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**Monthly Bulletin of Publications:
Faculty, Scientists and Students of IISER Pune.
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PATENTS

Inventor(s) BRITTO, SANDANARAJ S.; BATHLA, PUNITA
Title Process for Determining Enzyme Activity in A Cell By Activity Based Reporter Gene Technology (ABRGT)
Assignee Indian Institute of Science Education and Research Pune
Patent No. 515916
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8583>
Date of Publication 2024-02

Inventor(s) GALANDE, SANJEEV; NAIK, RUTIKA
Title Combined Expression Pattern of Satb Family Chromatin Organizers as Improved Biomarker Tool For Cancer Prognosis
Assignee Indian Institute of Science Education and Research Pune
Patent No. 530323
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8603>
Date of Publication 2024-03

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BIOLOGY

Book Chapter

Author(s)	Lenk, Kerstin; Denizot, Audrey; Genocchi, Barbara; Seppala, Ippa; Taheri, Marsa; NADKARNI, SUHITA
Title	Computational Models of Astrocyte Function at Glutamatergic Synapses
Citation	New Technologies for Glutamate Interaction- Neurons and Glia, 229-263.
Publisher	Springer Nature
URI	https://link.springer.com/book/9781071637418
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8582
Date of Publication	2024-03

Journal Articles

Author(s)	CHAKRABORTY, SUKANYA; KANADE, MANIL; PANANGHAT GAYATHRI
Title	Mechanism of GTPase activation of a prokaryotic small Ras-like GTPase MglA by an asymmetrically interacting MglB dimer
Citation	Journal of Biological Chemistry.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.jbc.2024.107197
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8596
Date of Publication	2024-03

Author(s)	Choudhary, Amit G.; UPADHYA, MANOJ A.; SUBHEDAR, NISHIKANT K. et al.
Title	Response of nitrenergic system in the brain of rat conditioned to intracranial self-stimulation
Citation	Journal of Neurochemistry.
Publisher	Wiley
URI	https://doi.org/10.1111/jnc.16090
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8585
Date of Publication	2024-03

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CHEMISTRY

Journal Articles

Author(s) DAM, GOURAB K.; LET, SUMANTA; JAISWAL, VARTIKA; GHOSH, SUJIT K.
Title Urea-Tethered Porous Organic Polymer (POP) as an Efficient Heterogeneous Catalyst for Hydrogen Bond Donating Organocatalysis and Continuous Flow Reaction
Citation ACS Sustainable Chemistry & Engineering, 12(08), 3000-3011.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acssuschemeng.3c06108>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8584>
Date of Publication 2024-02

Author(s) DEEPAK, NAMITHA; JAIN, VANSHIKA; PILLAI, PRAMOD P.
Title Metal-semiconductor heterojunction accelerates the plasmonically powered photoregeneration of biological cofactors
Citation Photochemistry and Photobiology
Publisher Wiley
URI <https://doi.org/10.1111/php.13937>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8599>
Date of Publication 2024-03

Author(s) FAJAL, SAHEL; MANDAL, WRITAKSHI; Torris, Arun; MAJUMDER, DIPANJAN; LET, SUMANTA; SEN, ARUNABHA; Kanheerampockil, Fayis; Shirolkar, Mandar M; GHOSH, SUJIT K.
Title Ultralight crystalline hybrid composite material for highly efficient sequestration of radioiodine
Citation Nature Communications, 15, 1278.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41467-024-45581-9>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8590>
Date of Publication 2024-02

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Author(s) MONDAL, BARNALI; SHINDE, APAMA; RAJPUT, PARIKSHIT KUMAR; ARFIN, HABIBUL; TANWAR, RITEEKA; GHOSH, PRASENJIT; NAG, ANGSHUMAN

Title Vibronically Coupled Near-Infrared Emission and Excitation from d–d Transitions of Cs_2MX_6 (M = Mo/W, X = Cl/Br)

Citation ACS Energy Letters

Publisher American Chemical Society

URI <https://doi.org/10.1021/acseenergylett.3c02613>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8588>

Date of Publication 2024-02

Author(s) MONDAL, SHANKHAJIT; PANDEY, AKANKSHA M.; GNANAPRAKASAM, BOOPATHY

Title Visible Light Mediated Organophotoredox Catalyzed Synthesis of Tetraketones Using Tertiary Amines as Alkyl Synthons

Citation Journal of Organic Chemistry, 89(06), 3769-3780.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.joc.3c02613>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8608>

Date of Publication 2024-03

Author(s) Palande, Aseem; Patil, Saniya; Veeram, Anjali; SAHOO, SOUMYA SWASTIK; Lodhiya, Tejan; Maurya, Pankaj; Muralikrishnan, Balaji; CHUGH, JEETENDER; Mukherjee, Raju

Title Proteomic Analysis of the Mycobacterium tuberculosis Outer Membrane for Potential Implications in Uptake of Small Molecules

Citation ACS Infectious Diseases, 10(03), 890-906.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acsinfecdis.3c00517>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8600>

Date of Publication 2024-03

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EARTH AND CLIMATE SCIENCE

Journal Articles

Author(s) KARRI, DAMODARARAO; Bikkina, Srinivas; Singh, Sunil Kumar
Title Tracing the provenance of mineral dust over the northern and southern Indian Oceans during the GEOTRACES-India (GI-01, GI-02) expeditions
Citation Geochimica et Cosmochimica Acta, 366, 141-153.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.gca.2023.12.025>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8591>
Date of Publication 2024-02

Author(s) Konecky, Bronwen L.; MANAGAVE, SHREYAS et al.
Title Globally coherent water cycle response to temperature change during the past two millennia
Citation Nature Geoscience, 16, 997-1004.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41561-023-01291-3>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8593>
Date of Publication 2023-11

Author(s) Woolnough, S. J.; JADHAV, P. et al.
Title Celebrating 10 Years of the Subseasonal to Seasonal Prediction Project and Looking to the Future
Citation Bulletin of the American Meteorological Society, 105(03).
Publisher American Meteorological Society
URI <https://doi.org/10.1175/BAMS-D-23-0323.1>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8607>
Date of Publication 2024-03

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HUMANITIES AND SOCIAL SCIENCES

Journal Article

Author(s) Shylaja, B.S.; PAI, VENKETESWARA R.
Title Unambiguous Identification of the Star Ārdrā
Citation Journal of Astronomical History and Heritage, 27(1), 127-134.
Publisher China Science Publishing & Media Ltd.
URI <https://doi.org/10.3724/SP.J.1440-2807.2024.01.09>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8614>
Date of Publication 2024-03

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MATHEMATICS

Journal Articles

Author(s) GAIKWAD, AJINKYA; MAITY, SOUMEN

Title Offensive alliances in graphs

Citation Theoretical Computer Science, 989, 114401.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.tcs.2024.114401>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8605>

Date of Publication 2024-03

Author(s) Ganguli, Saibal; PODDAR, MAINAK

Title Heegaard Floer invariants for cyclic 3-orbifolds

Citation Journal of Knot Theory and Its Ramifications, 33(01), 2350103.

Publisher World Scientific Publishing

URI <https://doi.org/10.1142/S0218216523501031>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8597>

Date of Publication 2024-01

Author(s) GOSWAMI, ANINDYA; Sahab, Subhamay; YADAV, RAVISHANKAR KAPILDEV

Title On meeting and merging of stochastic flow of non-homogeneous Markov and semi-Markov dynamics

Citation Stochastic Models

Publisher Taylor & Francis

URI <https://doi.org/10.1080/15326349.2024.2328301>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8595>

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PHYSICS

Journal Articles

Author(s) ANSARI, ARHUM; BHANDARI, LALIT SINGH; THALAPILLIL, ARUN M.
Title Q -balls in the sky
Citation Physical Review D, 109(02), 023003.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevD.109.023003>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8616>
Date of Publication 2024-01

Author(s) Arya, Richa; Jain, Rajeev Kumar; MISHRA, ARVIND KUMAR
Title Primordial black holes dark matter and secondary gravitational waves from warm Higgs-G inflation
Citation Journal of Cosmology and Astroparticle Physics, 2024(02).
Publisher IOP Publishing
URI <https://doi.org/10.1088/1475-7516/2024/02/034>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8601>
Date of Publication 2024-02

Author(s) CHAKRAVARTY, SHRUTI; NAIR, SUNIL
Title Exploring low-temperature dynamics in triple perovskite ruthenates using nonlinear dielectric susceptibility measurements
Citation Journal of Applied Physics, 135(10).
Publisher AIP Publishing
URI <https://doi.org/10.1063/5.0182471>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8594>
Date of Publication 2024-03

Author(s) DUTTA, PRANAB; MAURYA, S. SAGAR; BISWAS, KORAK; PATEL, KUSHAL; RAPOL, UMAKANT D.
Title Comparative analysis of phase noise for different configurations of Bragg lattice for an atomic gravimeter with Bose-Einstein condensate
Citation AIP Advances, 14,(01), 015352.
Publisher AIP Publishing
URI <https://doi.org/10.1063/5.0187293>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8587>
Date of Publication 2024-01

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Author(s) MONDAL, BARNALI; SHINDE, APAMA; RAJPUT, PARIKSHIT KUMAR; ARFIN, HABIBUL; TANWAR, RITEEKA; GHOSH, PRASENJIT; NAG, ANGSHUMAN

Title Vibronically Coupled Near-Infrared Emission and Excitation from d–d Transitions of Cs₂MX₆ (M = Mo/W, X = Cl/Br)

Citation ACS Energy Letters

Publisher American Chemical Society

URI <https://doi.org/10.1021/acsendergylett.3c02613>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8588>

Date of Publication 2024-02

Author(s) NADIGER, SHREYAS; JOSE, SANDRA M.; GHOSH, RATHEEJIT; KAUR, INDERPREET; NATH, REJISH

Title Stripe and checkerboard patterns in a stack of driven quasi-one-dimensional dipolar condensates

Citation Physical Review A, 109(03), 033309.

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevA.109.033309>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8592>

Date of Publication 2024-03

Author(s) PISTAWALA, NASHRA; KUMAR, ANKIT; Negi, Devesh; ROUT, DIBYATA; HARNAGEA, LUMINITA; Saha, Surajit; SINGH, SURJEET

Title Probing electron-phonon coupling in magnetic van der Waals material NiPS₃: a non-magnetic site-dilution study

Citation 2D Materials

Publisher IOP Publishing

URI <https://doi.org/10.1088/2053-1583/ad2f44>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8613>

Date of Publication 2024-03

Author(s) SINGH, VIKRAM; SINGH, M. BICKY; NAIR, SUNIL

Title Resonant ultrasound spectroscopy of single crystalline KH₂PO₄

Citation Solid State Communications, 380, 115424.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.ssc.2024.115424>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8589>

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