

A. Journal Articles

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105. Soharab M., Bhaumik I., Bhatt R., Saxena A., Karnal A.K.
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106. Soni V.*, Suman N.*, Thekkethil S.R.*, Nandawadekar A.*, Kumar R.*, Sinha G., Gupta A.*, Sharma R.G.*, Kar S.*
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110. Vanithakumari S.C.*, Choubey A.K., Thinaharan C.*, Gupta R.K., George R.P.*, Kaul R., Bindra K.S., Philip J.*
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111. Vavilapalli D.S.*, Peri R.G.*, Banik S., Muthuraaman B.*, Rao M.S.R.*, Singh S.*
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112. Verma P.*, Sarkar D.*, Rajput P.*, Singh M.N., Sharma R.*, Giri S.*
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Journal of Physical Chemistry C, 125, 21211–21222 (2021)
113. Verma P.*, Sarkar D.*, Rajput P.*, Singh M.N., Sharma R.*, Giri S.*
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CrystEngComm, 23, 8631-8640 (2021)
114. Verma S., Rao B.T., Singh R., Kaul R.
Photocatalytic degradation kinetics of cationic and anionic dyes using Au–ZnO nanorods: role of pH for selective and simultaneous degradation of binary dye mixtures
Ceramics International, 47, 34751-34764 (2021)
115. Vikas, Sahu R.K.
A review on application of laser tracker in precision positioning metrology of particle accelerators
Precision Engineering, 71, 232-249 (2021)
116. Vyas A.*, Menghani J.*, Patel P.*, More S.*, Paul C.P., Patnaik A.*, Ingole S.P.*
Characterization and optimization of slurry erosion behavior of SS 316 at room temperature
Transactions of the Indian Institute of Metals, 74, 839–849 (2021)
117. Wu H.*, Erbing A.*, Johansson M.B.*, Wang J.*, Kamal C., Odelius M.*, Johansson E.M.J.*
Mixed-halide double perovskite Cs₂AgBiX₆ (X=Br I) with tunable optical properties via anion exchange
ChemSusChem, 14, 4507-4515 (2021)
118. Yenubary P.*, Anil C.K.*, Singh B.
Synchrotron radiation-based micro-computed tomographic analysis of apical transportation of different nickel–titanium rotary systems in curved root canals: an in vitro study
Journal of Indian Society of Pedodontics and Preventive Dentistry, 39, 74-78 (2021)

B. Invited Talks (Online Mode)

- Banerjee A.
Adsorption and activation of CO₂ molecule on small sized Zr and Cu-Zr nanoclusters
DAE Symposium on Current Trends in Theoretical Chemistry (CTTC-2020), BARC, Mumbai, Sep. 23-25, 2021
- Chakera J.A.
Laser accelerated ion beam and its application in nuclear reaction

- 3rd International Conference on Nuclear Photonic (NP2020)**, Osaka University, Kurashiki Ivy Square, Japan, July 2021
3. Dixit V.K.
Investigations on semiconductor quantum structures with magneto-optical spectroscopy and electronic transport measurements
International Workshop on Physics of Semiconductor Devices (IWPSD-2021), Indian Institute of Technology Delhi, Dec.14-17, 2021
 4. Modi M.H.
Soft x-ray reflectance spectroscopy a versatile tools to study optical, electronic, and structural properties
Lecture series on X-ray spectroscopy, Science College, Bhabulgaon Maharashtra, Jul. 27, 2021
 5. Moorti A.
Extreme laser fields driven electron acceleration in plasmas
36th National Symposium on Plasma Science and Technology (PLASMA-2021), Birla Institute of Technology, Mesra (Jaipur Campus), Dec. 13-15, 2021
 6. Rai S.K., Gupta P., Rao P.N., Swami M.K., Bhakar A.
A versatile x-ray scattering and diffraction beamline for engineering applications at Indus-2 synchrotron source
65th DAE Solid State Physics Symposium (DAE-SSPS 2021), BARC, Mumbai, Dec.15-19, 2021
 7. Rajan A.
Intelligent agent using contemporary AI and ML techniques for document search
12th International Online Conference on Recent Advancements in Information Technology (READIT-2021), IGCAR, Kalpakkam, Nov. 24-25, 2021
 8. Upadhyaya B.N.
High power fiber laser development at RRCAT
44th Annual Symposium of the Optical Society of India, Frontiers in Optics and Photonics (FOP21), IIT Delhi, New Delhi, Sept. 24-27, 2021
- C. Seminar/Conference Presentations**
- C.1. 65th DAE Solid State Physics Symposium (DAE-SSPS 2021), BARC, Mumbai, Dec. 15-19, 2021 (Online Mode)**
1. Alam M.A., Trivedi A., Tiwari M.K.
Depth profile analysis of gold ions in silicon <100> substrate
 2. Bhakar A., Gupta P., Sagdeo A., Rai S.K.
Quantitative phase fraction analysis of ball milled FeSiB powder mixture using the rietveld method: effect of microabsorption
 3. Bhasin V.*, Nayak C.*, Biswas A. *, Halankar K.K.*, Rai S.K., Bhattacharyya D.*
Probing structural changes in TiO₂ thin film anodes of Li ion batteries during discharge
 4. Bhattacharjee J., Singh S.D.
Temperature dependence of band gap of β -(Al_xGa_{1-x})₂O₃ alloys from optical reflectivity
 5. Bhattacharya J., Chakrabarti A.
Collinear magnetic coupling of 3d transition metal atoms on Ni₂MnGa (001) surface
 6. Dutt R., Pandey A.*
Transport properties of Sb₂X₂Te₆ (X=Si, Ge, Sn): a DFT study
 7. Dutt S., Pokhriyal P., Sagdeo A.
Synthesis and structural characterization of Methylammonium Lead Bromide single crystal, grown by ITC method
 8. Gupta N., Chanchal*, Gupta M.*, Kumar D.*, Rao P.N., Rai S.K., Gupta P.
Growth temperature induced modifications in structure and magnetic anisotropy of magnetron sputtered FeCoB alloy thin films
 9. Jain V., Mohan S.R., Ittoop M.O., Dhama T.S., Joshi M.P.
Automated thermally stimulated current measurement setup for characterizing photovoltaic materials
 10. Khatua D.P., Gurung S., Singh A., Khan S., Jayabalan J.
A Comparison of transient optical response of a monolayer MoS₂ near to its A, B, and C excitons
 11. Kumar R.*, Banik S., Sen S.*, Yadav A.K.*, Bhattacharyya D.*
Effect of Mn doping in Bi₂Se₃ topological insulator: probed by DFT and ARPES
 12. Pandian M.S.*, Karuppasamy P.*, Kamalesh T.*, Ramasamy P.*, Verma S.
Growth and characterization 2AP4N single crystal by Immersing Ampoule Sankaranarayanan–Ramasamy (ISR) method
 13. Pradhan S., Deshmukh P., Majumder S.K., Satapathy S.
Magnetic control of dielectric permittivity and electric polarization voltage of polymer based nanocomposite film
 14. Sahani P.K., Haridas G.*, Nayak M.K.*, Srihari V.*, Jha S.N.*, Kulkarni M.S.*, Sahu R.K.*
XANES study of gamma irradiated CaSO₄:Dy for dosimetry
 15. Sajith B.K., Soharab M., Sexana A., Bhatt R., Bhaumik I.
Investigation of pyroelectric energy harvesting potential of LiTaO₃ single crystal

16. Sharma A.*, Yadav P., Bhaumik I., Singh G.
Effect of Niobium (Nb^{5+}) substitution on dielectric and piezoelectric properties in $(Na_{0.41}K_{0.09}Bi_{0.5})TiO_3$ ceramics
17. Soharab M., Bhaumik I., Bhatt R., Singh A.
Optical and laser characteristics of Nd doped $LuVO_4$ single crystal grown by OFZ method
18. Taya P., Vashisht G., Khamari S.K., Haridas G.*, Tyagi M.*, Dixit V.K., Sharma T.K.
Development of CsI(Tl) coupled GaAs detector for γ -ray detection
19. Tripathi S.*, Kumar Y.*, Nand M.*, Jangir R., Deshpande U.*, Roy A.*, Jha S.N.*
Optical and structural properties of Tb:CePO₄ nanowires
20. Vijay K., Sagdeo A., Tiwari P., Gupta M.*, Banik S.
Influence of Fe doping on the electronic structure of kagome semimetal CoSn
21. Yadav P.*, Sharma A.*, Singh G., Bhaumik I.
Investigation of piezoelectricity and photo-luminescence in Eu doped $(Na_{0.41}K_{0.09}Bi_{0.5})TiO_3$

C.2. 36th National Symposium on Plasma Science & Technology, BITS, Mesra, Jaipur Campus Dec. 13-15, 2021, (Online Mode)

1. Jain S. K., Naika R., Pathak M., Kumar R., Ghodke D.V., Prasad V., Shrivastava P.
Study and characterization of hydrogen / argon / nitrogen plasma produced by ECR using double Langmuir probe
2. Kumar R., Ghodke D.V., Prasad V., Shrivastava P.
Modelling and simulation study of magnetic enhancement in plasma density for RF based H^- ion source
3. Mandal T., Arora V., Moorti A., Chakera J.A.
Investigations of complex fast electron transport phenomena in intense ultrashort laser foil interaction
4. Mandal T., Arora V., Moorti A., Chakera J.A.
Understanding grazing incidence interaction through fast electron generation in thin foil at extreme intensities
5. Rathore R., Singhal H., Chakera J.A.
Modeling of ultrashort two colour pump- induced thermal strain propagation in Ge [111]

C.3. International Workshop on Physics of Semiconductor Devices (IWPSD-2021), Indian Institute of Technology Delhi, Dec.14-17, 2021 (Online Mode)

1. Kumar R., Roychowdhury R., Dixit V.K., Sharma T.K.
Estimation of asymmetrically distributed anti-phase domains ratio in GaAs/Si(100) epitaxial layers using high resolution X-ray diffraction

2. Nand M.*, Kumar Y.*, Tripathi S.*, Babita*, Rai S.K., Jha S.N.*
Effect of O_2 partial pressure on valence band maxima of HfO_2 thin film
3. Vashisht G., Haldar S.*, Porwal S., Sharma T.K., Dixit V.K.
Impact of disorder on the charge carrier transport and recombination properties in asymmetrically doped InGaAs/GaAs QWs probed by magneto-PL and PC measurements

C.4. Other Seminar/Conference Presentations (Online Mode)

1. Bhushan I., Rajendiran P., Parihar Y.S., Pattnaik J.K., Rajan A.
Electronic information resources sharing through digital inter-library loan using aggregated holding database of journals
12th International Online Conference on Recent Advancements in Information Technology (READIT-2021), IGCAR, Kalpakkam, Nov. 24-25, 2021
2. Patil J., Tokekar V.*, Rajan A., Rawat A.
MAC based model to differentiate flash crowd and malicious traffic in SDN
International Conference on Advanced Network Technologies and Intelligent Computing (ANTIC) 2021, Institute of Science, Banaras Hindu University, Varanasi, Dec.17-18, 2021
3. Rajendiran P., Parihar Y.S., Bhushan I., Pattnaik J.K.
A study of TR_J4-title report journal requests by YOP-Year of Publication (excluding open access gold) usage data
12th International Online Conference on Recent Advancements in Information Technology (READIT-2021), IGCAR, Kalpakkam, Nov. 24-25, 2021
4. Srivastava A., Borage M., Singh A., Dwivedi V., Tiwari S.
Steady-state analysis and design of two-quadrant, switch-mode, fast-ramped power converter for electromagnets in particle accelerators
10th National Power Electronics Conference (NPEC-2021), IIT Bhubaneswar, Dec. 15-17, 2021
5. Yadav U., Khatwani H.K., Borage M., Gandhi M.L., Tiwari S.R.
Experimental comparison of half-bridge DC-DC converter using silicon and silicon carbide MOSFETs
10th National Power Electronics Conference (NPEC-2021), IIT Bhubaneswar, Dec. 15-17, 2021

Note: '*' indicates author affiliation other than RRCAT Indore.