation
Optics Laser Technology, 120, 105764(1-10) (2019)
114. Kumar P., Kumar S., Kumar J., Purbia G.S., Prakash O., Dixit S.K.
Graphene-oxide-coated fiber Bragg grating sensor for ethanol detection in petrol
Measurement Science and Technology, 31, 025109(1-8) (2020)
115. Kumar R.M.*, Mahadevan S.*, Singh M.N.*
Study on the influence of prior cold work on precipitation behavior of 304HCu stainless steel during isothermal aging
Metallurgical and Materials Transactions A, 50, 5476 (2019)
116. Kumar R.*, Yadav A.K.*, Biswas A.*, Nand M.*, Bahadur J.*, Ghosh S., Jha S.N.*, Bhattacharyya D.*
Crystalline Bi_2Se_3 topological insulator films prepared by dc magnetron sputtering
Vacuum, 177, 109366(1-7) (2020)
117. Kumar S.*, Kumar A., Patel A.K.*
TIM barrel fold and glycan moieties in the structure of ICChI, a protein with chitinase and lysozyme activity
Phytochemistry, 170, 112221 (2020)

118. Kumar S.* , Shankar A.* , Kishore N.* , Mukherjee C., Kamparath R., Thakur S.*
Laser-induced damage threshold study on TiO₂/SiO₂ multilayer reflective coatings
Indian Journal of Physics, 94, 105-115 (2020)
119. Laila M. A.* , Tiwari P., Bhatt H.* , Srivastava A.K.
Fabrication of frequency selective metamaterial structure using low-cost laser writer
Vacuum, 170, 108975(1-4) (2019)
120. Laundry D.* , Dhamgaye V., Moxham T.* , Sawhney K.*
Adaptable refractive correctors for x-ray optics
Optica, 6, 1484 (2019)
121. Mahakud R., Kumar J., Prakash O., Dixit S.K.
Temperature dependence of temperature sensitivity of resonant mode of a long period fiber grating
Applied Physics B, 126, 90 (2020)
122. Mahantesha B.K.* , Ravindrachary V.* , Padmakumari R.* , R Sahanakumari R.* , Hegde S.* , Tegginamata P.* , Sanjeev G.* , Verma V.P.
Microstructural, relaxation and transport properties of electron irradiated ion conducting polymer electrolyte for solid state battery applications
Journal of Physics: Conference Series, 1172, 1-6 (2019)
123. Mahantesha B.K.* , Ravindrachary V.* , Padmakumari R.* , Sahanakumari R.* , Tegginamata P.* , Sanjeev G.* , Petwal V.C., Verma V.P.
Effect of electron irradiation on optical, thermal and electrical properties of polymer electrolyte
Journal of Radioanalytical and Nuclear Chemistry, 322, 19-27 (2019)
124. Majumder S.K., Shrivastava R., Dutta S.B.*
Sensitive detection of analytes in body-fluids for biomedical diagnosis: the potential of Raman Spectroscopy
ISRAPS Bulletin, 32, (2020)
125. Mandal A.* , Tiwari J.K.* , Sathish N.* , Paul C.P., Mishra S.K., Venket Ch. A.N.* , Singh A.K.* , Hashmi S.A.R.*
Microstructure and microhardness study of aluminium graphene composite made by laser additive manufacturing
Applied Innovative Research, 1, 67-74 (2019)
126. Mandal S.* , Sharma S.K.* , Gayathri N.* , Sudarshan K.* , Mukherjee P.* , Pujari P.K.* , Menon R.* , Nabhiraj P.Y.* , Sagdeo A.
Synchrotron GIXRD and slow positron beam characterisation of Ar ion irradiated pure V and V-4Cr-4Ti alloy: candidate structural material for Fusion reactor application
Fusion Engineering and Design, 154, 111518 (2020)
127. Manojkumar R.* , Mahadevan S.* , Mukhopadhyay C.K.* , Singh M.N.
Study on the influence of prior cold work on precipitation behavior of 304HCu stainless steel during isothermal aging
Metallurgical and Materials Transactions A, 50, 5476-5482(2019)
128. Mishra C., Chakraborty A., Ram S.P., Singh S., Tiwari V.B., Mishra S.R.
On electromagnetically induced transparency in N-systems in cold 87Rb atoms
Journal of Physics B, 53, 015001(1-8)(2020)
129. Mishra V.* , Kumar A.* , Sagdeo A., Sagdeo P.R.*
Comparative structural and optical studies on pellet and powder samples of BaTiO₃ near phase transition temperature
Ceramics International, 46, 3250-3256 (2020)
130. Mishra S., Hazra D., Moorti A., Chakera J.A.
An experimental and GEANT4 simulation study on design of a broad energy-range magnetic spectrograph for laser plasma accelerator
Journal of Instrumentation, 15, P01034(2020)

131. Mistry B. et al. *, Kane S.R.
Harnessing the N-dopant ratio in carbon quantum dots for enhancing the power conversion efficiency of solar cells
Sustainable Energy & Fuels, 3, 3182 (2019)
132. Mudi P., Khamari S.K., Sharma T.K.
Theoretical prediction and experimental demonstration of inter-valley scattering induced inverse spin hall effect for hot electrons in GaAs
Journal of Applied Physics, 126, 065703(1-9) (2019)
133. Mudi P., Khamari S.K., Sharma T.K.
Role of hot electrons in the development of GaAs-based spin hall devices with low power consumption
Physica Status Solidi, RRL, 14, 2000097(2020)
134. Nayak S.*, Acharya S. *, Baral M., Garbrecht M. *, Ganguli T., Shivaprasad S.M. *, Saha B.
Schottky barrier height of epitaxial lattice-matched TiN/Al_{0.72}Sc_{0.28}N metal/semiconductor superlattice interfaces for thermionic energy conversion
Applied Physics Letters, 115, 251901(1-5) (2019)
135. Nayak S.K., Mishra S.K., Paul C.P., Jinoop A.N., Bindra S.K.
Effect of energy density on laser powder bed fusion built single tracks and thin wall structures with 100 μ m preplaced powder layer thickness
Optics & Laser Technology, 125, 106016(1-10) (2020)
136. Nath S.K., Naik V. *, Chakrabarti A. *, Ray A. *
Discriminating electromagnetically induced transparency from Autler–Townes splitting in a Ξ system
Journal of the Optical Society of America B, 36, 2610-2617 (2019)
137. Nidhin S.L., Joshi S.C., Paul C.P., Senecha V.K., Sharma N.K., Kane G.V.
An efficient algorithm for computation of spatial heat generation during interaction of high energy proton beam with target materials
Nuclear Instruments & Methods in Physics Research B, 461, 16-24 (2019)
138. Oraon A. *, Oraon R. *, Ghosh S. *, Aich S. *, Sinha G.
Simulation-based design of optimized symmetric MRI magnet modified with ferromagnetic shell
IEEE Transactions on Magnetics, 56, 8000207 (2020)
139. Pal S., Mukherjee S. *, Nand M. *, Srivastava H., Mukherjee C., Jha S.N. *, Ray S.K. *
Si compatible MoO₃/MoS₂ core-shell quantum dots for wavelength tunable photodetection in wide visible range
Applied Surface Science, 502, 144196(1-8) (2020)
140. Panda M.R. *, Sinha A.K. et al.
Blocks of molybdenum ditelluride: a high rate anode for sodium-ion battery and full cell prototype study
Nano Energy, 64, 103951(1-13) (2019)
141. Pandey A.H. *, Reddy V.R. *, Nigam A.K. *, Gupta S.M.
Investigation of re-entrant relaxor behaviour in lead cobalt niobate ceramic
Acta Materialia, 177, 160-168 (2019)
142. Pandey D., Chakrabarti A.
Prediction of two-dimensional monochalcogenides: MoS and WS
Physics Letters A, 383, 2914-2921 (2019)
143. Pandey A.H., Gupta S.M.
Role of charge compensation mechanism on phase formation, dielectric and ferroelectric properties in aliovalent Gd³⁺ ion modified PbMg_{1/3}Nb_{2/3}O₃ ceramics
Materials Science and Engineering B, 253, 114495 (2020)
144. Pandey D., Kamal C., Chakrabarti A.
Intercalation of transition metals in aluminene bilayers: an ab initio study
Journal of Chemical Physics, 150, 194702(1-13) (2019)

145. Pandey A.H., Gupta S.M.
Role of charge compensation mechanism on phase formation, dielectric and ferroelectric properties in aliovalent Gd³⁺-ion modified PbMg_{1/3}Nb_{2/3}O₃ ceramics
Materials Science and Engineering B, 253, 114495 (2020)
146. Pandian M.S.*, Verma S., Ramasamy P.*, Singh G., Gupta S.M., Tiwari V.S., Karnal A.K.
Growth of [010] oriented urea-doped triglycine sulphate (Ur-TGS) single crystals below and above Curie temperature (T_c) and comparative investigations of their physical properties
Applied Physics A, 126, 492(2020)
147. Patra N.*, Prajapat C.L.*, Babu P.D.*, Rai S., Kumar S.*, Jha S.S.*, Bhattacharyya D.*
Pulsed laser deposited Co₂FeSi Heusler alloy thin films: effect of different thermal growth processes
Journal of Alloys and Compounds, 804, 470-485 (2019)
148. Paul S., Sharad Chandra L.S., Chattopadhyay M.K.
Renormalization of electron–phonon coupling in the Mott–Ioffe–Regel limit due to point defects in the V_{1-x}Ti_x alloy superconductors
Journal of Physics: Condensed Matter, 31, 475801 (1-8) (2019)
149. Paul S., Sharath Chandra S.L., Chattopadhyay M.K.
Two channel heat conduction in the superconducting state of the as-cast VZr alloys
Physica B: Condensed Matter, 577, 411763(1-4) (2020)
150. Paul N., Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Effect of spectral filtering on pulse duration in dissipative soliton resonance (DSR) regime of modelocked fiber laser
Review of Scientific Instruments, 90, 106102 (1-3) (2019)
151. Paul N.*, Singh C.P., Gupta P.K., Mukhopadhyay P.K., Bindra K.S.
Investigation of stimulated Raman scattering in a mode-locked ytterbium-doped fiber amplifier setup
Laser Physics, 29, 095101 (2019)
152. Pervin R.*, Ghosh A., Ghosh H., Shirage P.M.*
Study of transport properties in Se-deficient and Fe-intercalated NbSe₂ single crystals: experiment and theory
Journal of Materials Science, 55, 250-262 (2020)
153. Prajapat D.*, Sagdeo A., Reddy V.R.*
Structural, magnetic and dielectric properties of vanadium substituted four layered Aurivillius Bi₂FeTi₃O₁₅ ceramics
Ceramics International, 45, 19093-19097 (2019)
154. Puhan A.*, Bhushan B.*, Satapathy S., Meena S.S.*, Nayak A.K., Rout D.*
Facile single-phase synthesis of Sr, Co co-doped BiFeO₃ nanoparticles for boosting photocatalytic and magnetic properties
Applied Surface Science, 493, 593-604 (2019)
155. Raghuwanshi S.K.*, Kumar M.*, Jindal S.K.*, Kumar A.*, Prakash Om
High-sensitivity detection of hazardous chemical by special featured grating-assisted surface plasmon resonance sensor based on bimetallic layer
IEEE Transactions on Instrumentation and Measurement, 69, 5072-5080 (2020)
156. Rai A.K., Biswal R., Gupta R.K., Rai S.K., Singh R., Goutam U.K., Ranganathan K., Ganesh P., Kaul R., Bindra K.S.
Enhancement of oxidation resistance of modified P91 grade ferritic-martensitic steel by surface modification using laser shock peening
Applied Surface Science, 495, 143611(1-12) (2019)
157. Raj S.S.*, Rajan P.I.*, Ghosh N.*, Mahalakshmi S.*, Chattopadhyay M.K., Navamathavan R.*
Physical properties and electronic structure of YbFe₂As₂

- Journal of Magnetism and Magnetic Materials*, 493, 165736(1-7) (2020)
158. Rajput S.*, Kaushik V.*, Jain S.*, Tiwari P., Srivastava A.K., Kumar M.*
Optical modulation in hybrid waveguide based on Si-ITO heterojunction
Journal of Lightwave Technology, 38, 1365-1371 (2020)
159. Ramakrishna B.*, Krishnamurthy S.*, Tayyab M., Bagchi S., Makur K.*, Chakera J.A. et al
Ion source perturbation and control in intense laser plasma interaction
Matter and Radiation at Extremes, 5, 045402(1-6) (2020)
160. Ramovatar*, Coondoo I.*, Kumar P.*, Khan A.A., Satapathy S., Panwar N.*
Observation of large electrocaloric properties in lead-free $\text{Ba}_{0.98}\text{Ca}_{0.02}\text{Ti}_{0.98}\text{Sn}_{0.02}\text{O}_3$ ceramics
AIP Advances, 9, 055010(1-6) (2019)
161. Rao T.L.*, Pradhan M.K.*, Goutam U.K., Siruguri V.*, Reddy V.R.*, Dash S.*
Substitution induced magnetic phase transitions and related electrical conduction mechanisms in LaFeO_3 nanoparticle
Journal of Applied Physics, 126, 064104(1-12) (2019)
162. Rashid N.*, Bhat M.A.*, Goutam U.K., Ingole P.P.*
Electrochemical reduction of CO_2 to ethylene on $\text{Cu}/\text{Cu}_x\text{O}$ -GO composites in aqueous solution
RSC Advances, 10, 17572-17581 (2020)
163. Rathore R., Singhal H., Chakera J.A.
Temporal evolution of photo-induced thermal strain in InSb probed by ultra-short laser produced $\text{Cu K}\alpha$ x-rays
Journal of Applied Physics, 126, 105706(1-8) (2019)
164. Rawat R.*, Choudhary R.J.*, Awasthi A.M.*, Raghunathan R.*, Sagdeo A., Sinha A.K., Chaudhary S.*, Patnaik S.*, Phase D.M.*
Magneto-dielectric coupling and non-ergodic electrical behaviour in hexagonal $\text{Sr}_{0.6}\text{Ba}_{0.4}\text{MnO}_3$ via local strain driven magnetic ordering
Journal of Magnetism and Magnetic Materials, 497, 165972(1-7) (2020)
165. Reddy S.S. *, Sinha A.K., Amarendra G.*, Shekar N.V.C.*, Bhalerao G.M.*
Enhancement of graphitic order in carbon black using precursor additive
Diamond and Related Materials, 101, 107539(1-7) (2020)
166. Roy A.*, Bhatt H.*, Poswal H.K.*, Verma A.*, Deo M.N.*, Mondal P., Srihari V.*
Effect of site-disorder on microstructure and phase evolution of $\text{Ho}_{1-x}\text{Dy}_x\text{MnO}_3$
Journal of Solid State Chemistry, 285, 121222 (2020)
167. Sadhukhan P.*, Barman S.*, Roy T., Singh V.K.*, Sarkar S.*, Chakrabarti A., Barman S.R.*
Electronic structure of Au-Sn compounds grown on Au(111)
Physical Review B, 100, 235404(1-14) (2019)
168. Sadhukhan P.*, Pandey D., Singh V.K.*, Sarkar S.*, Rai A.*, Bhattacharya K.*, Chakrabarti A., Barman S.R.*
Electronic structure and morphology of thin surface alloy layers formed by deposition of Sn on Au(1,1,1)
Applied Surface Science, 506, 144606 (2020)
169. Sahlot P.*, Sharma G.*, Sathe V.*, Sinha A.K., Awasthi A.M.*
Interplay of spin, lattice, vibration, and charge degrees of freedom: magneto-dielectricity in $\text{Ca}_3\text{Mn}_2\text{O}_7$
Journal of the American Ceramic Society, 103, 3238-3248 (2020)
170. Sahu, V.K., Das A.K., Ajimsha R.S., Misra P.
Low power high speed 3-bit multilevel resistive switching in TiO_2 thin film using oxidisable

- electrode
Journal of Physics D: Applied Physics, 53, 225303(1-8)(2020)
171. Saini S.K.*, Dubey A.K.*, Upadhyay B.N.
Study and optimization of recast layer thickness and surface quality in laser trepan drilling of ZTA
The International Journal of Advanced Manufacturing Technology, 103, 2977–2989 (2019)
172. Saini V.K., Talwar S., Subrahmanyam V.V.V., Mishra R.K., Saini P.K., Dixit S.K.
Laser isotope separation scheme of lithium by three-color photoionization
Physica Scripta, 95, 075403(-10)(2020)
173. Sarkar P.*, Biswas A.*, Ghosh S.K.*, Rai S., Modi M.H., Bhattacharyya D.*
Interface evolution of Co/Ti multilayers with ultra-short period
Thin Solid Films, 693, 137688 (2020)
174. Saxena S., Bagchi S., Rao B.S., Naik P.A., Chakera J.A.
Corrections to “Single-Shot Terahertz Time Profiling Using Curved Wavefront” [Sep 18 528-534]
IEEE Transactions on Terahertz Science and Technology, 9, 470-485 (2019)
175. Saxena S., Bagchi S., Tayyab M., Rao B.S., Kumar S.*, Gupta D.N., Chakera J.A.
Scaling up and parametric characterization of two-color air plasma terahertz source
Laser Physics, 30, 036002 (2020)
176. Sharath Chandra L.S., Paul S., Khandelwal A., Kaushik V.*, Sagdeo A., Venkatesh R.*, Kumar K.*, Banerjee A.*, Chattopadhyay M.K.
Structural and magnetic properties of the as-cast $V_{1-x}Zr_x$ alloy superconductors
Journal of Applied Physics, 126, 183905 (2019)
177. Sharath Chandra L.S., Shyam S., Banik S., Ramjan S.K., Chattopadhyay M.K., Jha S.N.*, Roy S.B.*
Localization of electronic states resulting from electronic topological transitions in the $Mo_{1-x}Re_x$ alloys: a photoemission study
Journal of Applied Physics, 127, 163906(1-6) (2020)
178. Sharma A.K., Joshi A.S.
On the estimation of absolute grating groove density and inter-grating groove density errors of laser pulse compression gratings
Sadhana, 44, 1-7 (2019)
179. Sharma A.K.
Quasi single-shot two-pulse tilted pulse front autocorrelator coupled with spatial chirp and spectral divergence monitor for ultrashort pulsed laser beams
Optics Communications, 453, 124429(1-8)(2019)
180. Sharma D.K., Jain A., Pathak K., Lad M.
Compact dual-channel radio frequency power sensor for solid state amplifiers
Nuclear Instruments & Methods in Physics Research A, 944, 162559(1-7)(2019)
181. Sharma N.K., Paul C.P., Joshi S.C., Kane G.V., Chaturvedi A.
Multiphysics analysis for thermal management of a 3 MeV, 325 MHz radio frequency quadrupole accelerator for Indian Spallation Neutron Source
Journal of Electromagnetic Analysis and Applications, 11, 55-78 (2019)
182. Sharma N.K., Paul C.P., Joshi S.C., Kane G.V., Chaturvedi A.
Coupled 3D multiphysics analysis of 325 MHz ISNS RFQ structure
Nuclear Instruments & Methods in Physics Research A, 937, 59-71 (2019)
183. Sharma S.*, Singh A.K., Tiwari M.K., Uttam K.N.*
Prompt screening of the alterations in biochemical

- and mineral profile of wheat plants treated with chromium using attenuated total reflectance fourier transform infrared
Analytical Letters, 53, 085229(1-9) (2019)
184. Shiva S.*, Yadaiah N.*, Palani I.A.*, Paul C.P., Bindra K.S.
Thermo mechanical analyses and characterizations of TiNiCu shape memory alloy structures developed by laser additive manufacturing
Journal of Manufacturing Processes, 48, 98-109 (2019)
185. Shukla B.*, Kumar S.N.R.*, Kaur G.*, Shekar N.V.C.*, Sinha A.K.
Compressibility and thermal expansion study of δ -UZr₂ at high pressure and high temperature
Journal of Alloys and Compounds, 813, 152214(1-7) (2020)
186. Shukla B.*, Kumar N.R.S.*, Shekar N.V.C.*, Jena H.*, Sinha A.K.
Structural studies & thermal expansion behavior of samarium uranate at HP-HT
Journal of Alloys and Compounds, 771, 1029-1035 (2019)
187. Shukla M.*, Banik S., Pandey R.K.*, Upadhyay C.*
Role of chemical pressure on optical and electronic structure of Ho₂Ge_xTi_{2-x}O₇
Journal of Physics: Condensed Matter, 32, 115501(1-17) (2020)
188. Siddiqui A.A.*, Dubey A.K.*, Paul C.P.
Geometrical characteristics in laser surface alloying of a high-entropy alloy
Lasers in Engineering (Old City Publishing), 43, 237-259 (2019)
189. Siddiqui A.A.*, Dubey A.K.*, Paul C.P.
A study of metallurgy and erosion in laser surface alloying of Al_xCu_{0.5}FeNiTi high entropy alloy
Surface & Coatings Technology, 361, 27-34 (2019)
190. Singh A., Gurung S., Chari R., Jayabalan J.
Counting the electrons hopping in ultrafast time scales in an Ag–CdTe hybrid nanostructure
Journal of Physical Chemistry C, 123, 28584-28592 (2019)
191. Singh A.K.*, Dubey D.N.*, Singh G., Tripathi S.*
Unambiguous evidence of three coexisting ferroelectric phases in a lead-free Li_xNa_{1-x}NbO₃ system
Applied Physics Letters, 116, 232902(1-6) (2020)
192. Singh A., Sharma S.K., Mukhopadhyay P.K., Bindra K.S.
260 W of average green beam generation by intracavity frequency-doubled acousto-optic Q-switched Nd:YAG laser
Journal of Optics, 48, 512–519 (2019)
193. Singh G., Reshma S.S.*, Selvamani R., Tiwari V.S., Karnal A.K.
Investigations on vacuum sintered ytterbium-doped YAG ceramic: a laser–host material
Bulletin of Materials Science, 42, 273 (2019)
194. Singh G., Singh A.K.*, Selvamani R., Tiwari V.S., Karnal A.K.
Effect of lanthanum substitution on structural, dielectric and piezoelectric properties of (Na_{0.41}K_{0.09}Bi_{0.5})TiO₃: a lead-free piezoelectric material
Solid State Communications, 298, 113637(1-6) (2019)
195. Singh J.*, Sharma R.K.*, Goutam U.K.*, Sule U.S.*, Gupta J.*, Gadkari S.C.*, Rao P.N.
Orientation study of Iron Phthalocyanine (FePc) thin films deposited on silicon and gold surfaces
Materials Research Express, 6, 016411 (2019)
196. Singh M.*, Raghuwanshi S.K.*, Prakash O.
Ultra-sensitive fiber optic gas sensor using graphene oxide coated long period gratings
IEEE Photonics Technology Letters, 31, 1473-1476 (2019)

197. Singh, N., Nand M.*, Jha S.N.*, Raghavendra S.
Study of valence band electronic states of near-surface atoms of niobium used for superconducting cavity
Journal of Electron Spectroscopy and Related Phenomena, 240, 146942(2020)
198. Singh S.*, Raj K.A.*, Panda M.R.*, Sen R.*, Johari P.*, Sinha A.K., Meena S.S.*, Mitra S.*
Study of higher discharge capacity, phase transition, and relative structural stability in $\text{Li}_2\text{FeSiO}_4$ cathode upon lithium extraction using an experimental and theoretical
Applied Energy Materials, 2, 6112-6959 (2019)
199. Singh S., Tiwari V.B., Mishra S.R.
Cooling of fermionic ^{83}Kr and bosonic ^{84}Kr isotopes in a magneto-optical trap
Pramana Journal of Physics, 93, 237-242 (2019)
200. Singh, V., Tiwari V.B., Mishra S.R.
On the continuous loading of a U-magneto-optical trap on an atom-chip in an ultra high vacuum
Laser Physics Letters, 17, 035501 (2020)
201. Singh V.K.*, Taya P., Jana D.*, Tyagi R.*, Raghavan S.*, Sharma T.K.
On the determination of alloy composition using optical spectroscopy in MOVPE grown InGaN layers on Si(111)
Superlattices and Microstructures, 134, 106234(1-9)(2019)
202. Sinha G., Mandal S.S.*
A theoretical model for designing superconducting magnets
IEEE Transactions on Applied Superconductivity, 30, 4000306 (2020)
203. Souza A.D.*, Rayaprol S.*, Sagdeo A., Sinha A.K., Daivajna M.*
Magnetic phase transformation in $\text{La}_{0.7-x}\text{Bi}_x\text{Sr}_{0.3}\text{MnO}_3$ ($0.25 \leq x \leq 0.40$)
Journal of Magnetism and Magnetic Materials, 511, 166966(1-14)(2020)
204. Sudheer, Mukherjee C., Sinha A.K., Rai S.K., Reddy V.R.*, Rai V.N., Srivastava A.K.
Dynamics of instability in plasmonic response of nanostructured gold thin films on ambient ageing
Surfaces and Interfaces, 19, 100486(1-8) (2020)
205. Surampalli A.*, Schiesaro I.*, Corsi P.*, Meneghini C.*, Sathe V.G.*, Sagdeo A., Sinha A.K., Aquilanti G.*, Welter E.*, Reddy V.R.*
Evidence of structural modifications in the region around the broad dielectric maxima in the 30% Sn-doped barium titanate relaxor
Physical Review B, 100, 134104(1-10) (2019)
206. Kamlesh T.*, Karuppasamy P.*, Senthilkumar C.*, Pandian M.S.*, Ramasamy P.*, Verma S.
Growth, structural, Hirshfeld surface, optical, laser damage threshold, dielectric and chemical etching analysis of 4-dimethylaminopyridinium 4-nitrophenolate 4-nitrophenol
Journal of Materials Science: Materials in Electronics, 31, 373–386 (2020)
207. Tayyab M., Bagchi S., Moorti A., Chakera J.A.
Experimental investigation on nuclear reactions using a laser-accelerated proton and deuteron beam
Plasma Physics and Controlled Fusion, 61, 115007(1-9) (2019)
208. Tiwary S., Kuila S.*, Sahoo M.R., Barik A., Ghosh R., Sinha A.K. et al.
Effect of crystal symmetries and phase boundaries on the magnetoelectricity of $\text{La}_2\text{NiMnO}_6$ prepared under ambient conditions
Journal of Applied Physics, 127, 214101(1-10) (2020)
209. Vali I.P.*, Shetty P.K.*, Mahesha M.G.*, Petwal V.C., Dwivedi J., Phase D.M.*, Choudhary R.J.
Electron and gamma irradiation effects on $\text{Al}/n_x\text{4H-SiC}$ Schottky contacts
Vacuum, 172, 109068(1-6) (2020)
210. Vavilapalli D.S.*, Banik S., Peri R.G.*, Muthuraaman B.*, Miryala M.*, Murakami M.*

- Alicja K.*, Asokan K.*, Ramachandra Rao M.S.*, Singh S.*
Nitrogen incorporated photoactive Brownmillerite $\text{Ca}_2\text{Fe}_2\text{O}_5$ for energy and environmental applications
Scientific Reports, 10, 2713 (2020)
211. Verma, A.*, Yadav A.K.*, Kumar S.*, Srihari V., Jangir R., Poswal H.K.*, Biring S.*, Sen S.*
Structural, thermally stable dielectric, and energy storage properties of lead-free $(1-x)(\text{Na}_{0.50}\text{Bi}_{0.50})\text{TiO}_3-x\text{KSbO}_3$ ceramics
Journal of Materials Science: Materials in Electronics, 30, 15005–15017 (2019)
212. Verma S., Rao B.T., Jayabalan J., Rai S.K., Phase D.M.*, Srivastava A.K., Kaul R.
Studies on growth of Au cube-ZnO core-shell nanoparticles for photocatalytic degradation of methylene blue and methyl orange dyes in aqueous media and in presence of different scavengers
Journal of Environmental Chemical Engineering, 7, 103209(1-13) (2019)
213. Verma, P.*, Sarkar D.*, Rajput P.*, Singh M.N., Sharma R.*, Giri S.*
Synchrotron-based x-ray analysis: relating compressive lattice strain with the photoluminescence intensity of Li^+ -doped $\beta\text{-NaYF}_4:\text{Yb}^{3+}/\text{Ln}^{3+}$ ($\text{Ln}^{3+} = \text{Ho}^{3+}/\text{Er}^{3+}/\text{Tm}^{3+}$) upconversion crystals
Crystal Growth & Design, 20, 468–478 (2020)
214. Warshi M.K.*, Kumar A.*, Sati A.*, Thota S.*, Mukherjee K.*, Sagdeo A., Sagdeo P.R.*
Cluster glass behavior in orthorhombic SmFeO_3 perovskite: interplay between spin ordering and lattice dynamics
Chemistry of Materials, 32, 1250-1260 (2020)
215. Yadav A.*, Fahad M.*, Satapathy S. Sarun P.M.*
Effect of tantalum on the temperature dependent electrical characteristics of $\text{NaNb}_{1-x}\text{Ta}_x\text{O}_3$ ($0.0 \leq x \leq 0.3$) ceramics between 400 and 560_x°C
Journal of Alloys and Compound, 797, 902-911 (2019)
216. Yadav P.*, Sagdeo A., Sinha A., Lalla N.P.*
Rubbing induced strain-glass phase on ceramic BaTiO_3 surface
Ceramics International, 45, 19044-19048 (2019)
217. Yadav P.K., Kumar M., Gupta R.K., Sinha M., Chakera J.A., Modi M.H.
Refurbishment of an Au-coated toroidal mirror by capacitively coupled RF plasma discharge
Journal of Synchrotron Radiation, 26, 1152-1160 (2019)
218. Yadav P.K.*, Singh P.*, Shukla M.*, Banik S., Upadhyay C.*
Effect of B-site substitution on structural, magnetic and optical properties of $\text{Ho}_2\text{Ti}_2\text{O}_7$ pyrochlore oxide
Journal of Physics and Chemistry of Solids, 138, 109267(1-9) (2020)
219. Yadav R.K.*, Aneesh J.*, Sharma R.*, Salvi M., Jayabalan J., Jain.H.*, Adarsh K.V.*
Giant enhancement of nonlinear absorption in graphene oxide- Sb_2Se_3 nanowire heterostructure
Journal of Applied Physics, 125, 025702(1-8) (2019)
220. Yadav, S., Jinoop A.N., Sinha N., Paul C.P., Bindra K.S.
Parametric investigation and characterization of laser directed energy deposited copper-nickel graded layers
International Journal of Advanced Manufacturing Technology, 108, 3779–3791 (2020)
221. Yadav S., Puntambekar T.A., Varde P.V.*
Measurement and parametric analysis of transverse coupled bunch instabilities for electron synchrotron radiation source Indus-2
Journal of Instrumentation, 14, T10004 (2019)

222. Yogi P., Mondal P., Khan S., Singh A., Chari R., Kumar R.*, Jayabalan J.
Spatial delocalization of absorption and emission process in silicon nanowires
Journal of Luminescence, 214, 116551 (2019)

B. Book Chapters

1. Derek J.*, Jinoop A. N., Paul C.P., Nidhin S. L., Rasu N. G.*, Bindra K.S.
Investigating the effect of geometry on micro-channel heat exchangers using CFD analysis
Advances in Fluid and Thermal Engineering: Select Proceedings of FLAME 2018, Edited by Pankaj Saha, P.M.V. Subbarao, Basant Singh Sikarwar, Singapore, Springer, 2019, 978-981-13-6418-1, pp. 401-408
2. Kumar C.*, Das M.*, Paul C.P., Singh B.
Experimental study of fiber laser weldments of 5 mm thick Ti-6Al-4V alloy
Application of Lasers in Manufacturing: Select Papers from AIMTDR 2016, Edited by Uday Shanker Dixit, Shrikrishna N. Joshi, J. Paulo Davim, Singapore, Springer, 2019, 978-981-13-4449-7, pp. 45-67
3. Shiva S.*, Brown S.*, Cockburn A.*, Palani I. A.*, Paul C.P., O'Neill W*
Evolution in additive manufacturing techniques of metals as net-shaped products
Near Net Shape Manufacturing Processes, Edited by Kapil Gupta, Cham, Springer, 2019, 978-3-030-10578-5, pp. 55-77
4. Shiva S.*, Palani I.A.*, Paul C.P., Singh B.
Comparative investigation on the effects of laser annealing and laser shock peening on the As-manufactured Ni-Ti shape memory alloy structures developed by laser additive manufacturing
Application of Lasers in Manufacturing: Select Papers from AIMTDR 2016, Edited by Uday

Shanker Dixit, Shrikrishna N. Joshi, J. Paulo Davim, Singapore, Springer, 2019, 978-981-13-4449-7, pp. 1-20

C. Invited Talks

1. Banerjee A.
Remarkable structural effect on the gold-hydrogen analogy in hydrogen-doped gold cluster
1st DAE-BRNS Computational Chemistry Symposium, BARC, Mumbai, Nov. 7-9, 2019
2. Banerjee A.
Basics of density functional theory
Workshop on Density Functional Theory and its applications using Gaussian software, MNIT, Jaipur, Feb. 24-28, 2020
3. Deshpande P.P.
Supervisory control & data acquisition system for lasers & applications
28th DAE-BRNS National Laser Symposium (NLS-28), VIT, Chennai, Jan. 8-11, 2020
4. Dixit S.K.
Fiber sensor activities at RRCAT: technology development to field deployment
28th DAE-BRNS National Laser Symposium (NLS-28), VIT, Chennai, Jan. 8-11, 2020
5. Ghodke A.D.
Operational status of Indus accelerator facilities at RRCAT and planning of new high brightness light source in India
22nd National Symposium on Radiation Physics (NSRP-22), JNU, New Delhi Nov. 8-10, 2019
6. Ghosh Harnath
Basics of density functional theory and applications
National Webinar Series on Experimental & Computational Tools for Materials Research (ECTMR), IIITDMJ, Jabalpur & CUARAJ, Bandarsindri, Rajasthan, June 01-08, 2020

7. Ghosh Harnath
High temperature superconductivity in Fe-based materials; role of electronic structure studies
Colloquium at Physical Research Laboratory, K.R. Ramanathan Auditorium, PRL, Ahmedabad, Dec 4, 2019
8. Ingale A.
Unravelling the mystery of variation in Raman spectra of Si-SiO₂ nanocomposites using Raman and atomic force microscopy.
National Conference on Light Matter Interaction at Nanoscale, IGCAR, Kalpakkam, July 15-17, 2019
9. Jayabalan J.
Static & ultrafast optical response of metal-Semiconductor Hybrid Nanostructures,
National Symposium on Light - Matter Interactions (NSLIMI 2019), IIT- Madras, Chennai on Dec. 26, 2019
10. Majumder S.K.
Lasers in biomedical applications
DST Science Camp on Innovation in Science Pursuit for Inspired Research (INSPIRE), Smriti College of Pharmaceutical Education, Indore, Dec. 20, 2019
11. Majumder S.K.
Use of light for early detection of oral cancer
The Office of the Senior Superintendent of Police, Indore, Dec. 11, 2019
12. Majumder S.K.
Early detection of oral cancer - use of light as a tool
Seminar on Oral Cancer Detection, Aayakar Bhawan, Indore, Nov. 19, 2019
13. Majumder S.K.
Photonics for early diagnosis of oral cancer
Biennial Joint Conference of ISO-ISMPO 2019, Hotel Sayaji, Indore, Nov. 1-3, 2019
14. Majumder S.K.
Early diagnosis of oral cancer -the photonics way
Training & Education in Surgical Oncology Workshop on ORAL CANCER, AMC Dental College & Hospital, Ahmedabad, Sep. 25, 2019
15. Majumder S.K.
Probing sub-surface depths in layered turbid media – Raman spectroscopy as a tool
28th DAE-BRNS National Laser Symposium (NLS-28), VIT, Chennai, Jan. 8-11, 2020
16. Majumder S.K.
Laser assisted hyperthermia of tumor - a review
11th Biennial Conference of Indian Association of Hyperthermic Oncology & Medicine, Nanavati Super Speciality Hospital, Mumbai, Feb. 15-16, 2020
17. Majumder S.K.
Optical spectroscopy and imaging for oral cancer diagnosis- a journey from lab to clinic
8th International Translational Cancer Research Conference: Role of Inflammation and Immune System for Cancer Prevention and Treatment, Institute of Science, Banaras Hindu University, Varanasi, Feb 14-19, 2020
18. Majumder S.K.
Sensitive detection of bio-analytes in body-fluids –the prospect of Raman spectroscopy
International Conference on Emerging Areas in Biosciences and Biomedical Technologies (eBBT2), IIT, Indore, Feb. 7-9, 2020
19. Majumder S.K.
Sensitive detection of analytes in body-fluids for biomedical diagnosis: the potential of Raman spectroscopy
15th DAE-BRNS Trombay Symposium on Radiation & Photochemistry, DAE Convention Centre, Anushaktinagar, Mumbai, Jan. 5-9, 2020

20. Misra P.
Resistive switching memories: prospects and challenges
National E-Conference on Interdisciplinary Research in Science and Technology (NCIRST-20), AIDC, Lucknow University, Lucknow, May 30-31, 2020
21. Moorti A.
Electron acceleration using laser fields at extreme intensities in plasmas: an advanced accelerator concept
DAE-BRNS Theme Meeting on Ultrafast Sciences-2019 (UFS-2019), IIT-Bombay, Mumbai, Nov. 7-9, 2019
22. Nayak, M.
Indigenous development of x-ray optics: trends & challenges
CSIR- Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh, Jan. 27, 2020
23. Sharma T.K.
Development of the state of the art optoelectronic devices based on GaAs and GaN Semiconductors,
XX Int. Workshop on The physics of Semiconductor Devices, S. N. Bose National Centre for Basic Sciences, Kolkata, Dec. 17-20, 2019
24. Sharma T.K.
Epitaxial growth of semiconductor quantum structures (quantum well, wires and dots),
DST - SERB School on Photonics Phenomena, Materials and Devices, Anna University, Chennai, Dec. 6, 2019
25. Upadhyaya B. N.
Development of high power fiber lasers at RRCAT: challenges and opportunities
Workshop on High Power Fiber Laser: Opportunities and Challenges, CGRI, Kolkata, Feb. 27-28, 2020
26. Verma S.
Crystal growth and characterization techniques for investigating the optical properties and defects structure of laser and NLO crystals
ILA Course on Laser & NLO Materials: Development and Characterization, VIT, Chennai, Jan. 6-7, 2020
27. Verma S.
Techniques for investigating the kinetics of crystal growth process, measuring device relevant properties and establishing correlation with the defects structure of crystals
24th National Seminar on Crystal Growth and Applications (NSCGA-2020), Periyar University, Salem, TN, Feb. 3-5, 2020
28. Verma S.
Crystal growth of NLO and detector crystals, and investigating their optical quality using interferometry and defects structure using x-ray topography
Indian Summer School on Crystal Growth-2020, SSN Institution, Chennai, May 14-23, 2020

D. Seminar/Conference Presentations

D.1 Biennial Joint Conference of ISO-ISMPO 2019, Hotel Sayaji, Indore, Nov. 1-3, 2019

1. Alka, Khan K.M., Krishna H., Majumder S.K.
Combined confocal Raman spectroscopy-swept source optical coherence tomography for analyzing FFPE blocks of breast
2. Anita, Srivastava A., Sahu K., Khan K.M., Shrivastava R., Majumder S.K.
Detection of cancer causing formalin in milk using Raman spectroscopy
3. Bose A., Sahu K., Taraphdar D.B.*, Majumder S.K.
Synergistic anticancer effect of vitamin E (gamma-tocopherol) and lycopene for prostate cancer: a hypothesis
4. Dutta S.B.*, Krishna H., Gupta S.*, Majumder S.K.
Applicability of fluorescence photo-bleaching of

- urine in oral cancer diagnosis
5. Khan K.M., Sharma V., Krishna H., Nakhe S.V., Majumder S.K.
Development of an artefact-free Raman probe for analyzing biological tissues related to neoplasia
 6. Khan K.M., Sahu K., Vaze A.*, Krishna H., Shrivastava R., Kumawat J., Kumar N., Panchonia A.*, Majumder S.K.
Evaluation of Raman spectroscopy for ex-vivo diagnosis of oral cancer: a preliminary study on formalin fixed oral tissues
 7. Krishna H., Khan K.M., Chaturvedi P.*, Nayyar S.S.*, Nakhe S.V. Majumder S.K.
OncoVision: a low cost fluorescence imaging tool for improved identification of oral cavity lesions
 8. Krishna H., Khan K.M., Sharma V., Chaturvedi P.*, Nayyar S.S.*, Nakhe S.V. Majumder S.K.
OncoDiagnoScope - a stand-alone, field-usable optical spectroscopy based point-of-care device for non-invasive screening of oral cancer
 9. Kumar V., Srivastava A., Dutta S.B.*, Shrivastava R., Krishna H., Majumder S.K.
Raman spectroscopy for detection of hydroxyurea in urine: A feasibility study
 10. Sahu K., Khan K.M., Vaze A.*, Kumawat J., Shrivastava R., Kumar N., Panchonia A.*, Krishna H., Nayyar S.S.*, Majumder S.K.
Evaluation of Raman spectroscopy for breast cancer diagnosis: a preliminary study on formalin fixed breast tissue
 11. Sahu K., Majumder S.K.
Effect of low dose photodynamic therapy on colon carcinoma cells
 12. Sahu K., Shrivastava R., Majumder S.K.
Delta-aminolevulinic acid methyl ester for photodynamic treatment of human colon adenocarcinoma cells
 13. Shrivastava R., Sahu K., Khan K.M., Kumar N., Kumawat J., Panchonia A.*, Soni P.*, Majumder S.K.
Raman spectroscopy based diagnosis of leukemia in whole blood and plasma: a feasibility study
 14. Shrivastava R., Taraphdar D.B.*, Sahu K., Majumder S.K.
Effect of metformin on mice insulinoma cells
 15. Srivastava A., Khan K.M., Sahu K., Dutta S.B.*, Majumder S.K.
Detection of cancer causing formalin in fish using Raman spectroscopy
 16. Taraphdar D.B.*, Sahu K., Bose A., Shrivastava R., Majumder S.K.
Probiotics as anticancer agent: a hope!
 17. Vaze A.*, Khan K.M., Krishna H., Srivastava A., Kumar V., Anita, Sahu K., Nayyar S.S.*, Majumder S.K.
Optical spectroscopy to differentiate between tobacco consumers and non-consumers: a cross-sectional study
 18. Vaze A.*, Krishna H., Kumar V., Sahu K., Khan K.M., Srivastava A., Anita, Kumar N., Majumder S.K.
Clinical validation of optical fluorescence spectroscopy for screening of oral cancers and precancers: a cross-over Study
 19. Vaze A.*, Sahu K., Khan K.M., Kumawat J., Shrivastava R., Kumar N., Panchonia A.*, Majumder S.K.
Raman spectroscopy of a locally advanced breast cancer sample preserved in formalin: a case study

D.2 22nd National Symposium on Radiation Physics (NSRP-22), JNU, New Delhi, Nov. 8-10, 2019

1. Jain A., Tiwari R., Vyas M., Dev V., G Haridas, Rajan A., Rawat A.
Web portal for online user training and evaluation for

radiation protection and safety for utilizing synchrotron radiation sources at RRCAT

2. Jena S.K., Sahu T.K., Nayak M.K., G Haridas, Fakhri A.A., Ghodke A.D., Senecha V.K.
Detection of trapped ions by measuring Bremsstrahlung photons in Indus-2
3. Dev V., Nayak M.K.*, Sahani P.K., G Haridas*, Sahu R.K.
Radiation shielding evaluation for HTS-facility at RRCAT Indore
4. Routh T.*, Sahani P.K., G Haridas
FLUKA simulation of angular Bremsstrahlung source term for electron energies up to .5GeV

D.3 DAE-BRNS 9th Indian Particle Accelerator Conference (InPAC-2019), IUAC, New Delhi, Nov. 18-21, 2019

1. Abdurrahim, Fakhri Ali A., Ghodke A., Banerjee A.
Beam dynamics studies in presence of superconducting wavelength shifter for Indus-2
2. Abdurrahim, Ghodke A., Banerjee A.
Study of low momentum compaction factor optics and its implementation in Indus-2
3. Acharya M., Reghu T., Shrivastava P.
Design and development of high voltage switch using series connected BiMOSFET for solid state hard switch modulator
4. Aditya L., Meena R., Singh S.N., Ahlawat M.
Design and development of NiAlCo ferrites for pulsed high power circulator at S- band
5. Ahlawat M., Pareek P., Aditya L., Lad M., Shinde R.S., Singh S.N.
Design and development of ICVG disk resonator based 650 MHz strip line ferrite circulator for proton Linac
6. Arora P., Kulkarni N.S., Kumar V.
Physics design studies for accelerating section of the 200 MeV injector Linac for high brilliance synchrotron radiation source
7. Arora R.K., Vaishnav H., Tiwari A., Kumar R., Lad M.
Measurements and optimization of RF and higher order mode parameters of new RF cavity in Indus-2
8. Babbar L.K., Kumar M., Yadav D.P, Upadhyaya B.N., Bhatnagar V.K., Sisodia B., Sindal B., Tiwari S.K., Holikatti A.C., Yadav S., Tyagi Y., Soni A.K., Vaishnav D., Sheth Y.M., Puntambekar T.A.
Design and development of flange integrated beam position monitors for Indus-1 storage ring and infrared free electron laser set-up
9. Babbar L.K., Kumar M., Upadhyaya B.N., Bhatnagar V.K., Sisodia B., Yadav B., Sindal B. K., Tiwari S.K., Tyagi Y., Holikatti A.C., Chandrakant A.K., Yadav S., Vaishnav D., Sheth Y.M., Puntambekar T.A.
Design and development of upgraded integrated type beam position indicators for dipole vacuum chambers of Indus-2SRS
10. Badapanda M.K., Tripathi A., Upadhyay R., Tyagi R.K., Lad M., Shrivastava P.
Output filter network and control system modeling of a crowbarless HVDC bias power supply for RF amplifier
11. Bagduwal P.S., Sharma D., Mishra N., Tiwari N., Lad M.
Design, development and characterization of multichannel RF up/down converter for particle accelerators
12. Bagre M., Syed M., Sharma S., Veerbhadraiah T., Kane G.V., Sandha R.S., Mohania P., Mahawar A., Sankar P.R., Puntambekar A., Kumar V., Singh A., Maurya T., Yedle A., Verma V., Yadav A., Shrivastava U., Srivastava V.
Experience on fabrication of 650 MHz ($\beta=0.92$) five-

- cell SCRF cavities using electron beam welding
13. Bansod T., Bais V., Sindal B.K., S Raj Mohan , Bhatnagar P., Bhange N., Yadav D.P.
Optimization of process parameters for uniform NEG film deposition in long low conductance vacuum chamber
 14. Barothiya R., Singh Y.
Development of fast pulse power supply for low impedance TL magnet
 15. Bhange N.J., Sharma H., Bhatnagar P., Joshi S., Yadav D.P.
Upgradation of temperature monitoring system for Indus-2 vacuum components
 16. Bhardwaj N.K., Jain A. Lad M.
Front-end protection system for solid state RF amplifiers
 17. Bhatnagar P., Yadav D., Tiwari S. K. Pandey V.
Development of ultra-thin film heaters for baking & NEG activation for UHV chambers in Indus-2
 18. Bose A., Raghavendra S., Kokil S.V.
Study of the effect of incremental electropolishing towards hydride precipitation on Nitrogen doped Niobium samples
 19. Bose A., Kokil S.V., Raghavendra S.
Direct observation of the viscous layer formation and breakdown during electro polishing of Niobium and its co-relation with surface morphologies
 20. Burman A.K., Khatwani H., Gandhi M. Sharma V.D., Banwari R., Thakurta A.C.
Enhancement of fire safety for sub- systems of Indus accelerator
 21. Burman A.K., Khatwani H., Gandhi M. Sharma V.D., Banwari R., Thakurta A.C.
Design, installation and commissioning of smoke exhaust system for experimental hall at Indus-2 accelerator complex
 22. Chandran S., Kumar A., Biswas B., Ravdheer S.S., Nerpagar P., Pant K.K.
Characterization of the 90 keV electron beam and low energy beam transport in the upgraded IR-FEL injector
 23. Choudhary S., Chouksey S., Mundra G.
Machine tool requirement for making particle accelerator components
 24. Chauhan S., Kokil S.V., Nigam N. Oraon B., Kane G.V.
Development of data acquisition system for eccentricity measurement setup of five- cell 650 MHz SCRF cavity
 25. Dwivedi V.K., Singh A., Borage M., Tiwari S.R.
Design and development of power part of a 300 A, 90 V switch mode power converter with industrial support
 26. Fakhri Ali A., Kant P. Garg A. D., Yadav S. Rana R., Kumar K.V.A.N.P.S., Husain R., Prajapati S.K. Ghodke A.
Low emittance optics optimization during operation of Indus-2
 27. Gaur R., Kumar V.
Tuning algorithm for cure of mode mixing in an RFQ Linac
 28. Gauttam V., Gautan K.K., Kaliwal A., Sisodiya S., Tiwari S.R.
Design and experimentally measurement of frequency response of high bandwidth voltage mode control loop for DC-DC switch mode power converter
 29. Gauttam V., Gautan K.K., Kaliwal A., Tiwari S.R.
High stability, low ripple, - 30 kV high voltage DC power supply for scanning electron microscope
 30. Ghodke A., Radheshyam P., Fakhri A.A., Kumar P., Husain R., Abdurrahim, Jena S.K., Kant P., Meena V.K., Tyagi D.K.

- Physics design study for proposed high brightness synchrotron radiation source (HBSRS) in India
31. Ghosh R.
Installation of cryostat for horizontal test stand facility at RRCAT for testing 650 MHz SCRF cavities
 32. Gilankar S.
Successful fabrication of horizontal test stand (HTS) cryostats in Indian industry for testing 650 MHz SCRF cavities
 33. Gupta A.K., Jain A. Lad M.
Design and development of 150 kW pulsed rigid coaxial line based 3-way RF power combiner
 34. Gupta D.K., Nair H.G, Sinha G., Sindal B.K., Yadav D. P., Kulkarni M. S.
Radiation damage assessment and protective measures for tilt meters of undulators in Indus-2 ring
 35. Holikatti A.K., Chandrakant A., Jain R., Sonawane B., Sheth Y., Puntambekar T.A.
Development of internal beam orbit measurement electronics system for injector microtron
 36. Hussain R., Ghodke A.
Betatron coupling measurement and its correction in Indus-2 storage ring
 37. Hussain R., Ghodke A.
Linear lattice design studies of high brightness synchrotron radiation source (HBSRS)
 38. Jain A., Sharma D., Gupta A., Pathak K., Kumar N., Lad M.
Recent trends in high power solid-state amplifier for particle accelerator
 39. Jain M.K., Deo R.K., Lad M.
Realization of 107.5 MHz RF Power System for high power re-circulating accelerator
 40. Jain V., Bagre M., Syed M., Vijayakumar V., Srivastava V., Maurya T., Yedle A., Singh A., Singh K.K., Puntambekar A.
Progress on HB650 superconducting cavity dressing and its infrastructure
 41. Jena S.K., Fakhri Ali A., Ghodke A.D., Senecha V.K.
Ion-beam interaction in electron storage ring of HBSRS
 42. Jotangia J., Gothwal P., M. Seema, Gupta A., Fatnani P., Musuku J.
Development of software for remote operation of scanning magnet power supply
 43. Kant P., Fakhri Ali A., Ghodke A.
FODO lattice for booster of high brilliance synchrotron radiation source
 44. Kant P., Fakhri Ali A., Ghodke A.
Effect of eddy current induced sextupole during R.ping in booster synchrotron of HBSRS
 45. Kasliwal A. Gauttam V., Tiwari S.R.
High stability, low ripple, precision electron gun filament heating DC power supply floating at -30 kV DC
 46. Khare P.
Status of design and development of high beta 650 MHz cryomodule at RRCAT
 47. Khatwani H., Singh S.N., Gandhi M., Banwari R., Thakurta A.C.
Design and development of versatile and modular digital control system for power converters of accelerator
 48. Kumar K.V.A.N.P.S., Sindal B.K., Bhange N., Deokar D.Y., Yadav D.
Evaluation tests of upgraded hot cathode ionization gauge controllers for Indus accelerator vacuum systems

49. Kumar M., Yadav S., Karnewar A., Sheth Y., Puntambekar T.A.
Design of striplines for tune measurement in Indus-1
50. Kumar P., Ghodke A., Yadav S., Arora R., Deep A., Lad M., Puntambekar T.A.
Simulation study and measurement of longitudinal coupled bunch instabilities and its cure using longitudinal bunch by bunch feedback system in Indus-2
51. Kumar P., Tyagi D.K., Ghodke A.
Coupled bunch beam instability due to resistive wall of vacuum chamber and its cure in high brilliance synchrotron radiation source.
52. Kumar P., Tyagi D., Godhke A.
Study on coupled bunch beam instability due to resistive wall of vacuum chamber and its cure in high brilliance synchrotron radiation source
53. Kumar R., Godhke D.V., Pathak M., Sanecha V.K.
Design simulation of electrostatic beam deflector cum chopper for H⁺ Ion source
54. Kumar R. Tiwari A., Arora R.K., Lad M.
Development of RF components for SRS Indus-2 and HTS
55. Kumari A., Gandhi M.L., Thakurta A.C.
Development of methodology for qualification of performance of active shunts during their mass production
56. Kokil S.V., Bose A., Ragavendra S.
Analysis of the role of various factors affecting nitrogen line purity during doping of SCRF cavity
57. Lal S., Chandran S. Saini R. Kumar A., Biswas B., Pandit R.K., Nerpagar P., Pant K.K.
Operation of an RF cavity in the presence of a static magnetic field: RF conditioning and multipacting issues
58. Mahawar A., Mohania P., Namdeo R., Shrivastava P.
Design and development of a 650 MHz, 5 kW pulsed solid state amplifier for conditioning and pulse characterization of super conducting RF cavities at RRCAT VTS
59. Maheshwari P., Fatnani P.
Design of high I/O count FPGA based multilayer board and correlation between simulation and hardware results of digital design
60. Malik R., Ruwali K., Sinha G., Singh S.N.
Design of high gradient dipole-quadrupole magnet
61. Mandal T., Arora V., Moorti A., Chakera J.A.
Fast electron angular distribution from thin foil targets at laser intensity 7×10^{19} w/cm²
62. Meena V.K., Fakhri Ali A., Godhke A.
Closed orbit distortion and its correction at injection energy for booster synchrotron of HBSRS
63. Mishra D.K., Dutaa S., Dwivedi J.
Design of half wavelength coaxial resonant cavity for electron acceleration.
64. Mishra D.K., Rao K.V.S.R.A., Dutaa S., Dwivedi J.
Simulation and experimental validation of various means of improving the output beam current of Indus microtron
65. Mishra N., Bagduwal P.S., Sharma D., Tiwari N., Lad M.
Development of high precision RF amplitude & phase modulation system
66. Mohania P., Mahawar A., Shrivastava V.K., Vijayakumar V., Singh A.K., Shrivastava P., Singh A.P., Namdeo R., Rajput V., Moulali Syed, Puntambekar A., Yadav A., Maurya T., Bagre M.
Challenges of frequency measurement and their control during fabrication of 650MHz, five-cell SCRF cavities

67. Mulchandani J., Acharya M., Baboo P., Shrivastava P.
Indigenous development of 20 kV, 20 A PFN charging solid state switch for line type high power pulse modulators
68. Nidhin S.L., Sharma N.K., Kane G.V., Senecha V.K., Joshi S.C.
Study on proton beam induced thermal impacts on rotating spallation target for Indian facility for spallation research (IFSR)
69. Nayak M.K.*, Rani R., Sahu T.K.*, G Haridas*, Sahu R.K., Kulkarni M.S.
Study of shielding adequacy around Indus- for accidental beam loss conditions in transport lines
70. Pal M.K., Mukesh, Gaur R.
Physics design study of multispoke resonators and their comparison with single spoke resonator
71. Paliwal P., Sharma N.K., Kane G.V.
Engineering design analysis for 325 MHz drift tube Linac for Indian facility for spallation research
72. Pandey R.M., Singh M.K., Kumar R., Deshmukh G.R., Shah R.P., Prasad B., Kumar Y.
Study on utilization of phase change material nodules for improving the performance of precision cooling systems
73. Prasad M., Bagduwal P. S., Tiwari N., Lad M.
Design and electromagnetic simulation of third harmonic RF cavity for Indus-2
74. Pathak K. Sharma D. Jain A., Lad M.
Data logging software module for solid-state RF amplifier
75. Pathak M., Ghodke D.V., Senecha V.K., Oraon B., Sonawane S.K.
3D vacuum simulation of multi-port chamber for RF based ion source for efficient extraction of H- ion beam
76. Patidar C. Sharma A.
Design of beam collimators for transport of GeV H- beam
77. Radheshyam P., Ghodke A.
Simulation of 100 keV/500 mA electron gun using CST particle studio for 10 MeV Linac
78. Radheshyam P., Kant P., Ghodke A.
Conceptual design of transport line from booster to storage ring for HBSRS
79. Rana R., Yadav R.P., Fatnani P.
ARM based VME CPU board for equipment interface layer of Indus-1 LCW plant control system
80. Reghu T., Mulchandani J., Mandloi V., Mohania P., Mahawar A., Singh H., Rajput V., Shrivastava P.
Performance studies of 1 MW CW klystron under pulsed operating condition using 100 kV, 20 A long pulse converter modulator
81. Ruwali K., Awale N., Singh B., Mishra A.K., Srinivasan B., Sinha G., Singh S.N., Malik R.
Development of extended pole quadrupole magnet
82. Ruwali K., Malik R., Awale N., Sinha G., Singh S.N., Singh B.
Design of multifunction multipole corrector magnets
83. Saini R., Chandran S., Gupta S., Kumar A., Biswas B., Lal S., Pant K.
Design studies for a THz-FEL at RRCAT
84. Senecha V.K., Ghodke D.V.
H- Ion source coupling with LEPT for beam characterization and transport studies for injection readiness into RFQ
85. Sharma D., Bagduwal P.S., Tiwari N., Mishra N., Lad M.
Design and development of RF power detection and protection system

86. Sharma D., Jain A., Lad M.
Development of an automated RF amplifier test bench
87. Sharma N.K., Kokil S.V., Kane G.V., Nigam N., Kumar P., Chauhan S.K., Oraon B., Sahu A., Chaturvedi A.
Frequency and field flatness tuning of five-cell 650 MHz SCRF cavities
88. Sharma N.K., Chaturvedi A., Kane G.V.
Finite element analysis for skin effect and surface finish for 325 MHz RFQ structure
89. Sharma N.K., Chaturvedi A., Kane G.V.
A new methodology for multiphysics analysis of 325 MHz RFQ structure
90. Sharma S., Prasad R., Chouksey S., Mundra G., Chaterji U., Veerbadraia T., Sisodia B.N., Bagre M., Syed M., Mourya T., Vijayakumar V., Srivastava V.K.
Machining challenges for the development of 650 MHz multi cell SCRF cavities
91. Sindal B.K., Malviya K.K., Kumar K.V.A.N.P.S., Bais V., Joshi S., Sandha R.S., Wanmode Y., Yadav D.
Design, installation and operational experience of vacuum system of 10 MeV electron Linacs
92. Singh A., Borage M., Tiwari S.R.
Development of digital control card for high stability power converters for electromagnets
93. Singh A., Borage M., P. Renukanath, Tiwari S.R.
200A, 85 V Switch mode power converters for main sextupole winding of the harmonic sextupole magnets in Indus-2
94. Singh K.A.P., Baxy D., Shrivastava P., Mohania P., Rajput V, Mahawar A.
Analysis of uncertainty in measurement of quality factor and accelerating field gradient of 650 MHz 5-cell super conducting RF cavity in RRCAT vertical test stand
95. Singh G., Kasliwal A. Tiwari S.R.
Design and development of ethernet enabled high stability bipolar voltage reference for HV power supplies
96. Sinha G., Malik R., Ruwali K., Singh S.N.
Design of compact sextupole magnet using permanent magnets
97. Singh K.K., Yedle A., Jain V., Ghodke D.V., Puntambekar A.
Development and testing of tuner and its subsystems for superconducting RF cavity
98. Sisodia B., Sharma S. Veerbhadraiah T., Vishwakarma S.C., Bhatnagar V.K., Chouksey S., Mundra G., Sreeramulu K., Malik R., Goswami S.G., Soni R.K., Kumar P., Dwivedi J.
Fabrication of a 270 degree bending magnet core assembly for energy filtering system of ARPF RRCAT
99. Srivastava V.K.
Development of Ti gr-2 components for HB 650 SCRF cavity dressing
100. Sreeramulu K., Das S., Singh B., Singh S.N., Thakur V., Kumar A., Singh K., Awale N., Kumar P., Shah R.L., William A., Kumar S.
Development of combined function harmonic sextupole magnets for Indus-2
101. Suhane S., Chaturvedi A., Das K., Chouhan H., Muhammad Asif H., Rajpoot D.S., Prasad K., Jain R., Raghavendra S.
High pressure rinsing system for niobium 650 MHz jacketed cavity
102. Syed Moulali, Yadav A., Jain V.K., Bagre M., Vijayakumar V., Singh A.K., Puntambekar A.
FE analysis of SCRF cavity weld joints and its experimental verification

103. Veerabhadraiah T., Kane G.V., Chaturvedi A., Chouksey S., Mundra G.
Machining trials on vane structures of RFQ of 3 MeV, 325 MHz RFQ
104. Tayyab M., Bagchi S., Moorti A., Chakera J. A.
Quasi mono-energetic proton acceleration from the interaction of high intensity short pulse lasers with thin foil target
105. Tiwari N., Bagduwal P.S., Sharma D., Mishra N., Lad M.
Development and commissioning of compact digital LLRF system for Indus-2 SRS
106. Tiwari S.K., Kumar K.V.A.N.P.S., Sindal B.K., Bhatnagar P., Yadav G.
UHV performance evaluation of indigenously developed low conductance uncoated long aluminium alloy chamber for undulator in Indus-2
107. Tripathi A., Badapanda M.K., Upadhyay R., Rathi S., Lad M.
FPGA controlled high current pulse power supply for solid state RF amplifiers
108. Tyagi D.K., Kumar P., Ghodke A.
Theoretical study on nonlinear beam dynamics using pinger magnet in Indus-2 storage ring
109. Tyagi D.K., Kumar P., Ghodke A.
Optimization of higher harmonic RF cavity parameters for enhancing the Touscheck beam lifetime in the storage ring of HBSRS
110. Tyagi Y., Yadav S., Holikatti A.C., Sheth Y., Puntambekar T.A.
Development of an upgraded system for the calibration of beam position monitors of Indus-2
111. Upadhyay R., Badapanda M.K., Tripathi A., Lad M.
DSP controlled phase staggering of DC-DC power modules for low ripple operation
112. Vikas, Sharma P.K., Barapatre D., Sahu R.K.
Installation of hydrostatic levelling system in Indus-2 and its preliminary results
113. Yadav A., Verma V.K., Yedle A., Kamble P. Puntambekar A.
Development for thermometry system for quench detection of 650 MHz five cell SCRF cavity during cold test
114. Yadav D., Bais V., Sharma S.
Engineering design and finite element simulation of modified dipole chamber for Indus-2
115. Yadav H., Mishra D., Dutta S., Sandha R.S., Dwivedi J.
Experimental setup and preliminary measurements for improved tuning of $2\pi/3$ travelling wave linear accelerators
116. Yadav R.P., Rana R. Fatnani P.
120MSPS VME based ADC card for digital BPI
117. Yadav S., Puntambekar T.A., Varde P.V.*
Study and analysis of transverse position data of bunches in presence of transverse coupled bunch mode excitation in Indus-2
118. Yadav S., Agrawal R.K., Fatnani P., Sheth Y. M., Puntambekar T.A., Thakurta A.C.
Development of real coded genetic algorithm based optimization system for performance enhancement of booster synchrotron
119. Yadav S., Husain R., Sheth Y.M., Ghodke A., Puntambekar T.A., Thakurta A.C.
Development of software for automatic measurement of betatron coupling in Indus-2

D.4 International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT, Indore, Dec. 12-14, 2019

1. Belure A.R.*, Biswas A. K., Raghunathan D., Rishipal, Bhartiya S., Rai S. K., Pawade R. S., Kamath M. P., Benerji N. S.
Fabrication of super-smooth flat zerodur substrates for synchrotron x-ray mirrors
2. Chaurasia J.K.*, Ashraf D.*, Jinoop A. N., Bontha S.*, Paul C.P., Bindra K.S.
An enthalpy based finite element approach to predict single track geometry during laser directed energy deposition of Inconel 718
3. Jinoop A. N., Paul C.P., Nayak S.K., Kumar H., Bindra K.S.
Effect of scan strategy on the geometry of laser additive manufactured wall structures
4. Nayak S.K.* Mishra S.K., Paul C.P., Mandloi C.S., Bindra K.S.
Effect of higher layer thickness on track width during laser powder bed fusion of Ni-Cr-Nb-Mo alloy
5. Paul A. C.*, Jinoop A. N., Paul C.P., Reddy J. S.*
Multi-objective analysis on additive manufacturing of components at different build orientations
6. Yadav S. , Paul C.P., Jinoop A. N., Rai A.K., Bindra K.S.
Laser aided directed energy deposition of Cu on SS 304L
7. Yadav S., Paul C.P., Rai A.K., Jinoop A.N. Singh R., Bindra K.S.
Laser additive manufacturing using directed energy deposition of Cu on SS304L

D.5 64th DAE Solid State Physics Symposium (DAE-SSPS-2019), IIT, Jodhpur, Dec. 18-22, 2019

1. Bhartiya S., Kohli D.K., Singh R., Singh A., Singh M.K., Karnal A.K.
Synthesis of conducting and mesoporous carbon aerogel by high temperature sol-gel process and CO₂ activation
2. Chetia S. K., Ajimsha R. S., Das A. K., Misra P.
Effect of Mg/Zn RF Power Ratio and Substrate Temperature on Optical and Structural Properties of RF Co-Sputtered Mg_xZn_{1-x}O Alloy Thin Films
3. Gurung S., Singh A., Khatau D.P., Jayabalan J.
Effect of presence of Ag nanospheres on the emission properties of CdTe quantum dots
4. Haldar S., Vishwakarma G., Ghosh U.K., Jaiswal A.K., Porwal S., Khakha A., Sharma T.K., Dixit V.K.
Development of a simple cost-effective Maskless-Photolithography system
5. Kamalesh T., Karuppasamy P., Pandian M.S., Ramasamy P., Verma S., Karnal A.K.
Growth of 4-aminopyridinium 4-nitrophenolate 4-nitrophenol (4AP4N) single crystal and its structural, optical, electrical and laser damage threshold characterization
6. Karuppasamy P., Kamalesh T., Pandian M.S., Ramasamy P., Verma S.
Synthesis of new organic single crystal of quinoline 4-nitrophenol (QNP) for frequency conversion applications
7. Mudi P., Khamari S.K., Sharma T.K.
Observation of strong photo induced inverse spin hall effect in heavily doped n-GaAs
8. Padhi P. S., Ajimsha R. S., Chetia S. K., Das A. K., Sahu V. K., Misra P.
Reduced leakage current in Al₂O₃/TiO₂/Al₂O₃ dielectric stacks grown by pulsed laser deposition

9. Pandian M.S.*, Karuppasamy P.*, Kamalesh T.*, Ramasamy P.*, Verma S., Bhatt R., Bhaumik I., Karnal A.K.
Fabrication of type-I and type-II SHG elements using organic 2-aminopyridinium 4-nitrophenolate 4 nitrophenol (2AP4N) single crystals grown by point seed rotation and novel RSR technique
 10. Singh A., Singh R., Bhartiya S., Kohli D.K., Singh M.K., Karnal A.K.
Conductivity enhancement of CO₂ activated high surface area carbon aerogel using high temperature treatment
 11. Taya P., Singh V.K., Jana D., Tyagi R., Sharma T.K.
Optical characterization of InAlN/AlN/InGaN/GaN/Sapphire high electron mobility transistor structures
- D.6 28th DAE-BRNS National Laser Symposium (NLS-28), VIT, Chennai, Jan. 8-11, 2020**
1. Ali S., Choubey A., Yadav P., Mishra S.K., Modi M.H., Paul C.P., Bindra K.S.
Development of nano second fiber laser based cleaning and polishing for gold mirrors
 2. Bairwa M.K., Singh R., Jain R.K., Saini B.K., Shukla V., Paul B., Bhardwaj V., Kushwaha S., Khanwalkar J., Bhawsar V., Shryner P., Ravi S. *, Pal R. *, Sanyal D.N. *, Upadhyaya B.N., Arya R., Bindra K.S.
Development of optical viewing system for end-shield leak detection at MAPS-I reactor for repair by laser welding process
 3. Bhardwaj K., Ram S.P., Tiwari V.B., Mishra S.R.
On AC-Stark Shift of ⁸⁷Rb energy levels in a single beam optical dipole trap
 4. Bhawsar V., Vachhani D.M., Sharma A., Upadhyaya B.N., Arya R.
Power supply controller for modulated-CW Nd:YAG laser
 5. Bhuvnesh, Singh C.P., Gupta P.K., Mukhopadhyay P.K., Bindra K.S.
Development of narrow linewidth all-fiber multistage amplifier at 1064 nm and its second harmonic generation
 6. Biswal R., Soni J.K., Hedao P., Ranganathan K., Bindra K.S.
Development of a diode pumped CW Yb:YAG thin-disk laser
 7. Chakravarty Usha, Venu A.S. *, Kuruvilla A., Kumar A., Upadhyaya B.N., Bindra K.S.
Quasi-CW operation of single mode Tm-doped all-fiber laser with average power of more than 30 W
 8. Chaturvedi M., Sharma P., Verma Y., Raja S., Bindra K.S.
Design and development of an all fiber Velocity Interferometer System for Any Reflector (VISAR)
 9. Chaubey S., Saxena M.K., Sahu T. *, G Haridas *, Kher S., Dixit S.K.
Feasibility study of distributed optical fiber gamma radiation dose sensor
 10. Chinnasami S. *, Paulraj R. *, Bhatt R., Bhaumik I., Ramasamy P. *, Karnal A.K.
Effect of xylenol orange on the crystalline perfection, optical and piezoelectric behaviour of unidirectionally grown imidazolium L-tartrate single crystal
 11. Choudhary N., Kumar J., Kumar S., Saini P.K., Mahakud R., Prakash O. Dixit S.K.
Studies on the strain sensing characteristics of HF etched fiber Bragg grating
 12. Daiya D., Patidar R.K., Gurram S., Benerji N.S., Bindra K.S.

- Laser beam shaping using phase only spatial light modulator
13. Debnath C., Kar S., Verma S., Tiwari V.S., Karnal A.K.
Measurements of nonlinear absorption coefficient of poled LiNbO₃/PMMA nanocomposites by open aperture Z-scan technique
 14. Deshmukha P., Ahlawata A., Khana A.A, Karnal A.K. Satapathya S.
Effect of sensitizer concentration on upconversion efficiency of LaF₃ based nanophosphor
 15. Dubey V.K.* , Saxena P.* , Bhattacharyya K.* , Singh I., Kumar J., Saini P., Prakash O. Dixit S.K., Arya R., Nakhe S.V.
An Interrogator unit for FBG based single point temperature measurement
 16. Gautham P.* , Verma S., Debnath C., Kar S., Tiwari V.S., Karnal A.K.
Preparation of polymer composites and investigating their photorefractive property using two-beam coupling technique
 17. Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Pulse shortening and wavelength tuning in acousto-optic Q-switched Ytterbium doped fiber laser based on multi-mode interference filter
 18. Gurram S., Hussain Md. Saddam*, Kuruvilla A., Singh R., Chakravarty Usha, Viswakarma, S.C., Upadhyay B.N., Bindra K.S.
Design & development of Yb doped fibre laser with linearly polarized output of ~25 W and its application to generate >5 W of power @ 515 nm
 19. Gurram S., Varshnay N.K., Dongre O.K., Sharma J., Daiya D., Patidar R.K., Singh A., Benerji N.S., Joshi A.S., Bindra K.S.
All-fiber optic front end for high energy Nd: glass laser system
 20. Jadhav M.S.* , Bernal A.* , Mastiholi B.* , Lalasangi A.* , Kulkarni V.* , Kumar J., Prakash O., Raikar U.S.*
Highly sensitive fiber grating chemical sensors for detection of contaminants in water
 21. Jadhav M.S.* , Mastiholi B., Lalasangi A., Kulkarni V., Kumar J., Prakash O., Raikar U.S.*
Sensitivity enhancement in grating sensors using CuO nanoparticles for temperature measurement
 22. Jain R.K., Singh R., Bairwa M.K., Bhakar Paul, B. K. Saini, Vijay Shukla, V. Bhardwaj, A. A. Raju, Bhawsar V., Panwar C. B., Gawade L.* , Jadhav V.* , Ghosh S.* , Upadhyaya B.N., Arya R., Sanyal D.N.* , Bindra K.S.
Development of laser cutting technology for removal of single selected coolant channel of 540 MWe pressurized heavy water reactors at TAPS-3&4
 23. Kamalesh T.* , Karuppasamy P.* , Pandian M.S.* , Ramasamy P.* , Verma S., Karnal A. K.
Growth and characterization of 4-Aminopyridinium 4-Nitrophenolate 4-Nitrophenol (4AP4N) single crystals for nonlinear optical (NLO) applications
 24. Kar S., Debnath C., Verma S., Satapathy S., Tiwari V.S., Karnal A.K.
Synthesis and fabrication of Nd doped lithium tetraborate glass and its optical characterization for laser host application
 25. Karn R.* , Patel J. K.* , Bhatt R., Bhaumik I., Soharab M., Sajith B.K.* , Saxena A., Karnal A.K.
Growth of Ce doped BGO crystal by Czochralski technique for optical and x-ray imaging applications
 26. Karuppasamy P.* , Kamalesh T.* , Pandian M.S.* , Ramasamy P.* , Verma S., Karnal A.K.
Synthesis, growth and characterization of organic Quinoline 4-Nitrophenol (QNP) single crystals for nonlinear optical (NLO) applications

27. Khare R., Shukla P.K., Shrivastava V.K., Tiwari G.N.
Development and characterization of a copper vapour laser pumped dye laser with optical fiber as output coupler
28. Kumar A., Misra P., Jain R.K., Singh R., Bhardwaj V., Upadhyaya B.N., Bindra K.S.
Development of compact prototype version of 250 W of single transverse mode all-fiber Yb-doped CW fiber laser and its material processing application
29. Kumar A., Singh A., Jain S., Kulkarni A.P., Patidar R.K., Prasad Y.B.S.R., Benerji N.S., Bindra K.S.
Temporal evaluation of shock wave in transparent media (Glass)
30. Kumar J., Kumar S., Jain R., Prakash O., Dixit S.K., Nakhe S.V.
Studies on the thermal regeneration characteristics of chirped FBG
31. Kumar M., Dwivedi T.*, Nilaya J. P.*, Biswas A.K., Kaul R.
Evaluation of electron energy distribution function (EEDF) for pure CO gas
32. Kumar M., Ansari A., Singhal H., Chakera J.A.
Temporal characterization of attosecond pulse trains from higher harmonic generation
33. Kumar S.*, Khan S., Jayabalan J.
Spectrally resolved pump-probe reflectivity technique for carrier dynamics studies
34. Kumar S., Kumar J., Saini P.K., Mahakud R., Prakash O., Dixit S. K.
Simultaneous measurement of temperature and refractive index with fiber bragg grating
35. Mahakud R., Kumar J., Kumbhkar U., Saini P.K., Kumar S., Prakash O., Dixit S.K.
Transient behaviour of spectrum of LPG inscribed in hydrogen loaded telecom fiber
36. Malik A., Raja S., Bindra K.S.
Development of odd order suppressed fused silica diffraction gratings using femtosecond laser direct writing
37. Mishra R.K., Agrawal P.K., Ansari M.S.
Development of DC to DC converter based on push-pull topology for He-Ne laser
38. Mishra R.K., Agrawal P.K., Ansari M.S.
Development and performance of high voltage solid state pulse power supply for 6.25 kHz copper vapour laser
39. Mishra S., Rao B.S., Moorti A., Chakera J.A.
Laser wakefield electron acceleration and generation of micro-source of keV x-rays
40. Narwat D., Sah S.K., Bhawsar V., Upadhyaya B.N., Arya R.
Development of microcontroller based tool controller for laser welding of brachytherapy capsules
41. P. Arathi*, Gupta P.K., Paul N., Bhuvnesh, Singh C.P., Mukhopadhyay P. K., Bindra K.S.
Studies on metal marking and drilling using ultrashort pulses from indigenously developed fibre laser amplifier
42. Padhi P. S., Ajimsha R. S., Misra Pankaj
Pulsed laser deposition of ZrO₂ thin films for microelectronic device applications
43. Pathak S.K., Singh G., Gupta S.M., Tiwari V.S. Karnal A.K.
Effect of ytterbium doping on structural, microstructural and photo-luminescence behavior of vacuum sintered YAG Ceramic
44. Pandian M.S.*, Karuppasamy P.*, Kamalesh T.*, Ramasamy P.*, Verma S., Bhatt R., Bhaumik I., Karnal A.K.
Investigations of Type-I and Type-II phase matching

- elements using organic 2-Aminopyridinium 4-Nitrophenolate 4-Nitrophenol (2AP4N) single crystals grown by point seed rotation and novel RSR technique
45. Patidar R. K., Daiya D., Benerji N. S., Gurram S., Singh A., Kulkarni A.P., Jain S., Bindra K.S.
A high gain diode pumped 4-pass Nd: YLF amplifier for high energy Nd: glass laser system
 46. Rana L.B, Kumar M., Yadav R.K., Kaul R.
Refurbishment of a commercial 10 and 25 watts sealed-off RF excited CO₂ lasers
 47. Saini P.K., Kumar S., Kumar J., Mahakud R., Purbia G.S., Prakash O., Dixit S.K.
Graphene oxide coated tilted fiber bragg grating sensor for refractive index measurement of liquids
 48. Saini V.K., Kumar K. *, Dixit S.K.
Two-step photoionization studies of lithium using thermionic diode
 49. Saxena M.K., Kher S., Kumar S., Kishore J., Sharma R.K., Dixit S.K., Nathwani R.K., Gupta A.M., Kumar A., Khatwani H.K., Borage M.B., Thakurta A.C.
Thermal profiling and fire detection in 160 m long dipole supply cable of Indus-2 SRS by Raman optical fiber distributed temperature sensor system
 50. Sharma A.K.
Two-pulse spatial chirp cum spectral divergence monitor for laser beams
 51. Sharma A.K.
Two-pulse tilted pulse-front autocorrelator for estimation of pulse-front tilt angle in laser beams with improved accuracies
 52. Sharma S.K., Singh A.J., Prasad B., Mukhopadhyay P.K., Bindra K.S.
Experimental studies on quasi continuous wave (QCW) diode side pumped electrooptically Q-switched Nd:YAG laser
 53. Sharma S.K.*, Singh Y., Bhaumik I. Karnal A.K.
A technique of preparing c-elongated seed crystal in seed holder for the growth of large size flat-top KDP crystals
 54. Shrivastava V.K., Tiwari G.N., Khare R.
An independently tunable, simultaneous, and collinear two-wavelength dye laser pumped by copper vapour laser
 55. Shukla V., Aswathy D.K.*, Singh R., Bhardwaj V, Bairwa M.K., Vachhani D.M., Sharma A, Bhawsar V., Panwar C.B., Pant K.K., Upadhyaya B.N., Arya R., Bindra K.S.
Study on multi-rod resonator for sine and square wave modulated CW Nd:YAG laser
 56. Singh A.J., Sharma S.K., Prasad B., Mukhopadhyay P.K., Bindra K.S.
Generation of 112W of continuous wave (CW) power at 1.3 μm from a diode side pumped Nd:YAG laser
 57. Singh C.H.P., Kumar U., Srinivasulu B., Rai A.K. Mishra G.K., Paul C.P., Bindra K.S.
Feasibility studies for laser based cladding of SiC on thin wall tube of Zircaloy-4
 58. Singh R., Kumar A., Chakravarty U., Upadhyaya B.N., Bindra K.S.
Generation of 20 W of average power from all-fiber Yb-doped Q-switched fiber laser using MOPA configuration
 59. Singh S., Tiwari V.B., Jain B., Mishra, S.R.
Development of a single laser operated magneto-optical trap (MOT) for Rb atoms
 60. Singh V., Tiwari V.B., Mishra S.R.
Magnetic trapping of laser cooled Rb-atoms in a Ioffe-Pritchard trap near atom-chip
 61. Subrahmanyam V.V.V., Mukherjee C., Kamparatha R., Benerji N.S., Bindra K.S.
Laser induced damage threshold detection of

- multilayer coated optics by surface scattering technique
62. Tiwari G.N., Shukla P.K., Mishra R.K., Shrivastava V.K., Khare R.
Spatial coherence of indigenously developed copper bromide laser with unstable resonators
 63. Upadhyay J., Kumar S., Saxena P., Arya R.
Development of high-voltage ns pulse generator for laser applications
 64. Verma S., Rao B. T., Singh R., Jenitta J., Kaul R.
Dielectric response of ultrathin Au films of different morphologies prepared by pulsed laser deposition
 65. Yadav R., Kumar M., Rana L.B. Kaul R.
Operation of Helium free TEA CO₂ laser using very compact high voltage DC power supply
- D.7 Other Seminar/Conference Presentations**
1. Asif H.S.* Shrivastava B.B., Gamad R.S.* Puntambekar T.A.
Design and implementation of FFT processor in FPGA and performance analysis of ADCs of digital processing electronics
Second International Conference on Advances in Electrical Electronic and System Engineering (ICAEESE 2019), Guwahati University, Guwahati, Nov. 2-3, 2019
 2. Babbar L.K., Kumar A., Ganesh P., Kumar M., Soni A.K., Vishwakarma S.C., Gupta R.K., Nagpure D.C., Yadav N.S., Vaishnav D., Singh R., Singh M.K., Yadav D.P., Kaul R., Sheth Y. Puntambekar T.A.
Study on development of vacuum brazing recipes for dissimilar transition joints (AlN-Mo and AlN-Ti) for application in beam position monitors for low emittance storage ring
5th International Congress (IC 2020), CIDCO Exhibition Centre, New Mumbai, Feb. 6-8, 2020
 3. Baral M., Chakrabarti A.
Is cubic symmetry necessary for half-metallicity, :an ab-initio study in Co, Ni and Pt- based half Heusler alloys
3rd International Conference on Material Science (ICMS-2020), Tripura University, Agartala, Tripura, Mar. 4-6, 202
 4. Chakravarty U., Joshi M.P.
Theoretical study on optical response of gold nanorods of different aspect ratio
International Conference on Nanoscience and Nanotechnology (ICONSAT-2020), S. N. Bose National Centre for Basic Sciences, Kolkata, Mar. 5-7, 2020
 5. Chaudhari S. Maurya V.K. Singh V.* Tomar S.S., Rajan A., Rawat A.
Real time logs and traffic monitoring analysis and visualization setup for IT security enhancement
5th International Conference on Next Generation Computing Technologies (NGCT 2019), UPES, Dehradun, Dec. 20-21, 2019
 6. Chaurasia J.K.*, Jinoop A. N., Parthasarathy P.*, Bontha S.*, Paul C.P., Bindra K.S.
Understanding thermo-fluid conditions during laser surface melting of IN625
National Metallurgical Day - Annual Technical Meeting, Thiruvananthapuram, Nov. 15-16, 2019
 7. Dileep K.*, Jinoop A. N., Paul C.P., Baral M., Ravikumar Y.*, Bindra K.S.
Investigating high temperature oxidation of Hastelloy-X fabricated by laser assisted directed energy deposition
International Conference on Applied Mechanical Engineering Research (ICAMER-2019), NIT Warangal, 2019
 8. Diljith P.K. *, Paul C.P., Jinoop A.N., Krishna P.*, Bontha S.*, Bindra K.S.
Investigating corrosion behavior of laser directed energy deposited Inconel 718 in different acidic

- environments
National Metallurgical Day- Annual Technical Meeting, Thiruvananthapuram, Nov. 15-16, 2019
9. Jinoop A. N., Paul C.P., Kumar J. G. *, Prasad Reddy G.V. *, Bindra K.S.
Investigating high temperature mechanical behavior of laser directed energy deposited Hastelloy-X using automated ball indentation
National Metallurgical Day - Annual Technical Meeting, Thiruvananthapuram, Nov. 15-16, 2019
 10. Jinoop A. N., Paul C.P., Bindra K.S.
An innovative approach for directed energy deposition based laser 3D printing of metallic compact heat exchangers
National Aerospace Manufacturing Seminar (NAMS 2019), SAME, Trivandrum, Dec 6-7, 2019
 11. Jinwal J., Ojha A., Puntambekar T.A., Bansod P.P.* Gamad R.S.*
Development implementation and testing of gigabit ethernet communication interface for FPGA
International Conference on Communication Electronics and Electrical Engineering (ICCEEE 2019), Dehradun, Nov. 9, 2019
 12. Kamalesh T. *, Karuppasamy P. *, Pandian M.S. *, Ramasamy P. *, Verma S.
crystal growth and characterization of 4-dimethylamino pyridinium 4-nitrophenolate 4-nitrophenol (DMAPNP) for NLO applications
AIP Conference Proceeding vol.2115, 030397 (2019)
 13. Khatua D.P., Singh A., Gurung S. Jayabalan J.
Carrier dynamics measurement on MoS₂ monolayers using ultrafast pump-probe spectroscopy
DAE-BRNS Theme Meeting on Ultrafast Science-2019 (UFS- 2019), IIT-Bombay, Mumbai, Nov. 6-9, 2019
 14. Khan R.A., Mandal T., Arora V., Moorti A., Chakera J.A
A pre-pulse delay line set up at 150 TW 25 fs Ti:Sapphire Laser system for controlled pre-plasma generation
34th National Symposium on Plasma Science & Technology (PLASMA 2019), VIT, Chennai, Dec. 3-6, 2019
 15. Kim H. T. *, Shin J.H. *, Aniculaesei C. *, Rao B.S., Pathak V.B. *, Cho M.H. *, Hojbota C.I. *, Lee S.K. *, Sung J.H. *, Lee H.W. *, Yoon J.W. *, Nakajima K. *, Nam C.H. *
Multi-PW laser driven electron acceleration and applications
46th European Physical Society Conference on Plasma Physics, UNIMIB, Milan, Italy, July 8-13, 2019
 16. Nayak S.K., Mishra S.K., Paul C.P., Jinoop A. N., Yadav S., Bindra K.S.
Effect of laser energy density on bulk properties of SS 316L structures built by laser additive manufacturing using powder bed fusion
ASME 2019 Gas Turbine India (GT India 2019), IIT-Madras, Chennai, Dec. 5-6, 2019
 17. Pandian M.S. *, Karuppasamy P. *, Kamalesh T. *, Ramasamy P. *, Verma S.
Growth of 2-amino 4, 6-dimethyl pyrimidine 4-nitrophenol (AMP4N) single crystals for technological applications
AIP Conference Proceeding vol. 2115, 030396 (2019)
 18. Phadnis R. *, Naik S. *, Karmarkar A. *, Joseph T. *, Tyagi K. *, Shaikh A. *, Chaudhari S., Khole S. *
Portable gas detection and warning system for Olfactory Disabled People
IEEE International Conference for Emerging in Technology, Jain College of Engineering & Technology, Belgaum, Jun. 5-7, 2020
 19. Rathore R., Singhal H., Chakera J. A.
Comparative study of ultra-fast thermal strain evolution in Ge (111) sample induced by fundamental and second harmonic pump pulse
DAE-BRNS Theme meeting on Ultrafast Sciences

- 2019 (*UFS- 2019*), IIT-Bombay, Mumbai, Nov. 7-9, 2019
20. Sahu A. *, Jinoop A. N., Paul C.P., Kumar A. *, Bindra K.S.
Numerical modeling of high energy density beam assisted machining of hardened armour steel
International Conference on Applied Mechanical Engineering Research (ICAMER-2019), NIT, Warangal, May 2-5, 2019
21. Sahu K., Shrivastava R., Majumder S.K.
Development of photosensitizer loaded polymeric hydrogels for potential applications in antimicrobial photodynamic therapy
International Conference on Emerging Areas in Biosciences and Biomedical Technologies (eBBT2), IIT, Indore, Feb. 7-9, 2020
22. Saxena G., Gupta A. *, Verma Kumar D., Rajan A., Rawat A.
Robust algorithms for counting and detection of moving vehicles using deep learning
IEEE 9th International Conference on Advanced Computing (IACC-2019), M.A.M. College of Engineering and Technology, Tiruchirappalli, Dec. 13-14, 2019
23. Shrivastava B.B., Chouhan M., Tyagi Y., Puntambekar T.A.
Design and development of single pass digital beam position measurement electronics for IRFEL-Linac
Second International Conference on Advances in Electrical Electronic and System Engineering (ICAEESE 2019), Guwahati University, Guwahati, Nov. 2-3, 2019
24. Shrivastava B.B. Sheth Y.M. Puntambekar T.A.
Impact of RF cross-talk of processing electronics on beam position measurement in particle accelerators
Second International Conference on Advances in Electrical Electronic and System Engineering (ICAEESE 2019), Guwahati University, Guwahati, Nov. 2-3, 2019
25. Shrivastava R., Sahu K., Majumder S.K.
L-type Ca²⁺ channel independent release of hormones from mice pancreatic β -cells using optogenetics
International Conference on Emerging Areas in Biosciences and Biomedical Technologies (eBBT2), IIT, Indore, Feb. 7-9, 2020
26. Singh A., Khan S., Jayabalan J.
Ultrafast response of nanoplatelets around its particle plasmon resonance: effect of size distribution
DAE-BRNS Theme Meeting on Ultrafast Science-2019 (UFS- 2019), IIT-Bombay, Mumbai, Nov. 6-9, 2019
27. Tomar S., Rawat A., Vyavahare P.D.* Tokekar S.*
Investigations on equal cost multi path feature in dynamic routing protocols in IPv6 networks
3rd IEEE International Conference on Information & Communication Technology, IIIT, Allahabad, Dec. 6-8, 2019
28. Tomar S.S., Rawat A., Vyavahare P.D.* Tokekar S.*
Investigations on impact on path round trip times in migration from IPv4 to IPv6 internet
53rd Annual Convention of Computer Society of India, Theme: Digital Democracy - IT for Change (CSI 2020), KIIT, Bhubaneswar, Jan. 16-18, 2020
29. Yadav S, Paul C.P., Jinoop A. N., Nayak S.K., Rai A.K., Bindra K.S.
Effect of process parameters on laser directed energy deposition of copper
ASME 2019 Gas Turbine India (GT India 2019), IIT-Madras, Chennai, Dec. 5-6, 2019
- Note: '*' indicates author affiliation other than RRCAT Indore.**