

A. Journal Articles

1. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data
Physical Review D, 105, 102001 (2022)
2. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Constraints on dark photon dark matter using data from LIGO's and Virgo's third observing run
Physical Review D, 105, 063030 (2022)
3. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Narrowband searches for continuous and long-duration transient gravitational waves from known pulsars in the LIGO-Virgo third observing run
The Astrophysical Journal, 932, 1-27 (2022)
4. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Search for continuous gravitational waves from 20 accreting millisecond x-ray pulsars in O3 LIGO data
Physical Review D, 105, 022002 (2022)
5. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Search for gravitational waves associated with gamma-ray bursts detected by Fermi and Swift during the LIGO-Virgo run O3b
The Astrophysical Journal, 928, 186(1-20) (2022)
6. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Search for intermediate-mass black hole binaries in the third observing run of advanced LIGO and advanced Virgo
Astronomy & Astrophysics, 659, A84 (2022)
7. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Search of the early O3 LIGO data for continuous gravitational waves from the Cassiopeia A and Vela Jr. supernova remnants
Physical Review D, 105, 082005 (2022)
8. Abbott R.*, Bhandare R., Chaturvedi M., Dave I., George J., Khurshed M., Malik A., Pai S.A., Pant B.C., Rajan C., Raja S., Sharma P., Shyam Sundar S., Thondapu S.R., Verma Y. et al.
Searches for gravitational waves from known pulsars at two harmonics in the second and third LIGO-Virgo observing runs
The Astrophysical Journal, 935, 1(1-29) (2022)
9. Ahlawat A.*, Khan A.A., Deshmukh P., Bhartiya S., Satapathy S., Shirolkar M.M.*, Wang H.*, Choudhary R.J.*
Strain assisted magnetoelectric coupling in ordered nano-magnets of
CoFe₂O₄/SrRuO₃/(Pb(Mg_{1/3}Nb_{2/3})O₃-PbTiO₃) heterostructures
Journal of Physics: Condensed Matter, 34, 305801 (2022)
10. Alam M.A., Trivedi A., Tiwari M.K., Devi D.*, Rai S., Gupta M.*, Avasthi D.K.*
Depth profiling of energetic Au ions inside P-type Si <100> substrate
Applied Surface Science, 579, 152173(1-7) (2022)
11. Amin R.*, Samantaray K.*, Ayaz S.*, Sarangi S.N.*, Bhaumik I., Sen S.*
Room temperature multiferroicity with enhanced ferroelectric and ferromagnetic properties in Ba_{0.75}Pb_{0.25}Ti_{1-x}Fe_xO₃
Journal of Alloys and Compounds, 897, 162734 (2022)
12. Ansari A., Kumar M., Singhal H., Chakera J.A.
The effect of gas-density gradient on high-harmonic generation from neon-filled cells using annular and Gaussian laser beams
Journal of Physics B: Atomic, Molecular and Optical Physics, 55, 165602(1-15) (2022)
13. Banerjee C., Singh M.P.
Imprint of the temporal envelope of ultra-short laser pulses on the longitudinal momentum spectrum of e⁺e⁻ pairs
Physical Review D, 105, 076021(1-15) (2022)
14. Baral M., Ganguli T., Chakrabarti A.
Investigation of structural, magnetic and electronic properties of CoMnSb superstructure: a DFT study
Computational Materials Science, 210, 111441(1-13) (2022)
15. Baral M., Srihari V.*, Bhakar A.*, Chattopadhyay M.K., Tiwari P., Chakrabarti A., Ganguli T.
Revealing superstructure ordering in Co_{1+x}MnSb Heusler alloys and its effect on structural, magnetic, and

- and electronic properties
Physical Review B, 105, 184106(1-12) (2022)
16. Bhardwaj V., Upadhyaya B.N., Bindra S.K.
Mathematical model to study the keyhole formation in pulsed Nd:YAG laser welding of SS 316L material and its experimental verification
Journal of Laser Applications, 34, 032010(1-15) (2022)
 17. Bhardwaj V., Rai A.K., Upadhyaya B.N., Singh R., Rai S.K., Bindra K.S.
A study on effect of heat input on mode of welding, microstructure and mechanical strength in pulsed laser welding of Zr-2.5 wt.%Nb alloy
Journal of Nuclear Materials, 564, 153685 (2022)
 18. Bhattacharjee J., Sagdeo A., Singh S.D.
Determination of Al occupancy and local structure for β -(Al_xGa_{1-x})₂O₃ alloys across nearly full composition range from rietveld analysis
Applied Physics Letters, 120, 0091621(1-7) (2022)
 19. Bhattacharjee J., Singh S.D.
Temperature dependence of red luminescence in pure β -Ga₂O₃: An estimation of electron-phonon interaction
Solid State Communications, 352, 114831 (2022)
 20. Carry M.W.*, Mrinaleni S.*, Amaladass E.P.*, Pandian M.S.*, Rathan S.V.*, Ramasamy P.*, Mani A.*, Bhaumik I.
Fermi energy-level shift of p-type AgBiSe₂ single crystal featuring semiconductor-to-metal transition at cryogenics
ACS Applied Materials & Interfaces, 37, 065023 (2022)
 21. Chandra J., Singh R., Manekar M.
Physical aging and rejuvenation in the vortex matter of superconducting Nb₅₀Zr₅₀
Journal of Physics: Condensed Matter, 34, 315101(1-9) (2022)
 22. Chaoudhary S.*, Dewasi A.*, Ghosh S., Choudhary R.J.*, Phase D.M.*, Ganguli T. et al.
X-ray photoelectron spectroscopy and spectroscopic ellipsometry analysis of the p-NiO/n-Si heterostructure system grown by pulsed laser deposition
Thin Solid Films, 743, 139077 (2022)
 23. Chauhan V.*, Deshmukh P., Satapathy S., Pandey P.C.*
Greenish-yellow emission from rare-earth free Li⁺ doped zinc vanadate phosphor
Results in Physics, 39, 105689(1-11) (2022)
 24. Chauhan V.*, Rao P.N. et al.
Nanoarchitectonics with electrochemical additive manufacturing process for printing the reduced graphene oxide
Applied Physics A, 128, 458 (2022)
 25. Dev A.S.*, Bera A.K.*, Gupta P., Srihari V.*, Pandit P.*, Betker M.*, Schwartzkopf M*, Roth S.V.*, Kumar D.*
Oblique angle deposited FeCo multilayered nanocolumnar structure: magnetic anisotropy and its thermal stability in polycrystalline thin films
Applied Surface Science, 590, 153056 (2022)
 26. Dey K.*, Tripathy A.*, Sahu S.R.*, Srivastava H., Sagdeo A., Stempfer J.*, Shukla D.K.*
Monoclinic symmetry at the nanoscale in lead-free ferroelectric BaZr_xTi_{1-x}O₃ ceramics
Physical Review B, 105, 174202(1-7) (2022)
 27. Dixit P.*, Pandey P.K.*, Chauhan V.*, Deshmukh P., Satapathy S., Pandey P.C.*
Improvement in white light emission of Dy³⁺ doped CaMoO₄ via Zn²⁺ co-doping
Methods and Applications in Fluorescence, 10, 044003 (2022)
 28. Dwivedi P.K.*, Vinjamuri R.*, Rai A.K., Ganesh P., Ranganathan K., Bindra K.S.
Effect of laser shock peening on ratcheting strain accumulation, fatigue life and bulk texture evolution in HSLA steel
International Journal of Fatigue, 163, 107033 (2022)
 29. Fernandez A. G.*, Kamal C. et al.
Experimental and theoretical core level and valence band analysis of clean perovskite single crystal surfaces
Small, 18, 2106450(1-12) (2022)
 30. Gangwar A.*, Bulusu S.S.*, Banerjee A.
Feed-forward neural networks for fitting of kinetic energy and its functional derivative
Chemical Physics Letters, 801, 139718 (2022)
 31. Garg V.K.*, Tanta A.*, Srivastav A.L.*, Tiwari M.K., Sharma A.*, Kanwar V.S.*
Water quality assessment using synchrotron-based TXRF
Water Environment Research, 94, e10759 (2022)
 32. Gaur R., Kumar V.
Numerical study on the impact of errors in a 325 MHz radiofrequency quadrupole and assessing the validity of quasistatic approximation in the analysis
Pramana Journal of Physics, 96, 126(1-12) (2022)
 33. Ghosh S., Ghosh Haranath
Core electron spectroscopic studies on new structure type iron based superconductors CaKFe₄As₄ and KCa₂Fe₄As₄F₂: DFT predictions
Journal of Physics and Chemistry of Solids, 160, 110310(1-18) (2022)
 34. Ghosh S., Ghosh Haranath.
Pressure induced Lifshitz transition and anomalous crystal field splitting in AFeAs (A = Li/Na) Fe-based superconducting compounds: a first principles study
Computational Materials Science, 204, 111170 (2022)

35. Ghosh S., Nand M.*, Kamparath R., Gupta M.*, Phase D.M.*, Jha S.N.*, Singh S.D., Ganguli T.
Electronic structure modification in Fe-substituted β -Ga₂O₃ from resonant photoemission and soft x-ray absorption spectroscopies
Journal of Physics D: Applied Physics, 55, 185304(1-10) (2022)
36. Gupta N., Kumar D.*, Gupta M.*, Srihari V.*, Choudhary R.J.*, Rai S.K., Gupta P.
Role of Nb content in tailoring the microstructure and magnetic anisotropy of soft magnetic W/CoFeB alloy thin films prepared with varying the substrate temperature
Journal of Alloys and Compounds, 910, 164930(1-11) (2022)
37. Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Studies on passively Q-switched ytterbium doped all-fiber laser using fiber optic ring resonator
Journal of Optics, 24, 054012(1-6) (2022)
38. Gupta R.*, Sangeeth K.*, Gupta M., Choudhary R.J., Sagdeo A., Singh F.*, Gupta A.*
Magnetic properties of exchange-biased FeCo/CoO bilayer and its electronic structure
Applied Physics A, 128, 342 (2022)
39. Jadhav A.P.*, Khantwal N., Mondal P., Dhamgaye V.P. et al.
Synchrotron x-ray assisted degradation of industrial wastewater by advanced oxidation process
Radiation Physics and Chemistry, 197, 110161(1-13) (2022)
40. Jamal M.S.*, Gupta P., Raj R.*, Gupta M., Reddy V.R.*, Kumar D.*
Structural and magnetic asymmetry at the interfaces of MgO/FeCoB/MgO trilayer: precise study under x-ray standing wave conditions
Journal of Applied Physics, 131, 235301(1-7) (2022)
41. Jangir R., Srihari V.*, Bhakar A.K., Nand M.*, Shukla D.K.*, Jha S.N.*, Ganguli T.
Wide-band-gap p-type GaCrO₃: Ni semiconductor: a hole transport material
ACS Applied Energy Materials, 5, 8629-8638 (2022)
42. Jena R.*, Chandrakanta K.*, Pal P.*, Abdullah Md. F.*, Sahu D.P.*, Kaushik S.D.*, Sharma R.K., Singh A.K.*
Role of manganite in enhancing dielectric cum magnetic properties of BTFO-LSMO composites
Applied Physics A, 128, 153 (2022)
43. Johari K.K.*, Singh M.N. et al.
In situ evolution of secondary metallic phases in off-stoichiometric ZrNiSn for enhanced thermoelectric performance
ACS Applied Materials & Interfaces, 14, 19579-19593 (2022)
44. Kamalesh T.*, Karuppasamy P.*, Pandian M.S.*, Ramasamy P.*, Verma S.
Growth of large size triphenylphosphine oxide 4-nitrophenol (TP4N) single crystal by Sankaranarayanan–Ramasamy (SR) method for third order nonlinear optical applications
Chinese Journal of Physics, 76, 68-78 (2022)
45. Khan S., Khan S., Jayabalan J., Khamari S.K., Sharma T.K.
Role of intra-band relaxation of holes and tunneling of electrons in carrier relaxation in AlGaAs/GaAs quantum well.
Physica Status Solidi B, 259, 2100329 (2022)
46. Khatua D.P., Singh A., Gurung S., Khan S., Tanwar M.*, Kumar R.*, Jayabalan J.
Ultrafast carrier dynamics in a monolayer MoS₂ at carrier densities well above Mott density
Journal of Physics: Condensed Matter, 34, 155401(1-8) (2022)
47. Khatua D.P., Singh A., Gurung S., Tanwar M.*, Kumar R.*, Jayabalan J.
A comparative study of ultrafast carrier dynamics near A, B, and C-excitons in a monolayer MoS₂ at high excitation densities
Optical Materials, 126, 112224(1-6) (2022)
48. Kiranjot, Dhawan K.R., Modi M.H.
Surface and interface characterization of Ru/C/Ru trilayer structure using grazing incidence x-ray reflectivity and x-ray fluorescence
Surface and Interface Analysis, 54, 52-58 (2022)
49. Koner S., Deshmukh P., Ahlawat A., Singh R., Majumder S.K., Satapathy S.
Effect of interface coupling between polarization and magnetization in La_{0.7}Pb_{0.3}MnO₃ (LPMO)/P(VDF-TrFE) flexible nanocomposite films
Journal of Materials Science, 57, 7621-7641 (2022)
50. Koner S., Deshmukh P., Karnal A.k., Satapathy S.
Angular dependent magnetoelectric effect of La_{0.7}Ba_{0.3}MnO₃ (LBMO) embedded P(VDF-TrFE) particulate multiferroic nanocomposite
Journal of Materials Science: Materials in Electronics, 33, 8534-8541 (2022)
51. Kuila M.*, Sagdeo A., Longchar L.*, Choudhary R.J.*, Srinath S.*, Reddy V.R.*
Robust perpendicular magnetic anisotropy in Ce substituted yttrium iron garnet epitaxial thin films
Journal of Applied Physics, 131, 203901(1-11) (2022)
52. Lal. S., Paramonov V.*, Qian H.*, Shaker H., Shu G.*, Chen Y.*, Stephan F.*
Design studies of a continuous-wave normal conducting buncher for European x-ray free electron laser

- Nuclear Instruments & Methods in Physics Research: Section A***, 1027, 166220(1-12) (2022)
53. Liu C.*, Bourges P.*, Sidis Y.*, Xie T.*, He G.*, Bourdarot F.*, Danilkin S.*, Ghosh Haranath, Ghosh S., Ma X.*, Li S.*, Li Y.*, Luo H.*
Preferred spin excitations in the bilayer iron based superconductor $\text{CaK}(\text{Fe}_{0.96}\text{Ni}_{0.04})_4\text{As}_4$ with spin-vortex crystal order
Physical Review Letters, 128, 137003 (2022)
 54. Mahakud R., Kumar J., Kumar S., Prakash O., Dixit S.K., Nakhe S.V.
Fabrication and analysis of enhanced thermal stability and high-sensitivity turnaround point long-period fiber grating
Applied Optics, 61, 1068-1075 (2022)
 55. Mahapatra A., Ajimsha R.S., Misra P.
Oxygen annealing induced enhancement in output characteristics of ZnO based flexible piezoelectric nanogenerators
Journal of Alloys and Compounds, 913, 165277(1-8) (2022)
 56. Majumder S.*, Tripathi M.*, Fischer H.E.*, Souza D.O.de, Olivi L.*, Sinha A.K., Choudhary R.J.*, Phase D.M.*
Microscopic insights of magnetism in $\text{Sm}_2\text{NiMnO}_6$ double perovskite
Physical Review B, 105, 094425(1-13) (2022)
 57. Man G.J.*, Kamal C. et al.
A-site cation influence on the conduction band of lead bromide perovskites
Nature Communications, 13, 3839(1-10) (2022)
 58. Modi M.H., Gupta S., Yadav P.K., Gupta R., Bose A., Mukherjee C., Jonnard P.*, Idir M.*
Study of interface reaction in a $\text{B}_4\text{C}/\text{Cr}$ mirror at elevated temperature using soft x-ray reflectivity
Journal of Synchrotron Radiation, 29, 978-984 (2022)
 59. Mondal K.*, Megha, Banerjee A., Fortunelli A.*
Adsorption and activation of CO_2 on a Au_{19}Pt subnanometer cluster in aqueous environment
Computational and Theoretical Chemistry, 1212, 113701(1-6) (2022)
 60. Mondal K.*, Megha, Banerjee A., Fortunelli A., Walter M.*, Moseler M.*
Ab Initio Modeling of the ZnO-Cu(111) Interface
Journal Physical Chemistry C, 126, 764 (2022)
 61. Moxham T.E.J.*, Dhamgaye V.P., Laundry D.*, Fox O.J.L.*, Khosroabadi H.*, Sawhney K.*, Korsunsky A.M.*
Two-dimensional wavefront characterization of adaptable corrective optics and Kirkpatrick–Baez mirror system using ptychography
Optics Express, 30, 19185-19198 (2022)
 62. Mythili R.*, Kirana R.*, Singh L.H.*, Govindaraj R.*, Sinha A.K.*, Singh M.N., Saroja S.*, Vijayalakshmi M.*, Deb S.K.
Identification of retained austenite in 9Cr-1.4W-0.06Ta-0.12C reduced activation ferritic martensitic steel
Symmetry, 14, 196 (2022)
 63. Nag J.*, Kataria A.*, Singh R.P.*, Banik S., Alam A.*, Suresh K.G.*
Realizing topological states in type-II Dirac semimetal PdTe_2 : an angle-resolved photoemission and quantum oscillations study
Bulletin of Materials Science, 45, 1-5 (2022)
 64. Nanda S.S.*, Nayak P.*, Mandal S.K.*, Jana D.*, Goutam U.K., Dash S.*
Synthesis, Judd-Ofelt analysis and energy transfer mechanism in $\beta\text{-NaYGeF}_4$: Eu^{3+} microphosphors
Journal of Molecular Structure, 1266, 133446 (2022)
 65. Padhi P.S., Rai S.K., Srivastava H., Ajimsha R.S., Srivastava A.K., Misra P.
Maxwell–Wagner relaxation-driven high dielectric constant in $\text{Al}_2\text{O}_3/\text{TiO}_2$ nanolaminates grown by pulsed laser deposition
ACS Applied Materials & Interfaces, 14, 12873–12882 (2022)
 66. Pal M.K., Gaur R., Kumar V.
Electromagnetic design of 325 MHz superconducting single-spoke resonators for Indian Facility for Spallation Research
Pramana: Journal of Physics, 96, 69(1-17) (2022)
 67. Patil J., Tokekar V.*, Rajan A., Rawat A.
MAC based model to differentiate flash crowd and malicious traffic in SDN
Journal of Scientific Research, 66, 132-138 (2022)
 68. Patel D.*, Kane S.R., Modi C.K.*
One-pot multistep Henry-Michael reaction with notable upshots using reduced graphene oxide supported bifunctional catalysts
Catalysis Communications, 169, 106476(1-5) (2022)
 69. Paul N., Singh C.P., Gupta P.K., Bhuvnesh, Mukhopadhyay P.K., Bindra K.S.
Rectangular dark pulses in all-normal dispersion fiber oscillator
Optics & Laser Technology, 147, 107641 (2022)
 70. Paul N., Singh C.P., Gupta P.K., Mukhopadhyay P.K., Bindra K.S.
Noise-like pulses from all-normal dispersion ytterbium doped all-fiber oscillator with semiconductor saturable absorber

- Journal of Optics*, 24, 064015(1-11)(2022)
71. Podder S.*, Nath A.M.*, Mukherjee C., Subrahmanyam V.V.V.*, Jana S.*
Fabrication and characterization of sol–gel-based coatings on quartz glass to obtain antireflective effect at 1054 nm for optics of high power Nd:phosphate glass laser
Bulletin of Materials Science, 45, 154 (2022)
 72. Rajput P.*, Sagdeo A., Mondal P., Srivastava, A.K. et al.
Structural, optical and vacancies investigations of Li-doped ZnO
Journal of Nanoparticle Research, 24, 161 (2022)
 73. Ramjan S.K., Chandra L.S.S., Singh R., Ganesh P., Sagdeo A., Chattopadhyay M.K.
Enhancement of functional properties of $V_{0.6}Ti_{0.4}$ alloy superconductor by the addition of yttrium
Journal of Applied Physics, 131, 063901(1-11)(2022)
 74. Rani E.*, Ingale A.A., Sinha A.K.
Effect of external stimulus on polymer conformation in CdS-PVP nanocomposites: Raman, PL, and AFM mapping study
Journal of Materials Science, 57, 4118–4129 (2022)
 75. Rao P.N., Srihari V.*, Rajput P.*, Jha S.N.*, Ganguli T., Rai S.K.
Investigation of long term stability of W/B₄C multilayer structures
Thin Solid Films, 755, 139327 (2022)
 76. Rathi S., Badapanda M.K., Arya R., Tripathi A., Upadhyay R., Lad M.
Pulse power supply for solid state RF amplifiers: simulation study and experimental analysis
Journal of Electrical Engineering, Electronics, Control and Computer, 8, 19-26 (2022)
 77. Sabarish V.C.B.*, Bhatt R., Bhaumik I., Karnal A.K., Singh M.N. et al.
Exploration of Gamma irradiation effects on the structural, spectral characteristics, thermomechanical behaviour and optical constants in <011>-oriented glycine-Di-glycinium sulphate (TGS) single crystals
Journal of Molecular Structure, 1248, 131450(1-8) (2022)
 78. Saha P.*, Reddy V.R.*, Gupta P., Gupta M.*, Rawat R.*
Effect of substrate and Fe/Rh stoichiometry on first order antiferromagnetic–ferromagnetic transition in FeRh thin films
Journal of Magnetism and Magnetic Materials, 551, 169095(1-6) (2022)
 79. Samantaray K.S.*, Amin R.*, Rini E.G.*, Bhaumik I., Mekki A.*, Harrabi K.*, Sen S.*
Defect dipole induced improved electrocaloric effect in modified NBT-6BT lead-free ceramics
Journal of Alloys and Compounds, 903, 163837 (2022)
 80. Sekaran B.S.V.C.*, Bhatt R., Bhaumik I., Mohammad S., et al.
Enhanced ferroelectric and piezoelectricity in 100 MeV Ag⁷⁺ ion-irradiated <011>-oriented TGS single crystals
Applied Physics A, 128, 567 (2022)
 81. Sharma S.K., Gupta H.*, Jain V.K., Ganesh P., Gupta R.K., Yadav D.P., Kaul R.
Investigation of ultra-high vacuum compatible weld joints of AA5083 and AA6061 materials for synchrotron radiation source
Journal of Materials Engineering and Performance, 31, 4795-4810 (2022)
 82. Sharma V.K., Garg N.*, Manekar M.
Tuning the giant magnetocaloric effect in MnCoGe alloy with external pressure
AIP Advances, 12, 035107(1-6) (2022)
 83. Singh R.*, Banik S. et al.
Competition between axial anomaly and ferromagnetic ordering in Bi_{2-x}Fe_xSe_{3-x}S_x topological insulator: a study of magnetic and magnetotransport properties
Journal of Materiomics, 8, 669-677 (2022)
 84. Singh V., Tiwari V.B., Mishra S.R.
Efficient quantum state preparation using Stern–Gerlach effect on cold atoms
Measurement Science and Technology, 33, 095019(1-7) (2022)
 85. Soharab M., Bhatt R., Saxena A., Bhaumik I.
Effect of Cr co-doping on the optical absorption and emission characteristics of Yb:YVO₄ single crystals grown by OFZ technique
Optical Materials, 128, 112434(1-9) (2022)
 86. Upadhyay K.*, Kumar R., Baral M., Tripathi S.*, Jha S.N.*, Ganguli T., Saha B.*
Electronic structure of rare-earth semiconducting ErN thin films determined with synchrotron radiation photoemission spectroscopy and first-principles analysis
Physical Review B, 105, 075138(1-8) (2022)
 87. Varshney P.*, Singh A.P.*, Upadhyay A., Kundu M.*, Gopal K.*
Effect of laser intensity redistribution on semiconductor plasma based THz emission
Optik, 250, 168353 (2022)
 88. Vashisht G., Porwal S., Haldar S.*, Dixit V.K.
Influence of interface states on built-in electric field and diamagnetic-Landau energy shifts in asymmetric modulation-doped InGaAs/GaAs Qws
Journal of Physics D: Applied Physics, 55, 385101(1-16) (2022)

89. Verma D.K., Saxena G., Paraye A., Rajan A., Rawat A., Verma R.K.
Classifying COVID-19 and viral pneumonia lung infections through deep convolutional neural network model using chest x-ray images
Journal of Medical Physics, 47, 57-64 (2022)
90. Vishwakarma P.*, Nayak M., Reddy V.R. *, Gloskovskii A. *, Drube W. *, Gupta A. *
Standing wave hard x-ray photoemission study of the structure of the interfaces in Ta/Co₂FeAl/MgO multilayer
Applied Surface Science, 590, 153063(1-8) (2022)
91. Vithalani R.S. *, Modi C.K. *, Sharma V. *, Jha P.K. *, Srivastava H.
DFT assisted study on activation of surface acidic –COOH debris in graphene oxide supported catalyst for benzyl alcohol oxidation
Journal of Molecular Structure, 1249, 131620 (2022)
92. Yadav P. *, Sharma A. *, Srivastava H., Bhaumik I., Singh G., Tiwari V.S.
A correlation of piezoelectricity and photoluminescence of europium doped (Na_{0.41}K_{0.09}Bi_{0.5})TiO₃ with ferroelectric and structural ordering
Ceramics International, 48, 3243-3253 (2022)
- B. Invited Talks**
1. Chouksey S.
Overview of the manufacturing technologies for the development of future particle accelerators
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
2. Chouksey S.
Overview of the manufacturing technologies for the development of ultra high vacuum compatible components at RRCAT
DAE-BRNS International Symposium on Vacuum Science and Technology and its Applications in Accelerators (VSTAA-2022), BARC, Mumbai, Feb. 16-19, 2022
3. Dwivedi J.
Electron linacs and e-beam irradiation facilities at RRCAT
Indian Particle Accelerator Conference (InPAC-2022), VECC, VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
4. Dwivedi J.
Process integrity systems in electron beam radiation processing at Indore
DAE-BRNS International Symposium on Vacuum Science and Technology and its Applications in Accelerators (VSTAA-2022), BARC, Mumbai, Feb. 16-19, 2022
5. Kumar J.
Technology development and applications of fiber bragg grating sensors
DAE-BRNS National Laser Symposium (NLS-30), BARC, Mumbai, Jan. 19-22, 2022
6. Kumar V.
Physics design issues in traveling wave electron linacs
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
7. Lad M.
RF systems development, commissioning and operation at RRCAT - an overview
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
8. Modi M.H.
Soft x-ray reflectivity: role of optical constants
Short term course on Synthesis and Characterization of Thin Films, IIT Indore, Mar. 7-18, 2022
9. Nayak M.
Soft x-ray reflection spectroscopy: for structural and spectroscopic depth profile of nano-scale layered structured materials
A eight (8) day high-end workshop on "Scattering Methods (Electron, X-ray and Ion) for Materials Characterization", IIT, Bhubaneswar, June 13-20, 2022
10. Nayak M.
Interface engineering of nano-scaled materials for frontier technological applications
International conference on "Recent Advances in Materials (ICRAM 2022)", Centurion University of Technology and Management, Odisha, Mar. 21 - 23, 2022
11. Pant K.K.
Advances in FEL activity at RRCAT
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
12. Puntambekar T.A
Status of Indus synchrotron radiation sources and upgrades
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
13. Ram S.P.
Trapping and manipulating cold atoms using magnetic and laser fields
DAE-BRNS National Laser Symposium (NLS-30), BARC, Mumbai, Jan. 19-22, 2022
14. Sahu K.
Antimicrobial phototherapy: a new frontier in fight against antibiotic resistant bacteria and newly emerging infectious microorganisms
DAE-BRNS National Laser Symposium (NLS-30), BARC, Mumbai, Jan. 19-22, 2022



15. Shrivastava P.
Efforts and achievements in the superconducting RF technologies, related infrastructure and proton accelerator R & D activities at RRCAT
Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-2, 2022 (Online Mode)
Nd:YAG laser for nuclear field applications
7. Bhardwaj K., Ram S.P., Sarkar S., Tiwari V.B., Mishra S.R.
Effect of off-resonant light on the trap losses in a quadrupole magnetic trap
16. Upadhyay B.N.
Recent developments on high power CW fiber lasers at RRCAT
DAE-BRNS National Laser Symposium (NLS-30), BARC, Mumbai, Jan. 19-22, 2022
8. Bhardwaj V., Bairwa M.K., Singh R., Paul B., Ekka B., Sharma S.K., Upadhyaya B.N., Bindra K.S.
Comparative study of series and parallel flow laser pump chambers for high power Nd:YAG laser applications
17. Yadav D.P. Sindal B.K., Kumar K.V.A.N.P.S., Bhangre N.J., Bhatnagar P., Joshi, S., Shrivastava P.
Overview of ultra-high vacuum systems for Indian Synchrotron Radiation Sources Indus-1 and Indus-2 and industrial electron accelerators for AR
DAE-BRNS International Symposium on Vacuum Science and Technology and its Applications in Accelerators (VSTAA-2022), BARC, Mumbai, Feb. 16-19, 2022
9. Bhartiya S., Kohli D.K., Singh A., Singh R., Singh A., Mandal T., Arora V., Moorti A., Chakera J.A., Singh M.K.
Synthesis of carbon-aerogel based foam targets for laser matter interaction studies
10. Bhuvnesh, Singh C.P., Gupta P.K., Hedao P., Sahu S., Mukhopadhyay P.K., Bindra K.S.
Development of a 5 W narrow linewidth all-fiber multistage amplifier setup at 1550 nm
11. Bhuvnesh, Singh C.P., Gupta P.K., Hedao P., Sahu S., Mukhopadhyay P.K., Bindra K.S.
Development of 5 W linearly polarized CW output from all-fiber amplifier at 1064 nm with < 0.2 nm spectral width
12. Chakravarty U., Kuruvilla A., Kumar A., Singh R., Ekka B., Jain R.K., Upadhyaya B.N., Bindra K.S.
Generation of 920 W of peak power from all-fiber acousto-optic Qswitched thulium-doped fiber laser at 1940 nm
13. Chetia S.K., Das A.K., Ajimsha R.S., Misra P.
MgZnO based MSM solar blind UV photodetector grown by pulsed laser deposition
14. Chatterjee S., Dube A., Majumder S.K.
Anticancer photodynamic treatment efficacy of cycloimide purpurin-18, a near-infra red absorbing photosensitizer, in human breast carcinoma cells
15. Chaubey S., Kumar J., R. Mahakud R., Biswal R., Prakash O., Dixit S.K.
Study of gamma radiation effects on FBGs inscribed in different photosensitive fibers
16. Debnath C., Kar S., Agrawal A.K. *, Verma S., Majumder
Fabrication and testing of TSB/PMMA composite elements for x-ray imaging at Indus-2
17. Dhami T.S., Khare J., Rai S.K., Joshi M. P.
Comparison of structural and optical properties of thermal and laser annealed thin films of methyl ammonium lead iodide ($\text{CH}_3\text{NH}_3\text{PbI}_3$)
18. Dube A., Chowdhury A., Majumder S.K.
Photosensitizers immobilized on aluminium hydroxide

C. Seminar/Conference Presentations

C.1. DAE-BRNS National Laser Symposium (NLS-30), BARC, Mumbai, Jan. 19-22, 2022

1. Ahlawat S., Mukhopadhyay P.K., Bindra K.S.
Demonstration of a stand-off laser induced breakdown spectroscopy setup
2. Ahlawat S., Mukhopadhyay P. K., Singh A., Singh R., Bindra K.S.
Analyte enrichment using nanosecond laser textured superhydrophobic surfaces
3. Alka, Sahu K., Khan K.M., Krishna H., Verma S., Majumder S.K.
Use of combined off-confocal Raman spectroscopy (OCRS) and Swept Source Optical Coherence Tomography (SSOCT) system for monitoring dermal wound healing progress in mouse model
4. Ansari A., Kumar M., Singhal H., Chakera J.A.
Experimental study on self-compression of intense ultrashort laser pulse propagating in oxygen gas sheath
5. Bagchi S., Tayyab M., Moorti A., Chakera J. A.
Proton radiography of microstructure and laser produced plasma plume
6. Bairwa M. K., Bhardwaj V., Jain R. K., Meena R.S., Shukla V., Sharma S.K., Singh R., Saini B. K., Paul B., Kumar P., Ekka B., Kumar P., Beshra J., Raju A.A., Sah S.K., Bhawsar V., Khanwalkar J., Arya R., Upadhyaya B.N., Bindra K.S.
Single pass laser cutting of 30 mm thick SS316L plate using remotely operable 1 kW average power pulsed

- microparticles for photodynamic inactivation of bacteria and water disinfection
19. Gautam A., Rana L.B., Yadav R.K., Murugan R., Rao B.T., Kumar M., Kaul R.
Theoretical and experimental studies for development of sealed-off glass tube CO₂ laser
 20. Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
All-fiber passively Q-switched ytterbium doped laser using fiber optic ring resonator
 21. Gupta P.K., Singh C.P., Mukhopadhyay P.K., Bindra K.S.
Generation of vector dark-bright pulses from fiber laser mode locked by nonlinear multimode interference
 22. Gurram S., Varshnay N.K., Dongre O.B., Daiya D., Singh A., Sharma J., Patidar R.K., Kamath M.P., Benerji N.S., Bindra K.S.
Engineered two-arm time synchronized all-fiber optic front end system for high energy Nd: glass laser
 23. Jain R. K., Singh R., Bairwa M.K., Saini B.K., Shukla V., Paul B., Bhawsar V., Dwivedi N.D., Ulhas K.O., Sanyal D.N., Arya R., Upadhyaya B.N., Bindra K.S.
Development of laser cutting process and manipulator for removal of eroded dangling piece from feed water box of steam generator at KGS-4 reactor
 24. Kar S., Debnath C., Mondal P., Agrawal A.K.*, Verma S., Majumder S.K.
Synthesis of Mg₂GeO₄:Mn⁴⁺ phosphor and its characterization for x-ray beam positioning (detection) and imaging applications using Indus-2 facility
 25. Karmakar S., Pathak S.K., Gupta S.M.
Effect of annealing on the optical properties of transparent Nd:YAG ceramic
 26. Karn R., Soharab M., Chadar A., Saxena A., Sajith B.K., Bhatt R., Bhaumik I.
Growth and investigation of strontium borate single crystals for nonlinear optical and thermo-luminescence application
 27. Khan S., Khatua D.P., Khan S., Sharma T.K.
Micro-photoluminescence studies on MoS₂ two-dimensional monolayer using cw and femtosecond laser
 28. Khare J., Rai S.K.
Effect of laser ablation fluence on optical and structural properties of Yttria Stabilized Zirconia (YSZ) thin film
 29. Kumar A., Barnwal S., Singh A., Pal S., Kulkarni A.P., Jain S., Patidar R.K., Mukherjee C., Prasad Y.B.S.R., Benerji N.S., Bindra K.S.
Laser-driven shock study in aluminium foils coated with PMMA polymer
 30. Kumar A., Misra P., Jain R.K., Singh R., Upadhyaya B.N., Bindra K.S.
Development of monolithic 1 kW single transverse mode all-fiber Yb-doped CW fiber laser at 1080 nm
 31. Kumar S., Mahakud R., Kumar J., Prakash O., Dixit S.K.
Analysis and experiment on the effect of clad etching on refractive index sensitivity of a long period fiber grating
 32. Mahakud R., Srivastava V. K., Kumar J., Kumar S., Prakash O., Dixit S.K.
Inscription of fiber Bragg grating based Fabry-perrot interferometer in single mode photosensitive fiber by 255 nm UV beam
 33. Mandal T., Arora V., Moorti A., Khan R.A., Chakera J. A.
Demonstration of super-ponderomotive acceleration of fast electrons in ultrashort high-intensity laser foil interaction
 34. Mishra S., Rao B.S., Moorti A., Chakera J.A.
Enhanced synchrotron x-ray radiation from collective oscillations of electron bunch in laser-plasma accelerator and wiggler
 35. Pathak S.K., Karmakar S., Gupta S.M.
Microstructural and optical characterization of Cr-doped alumina ceramic
 36. Paul N., Singh C.P., Bhuvnesh, Gupta P.K., Mukhopadhyay P.K., Bindra K.S.
Noise-like pulse from all-normal dispersion ytterbium doped all fiber oscillator with semiconductor saturable absorber
 37. Rana L.B., Kumar M., Yadav R.K., Kaul R.
Design and development of mechanical system for carbon monoxide (CO) laser
 38. Sahu Y., Singh B., Ansari M.S.
Development of PXIe based control system for physics prototype laser
 39. Sarkar S., Ram S.P., Bhardwaj K., Tiwari V.B., Mishra S.R.
Rotation of a laser cooled 87Rb atom cloud using Time Averaged Adiabatic Potential (TAAP) scheme
 40. Selvamani R.*, Singh G., Sen D.*, Sastry P.U.*
Small angle neutron scattering study of transparent laser host Nd:YAG ceramic
 41. Sharma J., Mukherjee C., Kumar Y.P., Rajiv K., Dixit V.K., Daiya D., Patidar R.K., Singh A., Gurram S., Kamath M.P., Benerji N.S., Bindra K.S.
Development of edge cladding of large sized Nd: phosphate glass disc for high-energy laser amplifier
 42. Sharma M.L., Nigam S., Aneesh K., Prasad Y.B.S.R.,

Bindra K.S.

High voltage picosecond pulse generation by an avalanche transistor stack on microstrip PCB

43. Sharma S.K., Bhardwaj V., Bairwa M.K., Paul B., Singh R., Meena R.S., Bhawsar V., Raju A.A., Jain R.K., Kumar P., Kushwaha S., Khanwalkar J., Arya R., Upadhyaya B.N., Bindra K.S.
Development of engineered 567 J pulse energy long pulse Nd:YAG laser system for welding applications
44. Sharma S.K., Singh Y., Bhaumik I.
Growth kinetics studies of (100) face of L-arginine phosphate (LAP) single crystal using birefringence interferometry technique
45. Shukla V., Kumar Y., Rai A.K., Singhal H., Meena R.S., Singh R., Bairwa M.K., Paul B., Jain R.K., Saini B. K., Ekka B., Upadhyaya B. N., Bindra K.S.
Laser profile cutting of 0.6 mm thick silicon wafer using pulsed Nd:YAG laser
46. Singh S., Jain B., Tiwari V.B., Mishra S.R.
Atomic fountain of rubidium atoms with moving molasses
47. Singh V., Tiwari V.B., Chaudhary A., Shukla R., Mukherjee C., Mishra S.R.
Magnetic micro-trapping of laser cooled Rb-atoms using a gold Zwire trap on atom-chip
48. Srivastava V.K., Mahakud R., Kumar J., Kumar S., Prakash O., Dixit S.K.
Temperature sensitivity of dual resonance peak of long period fiber grating operating near turn around point
49. Tayyab M., Bagchi S., Upadhyay A., Moorti A., Chakera J.A.
Effect of thin gold (Au) coating on proton acceleration from a transparent Mylar foil target
50. Tiwari S.K., Singh S., Muralidharan G., Kumar Y. P., Ragoubady G. , Kumar A., Thangavel S.S., Rishipal, Biswas A.K., Kamath M.P., Benerji N.S., Bindra K.S.
Fast detection of refractive index inhomogeneity in unpolished Neodymium-doped phosphate glass slabs using index matched liquid by Schlieren technique
51. Upadhyay A., Madhubabu K., Prasad Y.B.S.R., Bindra K.S.
Inverse Compton scattering gamma ray source: PIC simulation
52. Yadav R., Kumar M., Rana L.B., Murugan M., Jayachandran N.*, Kaul R.
Design & development of an automated control system for CO₂ laser assisted tritium filled glass tube cutting & sealing for BRIT, Mumbai.

C.2. Indian Particle Accelerator Conference (InPAC-2022), VECC, Kolkata, Mar. 22-25, 2022

1. Abdurrahim, Kumar P., Ghodke A.D
Study of single bunch instabilities in high brightness synchrotron radiation source.
2. Acharya M., Reghu T., Lad M., Shrivastava P.
Design and development of 50 kV, 2A, 16 μ s, 300 Hz Marx modulator for electron guns.
3. Aditya L., Meena R., Singh S.
On the FMR and magnetic properties of high density ferrimagnetic garnets for high power cw RF circulators with garnet disc resonators.
4. Agrawal G., Tiwari A., Khare P., Patel H.K., Gilankar S.
Fast cool down studies of HB650 SCRf cavity of cryomodule.
5. Ahlawat S.
Holistic approach for reliability of electric power feed arrangement for synchrotron radiation facilities at RRCAT
6. Ahlawat S.
Automation of HVAC system for Indus-2 ring area at RRCAT, Indore
7. Arora P., Jana P.K., Dhingra R., Kulkarni N.S., Kumar V.
Design optimization studies for a 9.5 MeV constant gradient electron Linac for societal applications.
8. Arora R.K., Tiwari A.K., Vaishnav H., Pareek P., Kumar R., Lad M.
Low power RF characterization and high power testing of RF circulators.
9. Babbar L.K., Kumar A., Ganesh P., Kumar M., Soni A.K., Vaishnav D., Yadav D.P., Kaul R., Sisodia B., Tiwari S.K., Tyagi Y., Sheth Y., Puntambekar T.A.
Design and development of prototype beam position monitor for low emittance storage ring.
10. Babbar L.K., Kumar M., Upadhyaya B.N., Bhatnagar V.K., Yadav D.P., Sisodia B., Tiwari S.K., Holikatti A.C., Yadav S., Vaishnav D., Soni A.K., Sheth Y., M., Puntambekar T.A.
Design, development and installation of twin beam position indicator in Indus-2 synchrotron radiation source.
11. Badapanda M.K., Tripathi A., Upadhyay R., Tyagi R.K., Rathi S., Lad M.
Power supplies for RF amplifiers at RRCAT
12. Bagduwal P.S., Sharma D., Mishra N., Mishra E.,

- Gothwal P., Tiwari N., Lad M.
Commissioning of upgraded 31.6 MHz RF system in booster synchrotron and Indus-1 SRS
13. Bagduwal P.S., Sharma D., Mishra E., Mishra N., Prasad M., Gothwal P., Tiwari N., Lad M.
Design and development methodologies of LLRF systems for accelerators at RRCAT.
14. Bagduwal S.N., Mishra N., Mishra E., Tiwari N., Lad M., Sharma D.
Design and development of digital multichannel LLRF control for booster synchrotron & Indus-1 SRS.
15. Bagre M., Jain V., Kane G.V., Mahawar A., Maratha S., Mohania P., Moulali S., Ramsankar P., Puntambekar A., Sharma S., Shrivastava U., Singh A.K., Srivastava V., Veerbhadraiah T., V. Vijayakumar, Yadav A., Yedle A., Eremeev G.*, Grimm C.*, Maurya T., Shrivastava P.
Fabrication experience of five-cell HB650 bare SCRF cavities.
16. Bhardwaj A., Singh A.P., Singh S., Kumar A., Mundra G.
Conceptual design of stainless steel helium vessel for $\beta_g=0.9$ 650 MHz superconducting cavity
17. Bhatnagar V., Kherde A., Nathwani R.K., Sahu, R.K.
New radiation safety interlock systems at Indus accelerator complex
18. Biswas B., Chandran S., Saini R.S., Dave T., Lal S., Kumar A., Pandit R.K., Nerpagar P., Pant K.K.
Saturation of lasing of the IR-FEL at RRCAT
19. Bohrey A., Jain M.K., Lad M.
Automatic detuning of the RF cavity in RF system of SRS Indus-2
20. Bose A., Kokil S.V., Raghavendra S.
Cold EP and its route to current oscillation in elliptical cavities.
21. Chandra J., Manekar M.
Effect of nitrogen infusion on the superconducting properties of high purity niobium used for SCRF applications.
22. Chandran S., Biswas B., Pant K.K.
Parametric study of saturation of lasing of the IR-FEL through FEL simulations.
23. Chauhan A., Yadav R.P., Meena M.K., Rana R., Sahu D., Batham, S., Agrawal R.K., Fatnani P. Control system for horizontal test stand.
24. Choudhary R.S., Sandha R.S., Goswami S.G., Dwivedi J., Soni R., Nanda D., Pandey R.M.
Development of cooling system of industrial linacs.
25. Deo R.K., Kanyal G., Jain M.K., Lad M.
Realization of 1.4 kW solid state RF amplifier module at 107.5 MHz for high power RF system
26. Dhingra R., Raturi S., Kulkarn N. S., Kumar V.
Optimization studies of 325 MHz drift tube linac for the proposed IFSR project.
27. Fakhri A.A., Kant P., Ghodke A.D.
Non-linear beam dynamics studies for booster lattice of high brilliance synchrotron radiation source.
28. Gauttam V., Kasliwal A., Tiwari R.S.
Design and development of a high stability current controlled bipolar orbit correction coil power supply for microtron
29. Gauttam V., Kasliwal A., Tiwari S. R.
Design and development of a high stability phase shifted PWM power converter prototype of 270 degree bending magnet power supply for 10 MeV Linac
30. Gilankar S., Ghosh R., Gupta P., Khare P., Kumar M., Patel H.K., Raghavendra S, Sharma R., Shrivastava P., Tiwari A.
Leak detection and rectification in insulating vacuum of horizontal test stand-2 cryostat.
31. Goswami S.G., Sandha R.S., Choudhary R.S., Dwivedi J., Kumar A., Wanmode Y., Radheshyam P., Ghodke A., Karnewar A., Arora P., Sindal B.K., Puntambekar T.A.
Engineering development of 50keV electron gun for food irradiation linac.
32. Gothwal P., Mishra N., Bagduwal P.S., Mishra E., Sharma D., Tiwari N., Lad M.
Design and development of real time event monitoring & detection system for low level RF control system.
33. Gupta A.K., Jain A., Lad M.
Design and development of square coaxial line based broad band 70 kW dual directional coupler with EIA 61/8 inch coaxial line interface
34. Husain R., Ghodke A.D.
Lattice design of high brightness synchrotron radiation source with practical requirement of drift spaces for installing various components.
35. Husain R., Prakash S., Kant P., Ghodke A. D.
Beam dynamics with anti-bend and super-bend in low emittance storage ring.
36. Jain A., Sharma D. K., Gupta A. K., Pathak K., Kumar N., Lad M.
Operational experience of high-power solid-state RF amplifiers deployed at RRCAT.
37. Jain M., Kanyal G., Deo R.K., Lad M.

- Design and development of 100kW/325MHz tetrode based pulse RF power system for RFQ.
38. Jana P.K., Kumar V.
Electromagnetic design study of higher order mode coupler for elliptical SCRF cavity.
39. Jana P.K., Arora P., Kulkarni N. S., Kumar V.
Electromagnetic design of RF couplers for a prebuncher cavity of industrial electron linac, and study of the beam loading effect in the rebuncher
40. Jain R., Holikatti A.C., Karnewar A.K., Maurya N.K., Puntambekar T.A., Sheth Y.M., Sonawane B.B.
Design and development of scan width confirmation system of industrial linac
41. Jain R., Yadav S., Holikatti A.C., Ojha A., Sheth Y.M., Puntambekar T.A.
Development of software for Indus-2 post-mortem beam position data analysis.
42. Jain V., Bagre M., Moulali S., Srivastava V., Singh K., Kane G.V., Suhane S., Raghavendra S., Mohania P., Puntambekar A., Grigory E.*, Furuta F.*, Chandrasekaran S.*, Shrivastava P.
Qualification of $b=0.92$ 650 MHz superconducting RF dressed cavities of RRCAT for HB650 prototype CM of PIP-II
43. Jain V., Singh K., Raj A., Shrivastava P.
Development of X-link tuner as co-axial tuner for 1300MHz and as end tuner for 650 MHz SCRF cavities.
44. Jena S.K., Husain R., Fakhri A. A., Ghodke A.D.
Fast beam based alignment procedure in high brilliance synchrotron radiation source.
45. Jena S.K., Prasad M., Kumar K.V.A.N.P.S., Sindal B.K., Abdurrahim, Kumar P., Fakhri A. A., Ghodke A. D.
Ion clearing studies for dipole chamber of Indus-1 storage ring.
46. Kant P., Fakhri A. A., Ghodke A.D.
Beam lifetime studies in booster of HBSRS.
- Development of diagnostic devices for the measurement of beam parameters of electron gun and linac-3.
49. Kelkar Y., Singh Y.P., Karandikar U., Barothiya R., Srinivasl L., Nath P.R., Deepchand, Tiwari S.R.
Recent advances in Indus complex pulsed power supplies
50. Keshwani R.*, Sujo C.I.*, Bharade S.*, Sutar M.*, Sharma D., Mishra E., Joshi G.*
Installation and commissioning of RF protection and interlock system at HTS facility, RRCAT
51. Khare G., Kadwa S., Nathwani R.K., Rajan A., Sahu R.K., Rawat A.
Design and development of workflow based software for managing the maintenance and upgradation activities during planned shutdowns of Indus synchrotron radiation facility at RRCAT
52. Kokil S.V., Chauhan S.K., Sharma N.K., Kane G.V., Raghavendra S.
Development of data acquisition and control system for tuning of SCRF cavities
53. Kumar A., Das S., Singh S.N.
Development of vibrating wire setup to determine the magnetic axis of solenoid
54. Kumar N., Jain A., Lad M.
Development and commissioning of protection subsystem for 40 kW/650 MHz solid state RF amplifier system, in horizontal test stand, RRCAT
55. Kumar P., Abdurrahim, Tyagi D.K., Ghodke A.D.
Effect of non evaporable getter (NEG) coating on resistive wall Impedances in ultra-low emittance electron storage ring.
56. Kumar P., Abdurrahim, Tyagi D.K., Ghodke A.D.
Momentum acceptance and touschek beam lifetime estimations in ultra-low emittance electron storage ring.
57. Kumar P., Soni R.K., Purohit D., Goswami S.G., Choudhary R.S., Mallik R., Ruwali K., Sinha G., Sreeramulu K., Arora P., Goyal P. K., Sharma A., Kumar V., Sisodia B. N., Veerbhadraiya T., Sharma S., Bhatnagar V., Choukse S., Singh S.N., Dwivedi J., Puntambekar T.A.
Development of beam delivery systems for industrial linacs at RRCAT.
58. Kumar P., Abdurrahim, Tyagi D.K., Ghodke A.D.
Estimations of RF parameters during injection and beam acceleration in medical proton synchrotron.
59. Kumar P., Soni R.K., Purohit D., Mallik R., Sinha G., Sreeramulu K., Arora P., Sharma A., Kumar V., Sisodia B.N., Veerbhadraiya T., Sharma S., Bhatnagar V., Choukse S., Singh S.N., Dwivedi J., Puntambekar T.A.
Design and development of energy limiting system for food irradiation Linac
60. Kumar R., Ghodke D.V.
Modelling and simulation of plasma generator for cold cathode arc discharge filament-based negative hydrogen ion source.
61. Kumar R., Ghodke D.V., Pathak M., Jain S.K., Prasad V.
Simulation study of plasma generator for RF ignitor based duoplasmatron positive hydrogen ion source.
62. Kumar R., Arora R.K., Jana P.K., Tiwari A.K., Kumar V.,

- Lad M.
Advancement in RF power coupler development for radio frequency quadrupole
63. Lal S., Gupta S. K., Vishwakarma S.C., Rao P.C., Pandi R.K., Kumar A., Gupta R.K., Kumar A., Pant K.K.
Development of RF accelerating structures for the injector system of a proposed THz-FEL at RRCAT.
64. Mahawar A., Mohania P., Namdeo R.K., Lad M.
Development of a 1 kW S-band amplifier module based on planar Lim-Eom combiner
65. Maheshwari P., Yadav R.P., Fatnani P.
Design and development of programmable timing and trigger unit
66. Maheshwari P., Merh B., Yadav R.P., Agrawal R., Fatnani P.
Development and commissioning of control system for beam orbit correction coil power supplies in microtron
67. Meena V. K., Fakhri A. A., Ghodke A. D.
On-axis injection scheme for booster synchrotron of high brilliance synchrotron radiation source.
68. Meena V. K., Fakhri A. A., Ghodke A. D.
Strategy for first turn beam circulation in high brilliance synchrotron radiation source.
69. Merh B., Chauhan A., Fatnani P., Yadav R.P., Maheshwari P., Srivastava B.S.K., Musuku J., Rana R., Gangopadhyay S., Gupta A., Seema M., Bansal A., Jidee J.P., Valecha A., Saifee K., Agrawal R.K.
Status of Indus-2 control system.
70. Malik R., Ruwali K., Sinha G., Dwivedi J., Singh S. N.
Design and characterization of 270o dipole magnet for ARPF.
71. Mishra D.K., Dutta S., Rao K.V.S.R., Dwivedi J.
Design and performance study of new RF cavity for 20MeV injector microtron.
72. Mishra D. K., Dutta S., Sandha R., Dwivedi J. Simulation and experimental measurements of low emittance thermionic electron gun.
73. Mishra E., Sharma D., Mishra N., Bagduwal P.S., Gothwal P., Tiwari N., Lad M.
Automated, contactless startup of digital low-level radio frequency system of Indus-2
74. Mishra N., Bagduwal P.S., Mishra E., Sharma D., Gothwal P., Tiwari N., Lad M.
Design, development and installation of PLC based RF power monitoring and protection system for booster synchrotron and Indus-1 SRS.
76. Motwani K., Ghodke D.V., Amban A., Muralikrishnan K.
Design and development of switched mode pulsed power supply of 400V/50A for hydrogen arcing discharge
77. Moulali S., Maurya T., Vijayakumar V, Singh A.K., Lal V.K., Rathi J.B., Yedle A., Sisodia B., Bagre M., Jain V., Shrivastava P.
Dressing joint qualification of high beta 650 MHz five-cell SCRF cavity
78. Mulchandani J., Baboo P., Thekkeppat R., Lad M., Shrivastava P.
IGBT switch based bouncer compensated pulse modulator for 10 MeV electron LINAC applications.
79. Musuku J., Seema M., Jatin J., Prashant P., Satheesan T.V., Fatnani P.
Development of FPGA based control module for scan magnet power supply of electron beam radiation processing facility
80. Nidhin S.L., Nigam N., Sharma N.K., Kane G.V., Prasad V.
Design of liquid helium cryostat for testing of superconducting magnets.
81. Nigam N., Singh A.P., Chaturvedi A., Sahu A., Oraon B., Mandle S., Sharma S., Veerbhadrarajah T., Rajput V., Baxy D., Sharma N., Kane G.V., Prasad V.
Prototype development of SR011 spoke cavity made in aluminium
82. Nigam N., Mandle S., Chauhan S., Sahu A., Kumar P., Sharma N., Kane G.V., Prasad V.
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Design and development of 650 MHz high power RF circulator.
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132. Tyagi D.K., Kumar P., Hussain R., Ghodke A.D.
Analysis of turn-by-turn BPM data at Indus-2 electron.

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133. Upadhyay R., Rathi S., Tripathi A., Tyagi R.K., Badapanda M.K., Lad M.
Development of test stand for 50 V, 700 A solid state modular DC power supply
134. Veerabhadraiah T., Sisodia B., Vishwakarma S.C., Ramshankar P., Chouksey S., Mundra G., Yadav A.S., Yadav D.P.
Development of undulator vacuum chamber for infrared free electron laser
135. Vishnumolakala S., Deokar D.Y., Agrawal P.K., Joshi S., Yadav D.P., Shrivastava P.
Design, fabrication and testing of upgraded current measurement circuit up to femtoampere range for ionization gauge
136. Wanmode Y., Pandey A., Gupta A., Lad M., Shrivastava P.
Design and development of 90 kV triode electron gun
137. Yadav A., Shrivastava P., Puntambekar A., Jain V., Yedle A., Maurya T., Verma V.K., Kamble P., Bagre M.
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138. Yadav H., Mishra D., Sandha R.S., Dutta S., Dwivedi J.
Experimental setup and preliminary measurements for improved tuning of $2\pi/3$ traveling wave linear accelerators.
139. Yadav R.P., Maheshwari P., Fatnani P.
EPICS interface for programable trigger and timing unit.
140. Yadav R.P., Rana R., Fatnani P.
High speed ADC (HSADC631XX) data acquisition and processing platform for VME and standalone applications.
141. Yadav R.P., Rana R., Kumar A., Fatnan P.
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142. Yadav R.P., Chauhan A., Borage M., Shah R.L., Shrivastava P., Das S., Raghavendra S., Kumar P., Singh K., Suhane S.K., Singh B., Singh S.N., Jain V., Sreeramulu K., Singh K.K.
Degaussing and bucking coil system for maintaining magnetic hygiene during cryogenic testing in HTS.
143. Yadav R.R.
Automation and optimization of measuring instruments for pulsed magnet measurement
144. Yadav S., Agrawal R.K., Holikatti A.C., Sheth Y.M., Puntambekar T.A.

Development of software for optimization of Indus-2 beam injection system power supplies using MFO algorithm.

C.3. DAE-BRNS International Symposium on Vacuum Science and Technology and its Applications in Accelerators (VSTAA-2022), BARC, Mumbai, Feb. 16-19, 2022

1. Bansod T., Bais V.S., Ganesh P., Gupta R.K., Yadav D.P., Kaul R.
Ti-Zr-V film deposition in low conductance UHV chambers using argon and krypton as process gases, their vacuum and surface characterization
2. Bhatnagar P., Pandey V., Tiwari S.K., Bais V.S., Yadav D.P.
Development of thin film heaters for baking of UHV chambers in INDUS-2
3. Kumar K.V.A.N.P.S., Sharma S.K., Anugrah S.Y., Sindal B.K., Singh M.K., Sinha K., Amarapu G.R., More N.R., Yadav D.P., Shrivastava P.
Evaluation of non evaporable getter cartridges for upgradation of Indus-1 vacuum system
4. Deokar D.Y., Sharma H., Rajbar V.C., Kumar K.V., Joshi S., Yadav D.P.
Design enhancement of indigenously developed BAG controllers in RRCAT

C.4. International Conference on Synchrotron Radiation Instrumentations (SRI2021), Hamburg, Germany, Mar. 28 -Apr. 1, 2022

1. Gupta S., Dhawan R., Modi M.H.
Study of ruthenium film grown in oxygen environment for x-ray optics applications
2. Kiranjot, Modi M.H.
Study of Ni/AlN/Ni waveguide system for 8.05 keV incident energy
3. Modi M.H. Yadav P., Gupta R.K., Gupta S.
Design of a soft x-ray emission spectrometer setup for soft x-ray reflectivity beamline of Indus-2

C.5. International Symposium on Application of Ferroelectrics (ISAF-2022), Tours, France, Jun. 27 - July 1, 2022

1. Pradhan S., Deshmukh P., Majumder S.K., Satapathy S.
Magnetolectric effect in a multiferroic two phase composite of manganese ferrite nanoparticles in ferroelectric P(VDF-TrFE) matrix

2. Sharma A., Yadav P., Sajith B.K., Bhatt R., Bhaumik I., Singh G., Kaul R.
Temperature dependent piezoelectric and pyroelectric response of Nb doped (Na_{0.41}K_{0.09}Bi_{0.5})TiO₃ ceramics
3. Yadav P., Sharma A., Singh G., Bhaumik I., Kaul R.
Understanding the piezoelectric response of Eu³⁺ Doped(Na_{0.41}K_{0.09}Bi_{0.5})TiO₃: a lead-free piezo-luminescent material

C.6. Other Seminar/Conference Presentations

1. Bhattacharya J., Chakrabarti A.
Probing collinear and non-Collinear magnetic configurations of 3d transition metal adlayers supported on Mn-Ga terminated Ni₂MnGa (001) surface
American Physical Society (APS) March Meeting, Chicago, IL, Mar.14-18, 2022
2. Dutt R., Chakrabarti A., Pandey D.
Probing the martensite transition and thermoelectric properties of Co_xTaZ (x = 1, 2 : z = Si, Ge, Sn)
6th International conference on Martensitic Transformations (ICOMAT 2022), Jeju, Korea Mar. 13-18, 2022
3. Koner S., Sumit, Shukla R., Majumder S.K., Satapathy S.
FEM modelling of magnetoelectric coupling in (2-2) LSMO/P(VDF-TrFE) polymer composite
2nd International Conference on Materials Science & Engineering (ICMSE-2022), IIT Jalandhar, Punjab, June 11-12, 2022
4. Padhi P.S., Ajimsha R.S., Rai S.K., Misra P.
Engineering Maxwell-Wagner polarization in Al₂O₃/TiO₂/Al₂O₃ nanolaminates grown by atomic layer deposition
22nd International Conference on Atomic Layer Deposition (ALD 2022), Ghent, Belgium, June 26-29, 2022

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