

PUBLICATIONS (July 2025 – Dec. 2025)
A. Journal Articles

1. Agarwal A.*, Kumar A., Verma P.*, Singh M.N., Rajput P.*, Kumar S.*, Sharma R.K.*, Kamal C., Giri S.*
Amplification of self-sensitization at nanoscale in NIR-Upconverting NaErF₄ core-shell crystals: implications for energy applications
ACS Applied Nano Materials, 8, 20411 (2025)
2. Annadata H.V.*, Kamal C., Ghosh B.*
Combination of x-ray absorption spectroscopy and atomistic simulations reveals features of correlated disorder in quartz-like germanium oxide
Journal of Physical Chemistry C, 129, 12475–12485 (2025)
3. Arya R.*, Paulose R.*, Bijanu A.*, Agrawal V.*, Shil R.*, Mishra D.*, Banerjee K.*, Chatterjee S.*, Bhattacharyya S.*, Bhisikar A., Mondi P.*, Singh U.*, Pendam J.*, Salammal S.T.*
Inherent role of density on the gamma ray attenuation characteristics of red mud based shield
Radiation Physics and Chemistry, 234, 112757 (2025)
4. Bairagi M.*, Hinge V.K.*, Yadav N.*, Joshi S.K.*, Shrivastava B.D.*, Jha S.N., Bhattacharya D.*
XAFS study of mixed ligand ethylenediamine copper complexes having distorted octahedral coordination geometry
Indian Journal of Pure & Applied Physics, 63, 571-583 (2025)
5. Bhatt M.*, Gautam K.*, Sagdeo A., Sinha A.K.*
Exploration of pH-Driven morphology and defect evolution in Nickel Cobalt Carbonate Hydroxide nanomaterial for supercapacitor applications
Chemsuschem, 18, e202501348 (2025)
6. Bitra V.S.*, Verma S., Rao B.T.
HiT-IP Raman: An innovative high-throughput spectra acquisition system with interactive PCA combined machine learning for instant classification of various analytes and mixtures
Microchemical Journal, 219, 116054 (2025)
7. Bunkar R.P.*, Mulani S.R.*, Bimli S.*, Dohare A.*, Varshney M.*, Roy T.*, Jangir R., Thakare V.B.*, Devan R.S.*
Metal-organic framework-5 and graphene oxide (MOF-5@GO) composite for effective detoxification of highly hazardous sulfur mustard
Surfaces and Interfaces, 72, 107030 (2025)
8. Chaudhari S., Thakur A.*, Rajan A.
Anomaly detection for web attack prevention: analyzing web access logs for threat mitigation
Journal of the Indian Academy of Mathematics, 47, 427-439 (2025)
9. Dalal A., Krishna H., Khan K.M., Kumar N., Chourasia C., Sahu K., Satapathy S., Majumder S.K.
Detection of urea adulteration in packaged milk samples using spatially-offset Raman spectroscopy
International Dairy Journal, 168, 106307 (2025)
10. Das M.P.*, Dhar V.K.*, Singh A., Bhatt N.*, Yadav K.K.*
Development of source-dependent gamma-ray image parameters using Generative Adversarial Network (GAN) for the MACE telescope and its implications
Journal of High Energy Astrophysics, 48, 100416 (2025)
11. Dave T., Lal S., Pant K.K.
A novel methodology to tune the π mode RF parameters of a SW linac with full cell termination
Journal of Instrumentation, 20, P08032 (2025)
12. Deo R.K., Jain M.K., Kanyal G., Badapanda M. K., Bohrey A., Upadhyay R., Tripathi A., Tyagi R.K., Ntiwari N., Bagduwal P.S., Arora R.K., Gupta A.K., Sharma D., Jain A., Kumar R.
Review of multi-beam Klystron based RF power system of Indus-2
Asian Journal of Physics, 34, 625-642 (2025)
13. Deshmukh P., Sharma B., Chakraborty S., Srivastava H., Sahu K., Satapathy S., Majumder S.K.
NIR-Excited imaging of cervical cancer cells using biocompatible LaF₃:Er³⁺Yb³⁺ upconversion nanophosphors
Luminescence, 40, e70269 (2025)
14. Dey T., Kumar N.*, Patil R.*, Pathak P.K.*, Bhattacharjee S.*, Yadav P., Bhaumik A.*, Salunkhe R.R.*, Dutta S.*
Elucidating the role of cobalt nanoparticles and Mn-phosphate in etched ZIF-67/phthalimide-NC and phthalimene oxide for supercapacitor and electrochemical oxygen evolution reaction applications
Sustainable Energy & Fuels, 9, 1173-1182, (2025)
15. Gautam A., Rao B.T., Verma S., Kumar, K.V.A.N.P.S., Yadav R.K., Rana L.B., Verma S., Kumar M.

A novel experimental setup for determination of CO content to characterize catalyst performance for application of sealed-off CO₂ laser

Review of Scientific Instruments, 96, 123013 (2025)

Orbital angular momentum-driven ferromagnetism with magnetic anisotropy and electronic structure of epitaxial neodymium nitride

ACS Nano, 19, 36636–36645 (2025)

16. Gautam K.*, Bhatt M.*, Sagdeo A., Singh H.*, Sinha A.K.*
Charge transport dynamics and energy storage implications of nickel cobalt carbonate hydroxide interaction with the Aloe vera leaf matrix
Nanoscale Advances, 7, 6066-6083, (2025)
17. Gauttam V.K., Dikshit B.*, Kasliwal A., Sharma A.*
Simplified analysis and optimal design method for LLC resonant converter based focusing magnet DC power supply in high power LINAC applications
International Journal of Circuit Theory and Applications, 53, 6535-6553 (2025)
18. Gupta H.*, Modi M.H., Malik P.*, Bommali R.K.*, Srivastava P.*, Ghosh S.*
N rich a-SiN_x:H as a prospective material for EUV/soft x-ray mirror: A soft x-ray reflectivity analysis near Si L_{2,3} absorption edge
Journal of Applied Physics, 138, 035302 (2025)
19. Gupta N., Bhatt H., Bose A., Gupta M.*, Singh S., Rai S.K., Gupta P.
Deciphering the role of Nb driven interface engineering on the magneto-structural properties of W/CoFeB heterostructures
Journal of Alloys and Compounds, 1035, 181571 (2025)
20. Gupta P.K., Sharma R.K., Raghavendra S.
Design optimization study of cryogenic counter-flow plate fin heat exchangers
Cryogenics, 148, 104063 (2025)
21. Jha H.S.K., Rai S.K., Ganguli T., Shukla R.
Finite element analysis of mechanical deformable mirror using near-Bessel point support
Journal of Optics, 27, 125603 (2025)
22. Kane S.R., Whatmore R.W.*, Jha P.K.*, Mehta P.K.*
Optimizing pyroelectric x-ray detectors for synchrotron applications
AIP Advances, 15, 125309 (2025)
23. Karanje R.*, Bera A.*, Rudra S.*, Mukhopadhyay D.*, Banerjee S.*, Bansal M.*, Baraik K., Chowdhury S.*, Li W.B.*, Valvidares M.*, Maity T.*, Saha B.*
Orbital angular momentum-driven ferromagnetism with magnetic anisotropy and electronic structure of epitaxial neodymium nitride
ACS Nano, 19, 36636–36645 (2025)
24. Karmakar B.*, Aryshev A.*, Karmakar J.*, Aggarwal M.*, Sahu B.K.*, Mukhopadhyay P.K., Ghosh S.*, Kumar S.*
Burst mode amplification through Yb doped PCF ROD amplifier to generate mJ burst energy with femtosecond multi-micro bunch structure in all fiber laser system
Optics Communications, 596, 132481 (2025)
25. Khandelwal A., Sharath Chandra L.S., Sagdeo A., Singh R., Gangrade M., Venkatesh R., Chattopadhyay M.K.
Eutectic microstructure and its effect on electrical and magnetic properties of V-Ti-Si alloy superconductors
Materials Science and Engineering B, 317, 118158 (2025)
26. Khanna A.*, Jain P.*, Paul C.P.
Towards biomimetic evolution of artificial intervertebral disc: a review
Medical & Biological Engineering & Computing, 63, 2853-2869 (2025)
27. Khanna A.*, Jain P.*, Paul C.P.
A finite element biomechanical investigation of lumbar spine segments through novel intervertebral disc design
Journal of Clinical Neuroscience, 139, 111425 (2025)
28. Krishna V.*, Sarguna R.M.*, Ganesan K.*, Ramaseshan R.*, Kamal C., Ganesamoorthy S.*
Structural, Dielectric, and Mechanical Properties of ErFeO₃ Single Crystal Grown Using Optical Floating Zone Method
Applied Physics A, 131, 995 (2025)
29. Kumar A.*, Ghosh T.*, Roy J.*, Aabdin Z.*, Sahoo S.K.*, Kandasami A.*, Tripathi S., Singh V.R.*
Luminescence shift in the nanocrystalline powder of Cu-doped ZnO revealed by synchrotron-based X-ray absorption techniques
Pramana, 99, 157 (2025)
30. Kumar, A., Sudheer A.E.*, Tejaswini, G.*, Vallinayagam M.*, Zschornak M.*, Murali D.*, Kamal C.
Electrically and mechanically tunable Rashba splitting in SbSeI Janus layer: a density functional theory study
Scientific Reports, 15, 45043 (2025)

31. Kumar L.*, Singh G.*, Bhatt R., Chowdhury D.R.*, Soharab M., Bhaumik I., Gautam C.*, Jewariya M*.
The effect of 1.5 mol % Zn substitution on the broadband THz optical parameters of stoichiometric LiNbO₃ single crystal
Journal of Molecular Structure, 1339, 142365 (2025)
32. Kumar R.*, Sisodiya D.S.*, Vijay K., Banik S., Sen S.*, Babu P.D.*, Bhattacharyya D.*
A combined theoretical and experimental investigation on an Fe-Doped Bi₂Se₃ topological insulator
Journal of Physical Chemistry C, 129, 19514-19526 (2025)
33. Kumar R.*, Sisodiya D.S.*, Vijay K., Banik S., Sen S.*, Babu P.D.*, Bhattacharyya D.*
Co doped Bi₂Se₃ topological insulator: a combined theoretical and experimental study
Materials Science in Semiconductor Processing, 195, 109572 (2025)
34. Kumar S.*, Rawat N.*, Parida S.C.*, Bhattacharya D.*, Jeyakumar S.*, Urkude R.*, Agrawal A.*, Ghosh B.*, Ganguli T., Haridas G.
Development of a facility for x-ray absorption fine-structure spectroscopy of radioactive samples at Indus-2 synchrotron radiation source India
Nuclear Instruments & Methods in Physics Research B, 568, 165857 (2025)
35. Le Sech C.*, Banerjee A.
The effect of space restriction on the bonding and vibrational properties of H₂⁺ molecular ion
European Physical Journal D, 79, 119 (2025)
36. Mahapatra A., Ajimsha R.S., Vijay K., Kamparath R., Midday M., Banik S., Mukherjee C., Verma S., Misra P.
Tuning output of ZnO piezoelectric nanogenerators through V-doping and SiO₂ interlayer
Emergent Materials, 8, 8223-8232 (2025)
37. Maneesha P.*, Samantaray K.S.*, Saha R.*, Nabi T.*, Urkude R.*, Ghosh B.*, Pathak A.K.*, Bhaumik I., Mekki A.*, Harrabi K.*, Sen S.*
Room temperature multiferroicity and magnetoelectric coupling in Ca/Mn-modified BaTiO₃
Journal of Materials Chemistry C, 13, 14552-14573 (2025)
38. Mohapatra L.*, Sonwane A.K.*, Samal S.*, Chauhan T.*, Garg P.*, Deshpande U.*, Tiwari M.K., Kushwaha A.K.*
Enhancing the photocatalytic water electrolysis performance of Zn₂SnO₄ nanostructures via post-synthesis nitrogen doping
Nanoscale, 17, 18852-1886 (2025)
39. Mollick F., Nayak M., Kashyap A.K., Kumar J., Majhi A.*, Pothana N., Rajput P.*, Tiwari M.K., Rai S.K., Singh M.N., Sagdeo A.
Structure, stress, and optical property correlations in nano-structured Mo/Si and W/B₄C multilayer mirrors for hard x-ray applications
Journal Of Applied Physics, 138, 175303 (2025)
40. Muthukrishnan R.M.*, Sharma A., Kumar Y.N.*, Kader S.M.A.*
Structural and functional properties of BiFeO₃/CuCrO₂ nanocomposites for next-generation photosensors
Materials Science in Semiconductor Processing, 194, 109547 (2025)
41. Padole A.S.*, Singar V.*, Ratnawat P.*, Dabkara A.*, Kar D.P.*, Jain N.*, Gupta M.*, Sagdeo A., Sagdeo P.R.*
Structural and optical characterization of pure and lanthanum substituted Nd_{1-x}La_xAlO₃ prepared by Sol-Gel method
Chemistryopen, 14, e202400499 (2025)
42. Pal S., Kamparath R., Subrahmanyam V.V.V., Sharma N., Kumar Y.P., Tiwari S.K., Karwal S., Sankar P.R., Benerji N.S.
Sol-gel prepared TiO₂-PMMA composite thin film for high laser induced damage threshold optical coating
Optical Materials, 158, 116486 (2025)
43. Parashar R.*, Nailwal B.C.*, Goswami N.*, Lenka R.K.*, Singh J.*, Karki V*., Adak A.K.*, Parida S.C., Kar S., Mukhopadhyay S.*
Comparative study on corrosion behavior and performance evaluation of metal/alloy membranes for hydrogen recovery in bio-jet fuel production
Journal of Alloys and Compounds, 1041, 183874 (2025)
44. Parida T., Patajoshi S., Santra B., Qamar U., Bose A., Rao P.N., Rai S., Das S., Kanjilal A.
Exploring oxygen vacancies in sputtered HfO₂ films for multi-bit RRAM applications
Advanced Materials Technologies, 10, e00289 (2025)
45. Patajoshi S.*, Chattaraj A.*, Bose A., Qamar U.*, Das S.*, Luong M.A.*, Claverie A.*, Kumar V.*, Kanjila A.*
Experimental and theoretical exploration of oxygen impurities in sputter grown β -Ta films
Materialia, 42, 102430 (2025)

46. Patel A., Badapanda M.K., Reghu T., Kumar R., Khare P.
High-voltage pulse modulator for S-Band klystron in IR-FEL RF system
IEEE Transactions on Plasma Science, 53, 9 (2025)
47. Pathak M., Jain S.K., Ghodke D.V., Prasad V.
Pressure profiling of 2.45 GHz electron cyclotron resonance-based proton source for optimized performance
International Journal of Modern Physics A, 40, 30 (2025)
48. Pathak M., Naika R., Sharma N., Jain S.K., Ghodke D.V., Prasad V., Lad M.
Characterization of plasma produced at 2.45-GHz Frequency in CW mode by electron cyclotron resonance method using langmuir probe and optical emission spectroscopy
IEEE Transactions on Plasma Science, 53, 10 (2025)
49. Prakash R., Sharma A., Singh G.*, Kumar R.*, Kumar V.
Saturation of multipacting due to space-charge effects in elliptic SRF cavities
Physics of Plasmas, 32, 113904 (2025)
50. Priyadarsini M.*, Singh S.*, Kaushik S.*, Dev A.S.*, Roychowdhury R.*, Gupta P., Pandit P.*, Venkatesh R.*, Verma G.*, Vayalil S.K.*, Schwartzkopf M.*, Kumar D.*
Columnar nanostructure and morphology driven magnetic anisotropy crossover in obliquely deposited Co/Alq₃ metal-organic bilayers
Surfaces and Interfaces, 74, 107703 (2025)
51. Pussi K.*, Gupta P., Barbiellini B.*, Srihari V.*, Svec P.*, Bansil A.*, Gupta A.*, Kamali S.*
Local atomic structure of amorphous Fe_{81-x}Co_xNb₇B₁₂ alloys using synchrotron radiation x-ray diffraction and pair-distribution function analysis
Applied Physics Letters, 127, 012401 (2025)
52. Rathore R., Singhal H., Kulkarni R.*, Thamizhavel A.*, Bansal D.*, Chakera J.A.
Development of ultrashort intense broadband laser-plasma x-ray source for ultrafast Laue x-ray diffraction
Review of Scientific Instruments, 96, 074902 (2025)
53. Ravikanth K.V.*, Verma A.*, Singh J.B.*, Saini S.*, Rai S.K.
Tempering response of martensite and bainite in a Cr-Mo-V RPV steel: Influence of retained austenite and its thermal stability
Materials Today Communications, 49, 114246 (2025)
54. Roy R., Arora V., Mandal T., Mishra S., Moorti A., Chakera J.A.
Parametric variation of Cu K α x-ray emission in intense ultra-short laser pulse solid interaction and correlation with fast electrons transport processes
Plasma Physics and Controlled Fusion, 67, 115005 (2025)
55. Rudra S.*, Rao D.*, Kobri M.S.*, Dey A.*, Karanje R.*, Das P.*, Manna S.*, Baral M., Yadav B.*, Pillai A.I.K.*, Garbrecht M.*, Gupta M.*, Sahoo S.*, Ganguli T., Saha B.*
Carbon ion implantation for electron compensation in epitaxial scandium nitride
Physical Review B, 112, 165302 (2025)
56. Sah D., Singh M.P.
Vacuum polarization current in presence of intense Sauter field
European Physical Journal Plus, 140, 1184 (2025)
57. Saini S.*, Srivastava A.P.*, Ghosh P.S.*, Sagdeo A., Ghosh A.*, Babu D.A.*, Madge S.V.*, Neogy S.*
Investigation of microstructural and magnetic property evolution in mechanically milled Co-Zr metallic ribbon
Journal of Materials Science, 60, 16480-16496 (2025)
58. Sarkar S., Singh V., Singh K.A.P., Chaudhary A., Tiwari V.B., Mishra S.R.
On Rabi oscillations in ground hyperfine states of 87Rb atom driven by a microwave field
Applied Physics B, 131, 8 (2025)
59. Sharma B.*, Hardeep*, Bisht K., Singh A., Singh R., Dalvi A.*
Solid-state supercapacitors with enhanced performance using Al³⁺-Doped Li⁺ Ion perovskite electrolyte integrated with carbon aerogel electrode
ACS Omega, 10, 39132–39147 (2025)
60. Shukla B.*, Maji D.*, Kumar N.R.S.*, Balakrishnan S.*, Upadhyay A.
Structural evolution and compressibility trends in Ce-doped UO₂
Journal of Nuclear Materials, 616, 156040 (2025)
61. Singh C.K.*, Rajalakshmi K.*, Balamurugan N.*, Kumar R., Gupta M.*, Ramaseshan R.*, Baraik K.*
Mitigating parasitic contributions in measured piezoresponse for accurate determination of piezoelectric coefficients in Sc-alloyed-AlN thin films using piezoresponse force microscopy
Journal of Applied Physics, 138, 075302 (2025)

62. Singh D.*, Singh R.*, Banerjee A.
A new variational wave-function ansatz for confined two-electron atomic systems
Journal of Physics B, 58,205002 (2025)
63. Singh S.*, Rath D.K.*, Kumar S.*, Ahlawat N.*, Sharma S., Singh A., Pandey S.C., Rout P.S.*, Bansal L.*, Sahu B.*, Srivastava S.*, Chondath S.K.*, Chattopadhyay M.K., Kumar R.*
Abrupt Raman line-shape evolution and quantifying short-range order parameter: laser-driven nanocrystallization in amorphous germanium
Journal of Physical Chemistry C, 129, 13329–13336 (2025)
64. Sudhir V.*, Das D.*, Utpalla P.*, Kolay S.*, Singh M.N., Dutta D.*
Amorphous solid water prevails inside the spherical nanopores of the MIL-101(Cr) framework below 200 K: PALS XRD and BDS studies
Physical Chemistry Chemical Physics, 27, 18222-18233 (2025)
65. Sun Y.L.*, Li Z.Z.*, Li Y.*, Zhou H.L.*, Pokhriyal A.*, Ghosh Haranath, Li S.L.*, Luo H.Q.*
Crystal growth and characterization of a hole-doped iron-based superconductor $\text{Ba}(\text{Fe}_{0.875}\text{Ti}_{0.125})_2\text{As}_2$
Chinese Physics B, 34,127401 (2025)
66. Verma A.K.*, Gupta R.*, Gupta, P., Rai, S., Prakash S.*, Tayal A.*, Gloskovskii A.*, Ramaseshan R.*, Garg P.*, Deshpande U.*, Gupta M.*
Effect of Al doping on structural, electronic, mechanical, and optical properties of VN thin films
Applied Surface Science Advances, 30, 100884 (2025)
67. Verma P.*, Swain A.*, Agarwal A.*, Mohanty S.*, Kumar S.*, Pandey P.*, Singh M.N., Giri S.*
Geometry-dependent nature of microstrain in single-phase NIR upconverting crystals
Crystal Growth & Design, 25, 9865 (2025)
68. Verma S., Bitra V.S.*, Rao B.T.
Machine learning driven trace detection of pesticide mixtures using citrate optimized Au nanoparticles based in-expensive efficient micro-drop SERS with portable spectrometer
Spectrochimica Acta Part A, 340, 126333 (2025)
69. Waghmaitar P.P.*, Alex S.B.*, Vazhayal L.*, Kad S.*, Urkude R.R., Ghosh B., Haram S.K.*
Rationally designed $\text{PtNi/Ti}_3\text{C}_2\text{T}_x$ bifunctional electrocatalysts with improved MOR and HER performance leveraged by alloying and SMSI effects
ACS Applied Energy Materials, 8, 14519–14529 (2025)
70. Wakale G.R.*, Choudhary E.*, Samtham M.*, Patil A.*, Yadav A.*, Yadav S.*, Sharma R.*, Ma Y-R.*, Jangir R., Jadhav H.*, Devan R.S.*
Morphology-driven interlinked 2D nanostructures anchored nickel cobalt sulfide (NiCo_2S_4) electrodes for high-performance symmetric supercapacitor
Journal of Energy Storage, 136, 118488 (2025)
71. Yadav J., Vanam S.P., Parate S.K.*, Doddi N.*, Srihari V.*, Pralong V.*, Fichtner M.*, Barpanda P.*
The effect of Ti-doping on the electrochemical activity of the $\text{Li}_{0.44}\text{MnO}_2$ cathode material for Li-ion batteries
Materials Advances, 6, 6508-6517 (2025)

B. Invited Talks

1. Banik S.
Role of topology, magnetism and electron correlation in kagome semimetal $\text{Co}_1\text{-xFe}_x\text{Sn}$
Physics of Strongly Correlated Electron Systems (5th PSCES-2025), Indian Institute of Technology-BHU, Varanasi, Sep. 12-14, 2025
2. Banik S.
Photoemission studies on spintronic materials using Indus-2 synchrotron.
A meeting on Advances in Condensed Matter Physics (ACMP-2025), UGC-DAE CSR, Indore, Dec. 26-28, 2025
3. Bose A.
SRF cavity processing
First Indian Particle Accelerator School (InPAS-2025), BARC, Mumbai, Sept. 15-20, 2025
4. Chakera J. A.
Recent studies on proton acceleration and highly stable higher harmonic source generation and applications
12th DAE-BRNS Theme Meeting on Ultrafast Science (UFS-2025), IIT-Hyderabad, Nov. 13–15, 2025
5. Jain V.
Cutting-edge technologies for high-performance superconducting particle accelerators
Special talk on the occasion of Engineer's Day, Indian Institute of Astrophysics, Bangalore, Sept 15, 2025
6. Jain V.
Mechanical design aspects: SC Linacs
First Indian Particle Accelerator School (InPAS-2025), BARC, Mumbai, Sept. 15-20, 2025

7. Jain V.
Indigenous development of superconducting Niobium cavities at RRCAT for particle accelerator
69th DAE Symposium on Nuclear Physics (SNP-2025), Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, Dec.8-12, 2025
8. Kumar V.
Envelope equations and particle dynamics
First Indian Particle Accelerator School (InPAS-2025), BARC, Mumbai, Sept. 15-20, 2025
9. Mondal P.
X-ray Lithography activities at the Synchrotron Radiation Source, Indus-2- A tool for micro-fabrication of 3-D structures
5th International Conference on Physics of Materials and Material based Device Fabrication (ICPM-MDF-2025), Shivaji University, Kolhapur, Dec. 10-12, 2025
10. Mukhopadhyay P. K.
Ultrafast Yb-doped fiber laser in diverse operating regime
International Conference on Atomic, Molecular, Nano & Optical Physics with Applications (IAMNOP-2025), Jawaharlal Nehru University (JNU), New Delhi, Dec. 17-19, 2025
11. Pal S.
Multifunctional thin films for optical coatings and optoelectronic device applications
International Symposium on Advanced Materials and Devices (SAMDeV 2025), IIT Kharagpur, Dec.19-20, 2025
12. Radheshyam P.
Electron guns
First Indian Particle Accelerator School (InPAS-2025), BARC, Mumbai, Sept. 15-20, 2025
13. Sandha R.
Mechanical design aspects: SC Linacs
First Indian Particle Accelerator School (InPAS-2025), BARC, Mumbai, Sept. 15-20, 2025
14. Upadhyaya B. N.
High-power solid-state lasers for material processing applications
International Conference on Atomic, Molecular, Nano & Optical Physics with Applications (IAMNOP-2025), Jawaharlal Nehru University (JNU), New Delhi, Dec. 17-19, 2025

C. Seminar/Conference Presentations

C.1. Other Seminar/Conference Presentations

1. Anuj, Tiwari H., Kumar R., Khamari S.K., Vashisht, G. Khakha A., Maheshwari P., Dixit V.K., Sharma T.K.
Micro-patterned electroplated Indium on GaAs for x-ray pixel detector integration
69th DAE Solid State Physics Symposium, Indian Institute of Technology, Roorkee, Uttarakhand, Dec. 19-23, 2025
2. Chakravarty U., Kumar A., Barnwal S., Jain S., Patidar R.K., Benerji N. S., Chakera J.A.
Bio-inspired route for enhanced x-ray emission from high-energy sub-ns Laser produced plasmas
National Symposium on Plasma Science and Technology (PLASMA-2025), IIT and IISER, Tirupati, Dec. 27-29, 2025
3. Khamari S. K., Vashisht G., Porwal S., Dixit V. K., Sharma T. K.
Photoluminescence intensity and polarization enhancement in a weakly coupled GaAs quantum well-microcavity system
36th AGM of MRSI & 7th Indian Materials Conclave and International Conference on Emerging Materials (MRSI-ICEM 2025), NISER Bhubaneswar, Odisha, Dec. 17-20, 2025
4. Khan R.A., Tayyab M., Moorti A., Chakera J. A.
Measurement of laser back reflection during High intensity laser solid interaction at oblique incidence
National Symposium on Plasma Science and Technology (PLASMA-2025), IIT and IISER, Tirupati, Dec. 27-29, 2025
5. Khan S., Khan S., Singh A., Sharma T.K.
Ultrafast dynamics of bound excitons in MoS₂ monolayer
12th DAE-BRNS Theme Meeting on Ultrafast Sciences (UFS-2025), 13-15 Nov., 2025, IIT Hyderabad.
6. Kumar A., Chakravarty U., Barnwal S., Singh A., Jain S., Mukherjee C., Patidar R.K., Singhal H., Benerji N.S., Chakera J.A.
Probing Laser-Driven Dynamic Compression and X-ray Emission in Pure and Layered Copper Targets
National Symposium on Plasma Science and Technology (PLASMA-2025), IIT and IISER, Tirupati, Dec. 27-29, 2025

7. Kumar A., Sudheer A.E.*, Tejaswini G.*, Vallinayagam M.*, Zschornak M.*, Murali D.*, Kamal C.
Tunable Rashba splitting in single layer janus SbSeI via strain and electric field
Topological Matter School: Topological excited states and non-crystalline systems (TMS2025), Donostia-San Sebastian, Spain, Aug. 18-22, 2025
8. Kumar M., Ansari A., Singhal H., Chakera J. A.
An intense, ultra stable, high-harmonic radiation from a semi-infinite gas cell with thermally-insulated end-cap
National Symposium on Plasma Science and Technology (PLASMA-2025), IIT and IISER, Tirupati, Dec. 27-29, 2025
9. Kumar R., Bhargava K., Choudhary M.R., Rawlani B.K.
Condition Assessment of Structures by NDT-A case study
2nd International Conference on Condition Assessment, Rehabilitation and Retrofitting of Structures (CARRS 2025), IIT- Roorkee, Dec. 11-13, 2025
10. Khan R.A., Tayyab M., Moorti A., Chakera J. A.
Measurement of laser back reflection during High intensity laser solid interaction at oblique incidence
National Symposium on Plasma Science and Technology (PLASMA-2025), IIT and IISER, Tirupati, Dec. 27-29, 2025
11. Maurya V.K., Chaudhari S., Tomar S.S., Rajan A.
NetFlow based multilayer fire wall effectiveness and validation framework
IEEE 2nd International Conference on Pioneering Developments in Computer Science & Digital Technologies (IC2SDT2025), National Institute of Technology, Delhi (NITD), Dec., 4-6, 2025
12. Midday M., Ajimsha R.S., Sahu V.K., Payal, Verma S., Misra P.
Integration of memristive behaviour and NH₃ sensing in Pt/ZnO/ITO crossbar devices
XXIII International Workshop on the Physics of Semiconductor Devices (IWPSD-2025), IIT Roorkee, Uttarakhand, Dec. 15-18, 2025
13. Sahu R.K., Sagdeo A., Singh R., Mishra S.*, Shahi P.*, Banik S.
Electronic structure and transport properties of Kagome semimetal Co_{1-x}MnxSn.
69th DAE Solid State Physics Symposium 2025, Indian Institute of Technology, Roorkee, Dec. 19-23, 2025.
14. Sahu R.K., Mishra S.*, Shahi P.*, Sagdeo A., Kumar K.*, Chandra L.S.S., Banik S.
Effect of Mn doping in CoSn Kagome semimetal.
National Conference on Electronic Structure (8th NCES-2025), Indian Institute of Science Education and Research, Bhopal, Nov. 20-22, 2025
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