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Monthly Bulletin of Publications: Faculty, Scientists and Students of IISER Pune. MARCH 2023

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BIOLOGY

Journal Articles

Author(s) Bapat, Niraja V.; RAJAMANI, SUDHA
Title Distinguishing Biotic vs. Abiotic Origins of 'Bio'signatures: Clues from Messy Prebiotic Chemistry for Detection of Life in the Universe
Citation Life, 13(3), 766.
Publisher MDPI
URI <https://doi.org/10.3390/life13030766>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7687>
Date of Publication 2023-03

Author(s) BHOWMIK, RAJDEEP; PARDASANI, MEENAKSHI; MAHAJAN, SARANG; Magar, Rahul; Joshi, Samir V.; NAIR, GANESH ASHISH; BHATTACHARJEE, ANINDYA S.; ABRAHAM, NIXON M.
Title Persistent olfactory learning deficits during and post-COVID-19 infection
Citation Current Research in Neurobiology, 4, 100081.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.crneur.2023.100081>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7668>
Date of Publication 2023-03

Author(s) BODAS, DEVIKA S.; MADUSKAR, ADITI; KANIGANTI, TARUN; WAKHLOO, DEBIA; BALASUBRAMANIAN, AKILANDESWARI; SUBHEDAR, NISHIKANT; GHOSE, AURNAB
Title Convergent Energy State-Dependent Antagonistic Signaling by Cocaine- and Amphetamine-Regulated Transcript (CART) and Neuropeptide Y (NPY) Modulates the Plasticity of Forebrain Neurons to Regulate Feeding in Zebrafish
Citation Journal of Neuroscience, 43 (7), 1089-1110.
Publisher Society for Neuroscience
URI <https://doi.org/10.1523/JNEUROSCI.2426-21.2022>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7654>
Date of Publication 2023-02

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Author(s) Chee, Justine M.; GALANDE, SANJEEV et al.
Title Genome-wide screening reveals the genetic basis of mammalian embryonic eye development
Citation BMC Biology, 21(22)
Publisher Springer Nature
URI <https://doi.org/10.1186/s12915-022-01475-0>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7683>
Date of Publication 2023

Author(s) Gaudreault, Nathalie; PODDER, SANTOSH et al.
Title Illumination Power, Stability, and Linearity Measurements for Confocal and Widefield Microscopes V.2
Citation Protocols io
Publisher QUAREP
URI <dx.doi.org/10.17504/protocols.io.5jyl853ndl2w/v2>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7686>
Date of Publication 2023-03

Author(s) GHOSE, AURNAB; Pullarkat, Pramod
Title The role of mechanics in axonal stability and development
Citation Seminars in Cell & Developmental Biology, 140, 22-34.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.semcdb.2022.06.006>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7655>
Date of Publication 2023-05

Author(s) GUNGI, AKHILA; Saha, Shagnik; PAL, MRINMOY; GALANDE, SANJEEV
Title H4K20me1 plays a dual role in transcriptional regulation of regeneration and axis patterning in Hydra
Citation Life Science Alliance, 6(5), e202201619.
Publisher Life Science Alliance
URI <https://doi.org/10.26508/lsa.202201619>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7681>
Date of Publication 2023-05

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Author(s) KUMARI, POOJA; Kaul, Grace; KUMAR, T. ANAND; Akhir, Abdul; Shukla, Manjulika; SHARMA, SURAJ; KAMAT, SIDDHESH S.; Chopra, Sidharth; CHAKRAPANI, HARINATH

Title Heterocyclic Diaryliodonium-Based Inhibitors of Carbapenem-Resistant *Acinetobacter baumannii*

Citation Microbiology Spectrum

Publisher American Society for Microbiology

URI <https://doi.org/10.1128/spectrum.04773-22>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7684>

Date of Publication 2023-03

Author(s) O'Rourke, Matthew B.; GALANDE, SANJEEV et al.

Title Optimised plasma sample preparation and LC-MS analysis to support large-scale proteomic analysis of clinical trial specimens: Application to the Fenofibrate Intervention and Event Lowering in Diabetes (FIELD) trial

Citation Proteomics - Clinical Applications.

Publisher Wiley

URI <https://doi.org/10.1002/prca.202200106>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7682>

Date of Publication 2023-03

Author(s) Paul, Ria; Sarkar, Soumyajit; MARATHE, SHRUTI D.; Murali K.; Das, Susweta; ABRAHAM, NIXON M.; Varma, Hari M.

Title Functional imaging of olfactory bulb and somatosensory cortex in mice using small-animal blood flow imaging platform

Citation Proceedings of SPIE, 12378.

Publisher SPIE

URI <https://doi.org/10.1117/12.2668690>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7669>

Date of Publication 2023-03

Author(s) Sultan, Farina; GOKHALE, RAJESH S. et al.

Title Temporal analysis of melanogenesis identifies fatty acid metabolism as key skin pigment regulator

Citation PLoS Biology

Publisher PLOS

URI <https://doi.org/10.1371/journal.pbio.3001634>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7648>

Date of Publication 2023-05

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Author(s) Tak, Yogesh; GOPAN, SHILPA et al.
Title Identification of subfunctionalized aggregate-remodeling J-domain proteins in Arabidopsis thaliana
Citation Journal of Experimental Botany, 74(5), 1705-1722.
Publisher Oxford University Press
URI <https://doi.org/10.1093/jxb/erac514>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7650>
Date of Publication 2023-03

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CHEMISTRY

Journal Articles

Author(s) CHAUDHURY, SRABANTI; JANGID, PANKAJ; Kolomeisky, Anatoly B.
Title Dynamics of chemical reactions on single nanocatalysts with heterogeneous active sites
Citation Journal of Chemical Physics, 158(7).
Publisher AIP Publishing
URI <https://doi.org/10.1063/5.0137751>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7677>
Date of Publication 2023-02

Author(s) DHARPURE, PANKAJ D. D.; BEHERA, MOUSUMI; THUBE, ARCHANA S. S.; BHAT, RAMAKRISHNA G.
Title Base Dependent Rearrangement of Dithiane and Dithiolane under Visible-light Photoredox catalysis
Citation Chemistry—An Asian Journal, 18(4), e202201128.
Publisher Wiley
URI <https://doi.org/10.1002/asia.202201128>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7652>
Date of Publication 2023-02

Author(s) GHOSH, RUMA; JAYAKANNAN, MANICKAM
Title Theranostic FRET Gate to Visualize and Quantify Bacterial Membrane Breaching
Citation Biomacromolecules, 24(2), 739-755.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.biomac.2c01202>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7664>
Date of Publication 2023-02

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Author(s) KUMARI, POOJA; Kaul, Grace; KUMAR, T. ANAND; Akhir, Abdul; Shukla, Manjulika; SHARMA, SURAJ; KAMAT, SIDDHESH S.; Chopra, Sidharth; CHAKRAPANI, HARINATH

Title Heterocyclic Diaryliodonium-Based Inhibitors of Carbapenem-Resistant *Acinetobacter baumannii*

Citation Microbiology Spectrum

Publisher American Society for Microbiology

URI <https://doi.org/10.1128/spectrum.04773-22>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7684>

Date of Publication 2023-03

Author(s) MANDAL, WRITAKSHI; MAJUMDER, DIPANJAN; FAJAL, SAHEL; LET, SUMANTA; Shirolkar, Mandar M.; GHOSH, SUJIT K.

Title Post engineering of a chemically stable MOF for selective and sensitive sensing of nitric oxide

Citation Molecular Systems Design & Engineering

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D2ME00278G>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7660>

Date of Publication 2023-02

Author(s) MOHANTA, NIRMALA; Samal, Pragnya Paramita; Krishnamurty, Sailaja; GNANAPRAKASAM, BOOPATHY

Title FeCl₂-Catalyzed Rearrangement of Aryl Peroxyoxindole into 1,3-Benzooxazin-4-One

Citation Advanced Synthesis & Catalysis, 365(4), 515-521.

Publisher Wiley

URI <https://doi.org/10.1002/adsc.202201308>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7675>

Date of Publication 2023-02

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Author(s) PRAJESH, NEETU; Naphade, Dipti R.; YADAV, ASHOK; KUSHWAHA, VIKASH; Praveenkumar, Balu; Zareba, Jan K.; Anthopoulos, Thomas D.; BOOMISHANKAR, RAMAMOORTHY

Title Visualization of domain structure and piezoelectric energy harvesting in a ferroelectric metal-ligand cage

Citation Chemical Communications, 59(20), 2919-292.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D3CC00098B>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7659>

Date of Publication 2023-03

Author(s) SAWASE, LAXMAN R.; JISHNU, C., V.; MANNA, SUMAN; CHAKRAPANI, HARINATH

Title A modular scaffold for triggerable and tunable nitroxyl (HNO) generation with a fluorescence reporter

Citation Chemical Communications, 59(23), 3415-3418

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D2CC06134A>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7671>

Date of Publication 2023-03

Author(s) SHEIKH, TARIQ; ANILKUMAR, GOKUL M.; Das, Tisita; RAHMAN, ATIKUR; Chakraborty, Sudip; NAG, ANGSUMAN

Title Combining π -Conjugation and Cation- π Interaction for Water-Stable and Photoconductive One-Dimensional Hybrid Lead Bromide

Citation Journal of Physical Chemistry Letters, 14(7), 1870-1876.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.jpcllett.2c03861>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7649>

Date of Publication 2023-02

Author(s) SUTAR, DASHRAT VISHAMBAR; SARANG, NEHA UTTAMRAO; JAMDADE, AKASH BANDU; GNANAPRAKASAM, BOOPATHY

Title Continuous Flow Inter- and Intramolecular Macrolactonization under High Dilution Conditions

Citation Journal of Organic Chemistry, 88(6), 3740-3759.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.joc.2c03000>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7670>

Date of Publication 2023-03

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DATA SCIENCE

Journal Article

Author(s) Raghav, Mukesh Singh; Jose, Sharath; APTE, AMIT; Govindarajan, Rama
Title Effects of equatorially-confined shear flow on MRG and Rossby waves
Citation Dynamics of Atmospheres and Oceans, 100, 101331.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.dynatmoce.2022.101331>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7688>
Date of Publication 2022-12

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EARTH AND CLIMATE SCIENCE

Journal Article

Author(s) Chakravarty, Rohit; Radchuk, Viktoriia; MANAGAVE, SHREYAS; Voigt, Christian C.
Title Increasing species richness along elevational gradients is associated with niche packing in bat assemblages
Citation Journal of Animal Ecology.
Publisher Wiley
URI <https://doi.org/10.1111/1365-2656.13897>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7661>
Date of Publication 2023-02

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HUMANITIES AND SOCIAL SCIENCES

Poster Presentation

Author(s)	Martin, J.G.C.; Kanade, R.; Bhadbhade, N.; de Bruijn, J.; Hanger-Kopp, S.; Irshaid, J.; Joy, K. J; Lohakare, K.; THOMAS, BEJOY K.; Willaarts, B.
Title	Transdisciplinarity in practice: the food-water-biodiversity nexus and its fairness in the Upper Bhima Basin
Citation	Conference on 'Systems Analysis for Reducing Footprints and Enhancing Resilience', 16-17 November, 2022, Vienna, Austria.
Publisher	International Institute for Applied Systems Analysis
Description	This poster was presented at the IIASA-OeAW conference on 'Systems Analysis for Reducing Footprints and Enhancing Resilience', 16-17 November, 2022, Vienna, Austria.
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7645
Date of Publication	2022-11

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MATHEMATICS

Journal Articles

Author(s) ANAMBY, PRAMATH; Das, Soumya
Title Jacobi forms, Saito-Kurokawa lifts, their Pullbacks and sup-norms on average
Citation Research in the Mathematical Sciences, 10.
Publisher Springer Nature
URI <https://doi.org/10.1007/s40687-023-00377-z>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7676>
Date of Publication 2023-02

Author(s) Balwe, Chetan; HOGADI, AMIT; PAWAR, RAKESH
Title Milnor-Witt cycle modules over an excellent DVR
Citation Journal of Algebra, 615, 53-76.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jalgebra.2022.10.005>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7653>
Date of Publication 2023-02

Author(s) Das, Bata Krishna; Kumar, Poornendu; SAU, HARIPADA
Title Determining sets for holomorphic functions on the symmetrized bidisk
Citation Canadian Mathematical Bulletin.
Publisher Cambridge University Press
URI <https://doi.org/10.4153/S0008439523000103>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7673>
Date of Publication 2023-01

Author(s) KALELKAR, TEJAS; Nair, Ramya
Title Prism Complexes
Citation Topology Proceedings, 62, 45-63.
Publisher Nipissing University, North Bay, Ontario, Canada.
URI <http://topology.nipissingu.ca/tp/reprints/v62/tp62004p1.pdf>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7657>
Date of Publication 2023

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PHYSICS

Journal Articles

- Author(s)** BANERJEE, ARKA; Abel, Tom
Title Tracer-field cross-correlations with k-nearest neighbour distributions
Citation Monthly Notices of the Royal Astronomical Society, 519(04), 4856-4868.
Publisher Oxford University Press
URI <https://doi.org/10.1093/mnras/stac3813>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7662>
Date of Publication 2023-03
- Author(s)** CMS Collaboration; Tumasyan, S.; ALPANA, K.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.
Title Observation of triple J/ψ meson production in proton-proton collisions
Citation Nature Physics, 19, 338-350.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41567-022-01838-y>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7665>
Date of Publication 2023-01
- Author(s)** GHOSH, DIPTIMOY; SHARMA, RAJAT; ULLAH, FARMAN
Title Amplitude's positivity vs. subluminality: causality and unitarity constraints on dimension 6 & 8 gluonic operators in the SMEFT
Citation Journal of High Energy Physics, 2023(02), 199.
Publisher Springer Nature
URI [https://doi.org/10.1007/JHEP02\(2023\)199](https://doi.org/10.1007/JHEP02(2023)199)
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7672>
Date of Publication 2023-02
- Author(s)** Kudo, Koji; Sharma, A.; SREEJITH, G. J.; Jain, J. K.
Title Exactly solvable Hamiltonian for non-Abelian quasiparticles
Citation Physical Review B, 107(11), 115163.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevB.107.115163>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7685>
Date of Publication 2023-03

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Author(s) MISHRA, SANDEEP KUMAR; Suryaprakash, N.
Title Pure shift edited NMR methodologies for the extraction of Homo- and heteronuclear couplings with ultra-high resolution
Citation Progress in Nuclear Magnetic Resonance Spectroscopy, 136-137, 1-60.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.pnmrs.2023.02.001>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7666>
Date of Publication 2023-08

Author(s) SATIN, SEEMA
Title A linear response relation for perturbed Einstein's equations with a Langevin source: applications to perturbations in compact stars
Citation Classical and Quantum Gravity, 40(5), 055010.
Publisher IOP Publishing
URI <https://doi.org/10.1088/1361-6382/acb882>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7651>
Date of Publication 2023-03

Author(s) Sathish, Elagandhula; Gupta, Ashis Kumar; Deeksha; MISHRA, SANDEEP KUMAR; Sawant, Devesh M.; Singh, Ritesh
Title Heteroarylation of Congested α -Bromoamides with Imidazo-Heteroarenes and Indolizines via Aza-Oxyallyl Cations: Enroute to Dibenzazepinone and Zolpidem Analogues
Citation Journal of Organic Chemistry, 87(21), 14168-14176.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.joc.2c01708>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7667>
Date of Publication 2022-11

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