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

Journal Articles

Author(s) JOSHI, MANESH PRAKASH; UDAY, ASHWIN; RAJAMANI, SUDHA
Title Elucidating N-acyl amino acids as a model protoamphiphilic system
Citation Communications Chemistry, 5, 147.
Publisher Springer Nature
URI <https://doi.org/10.1038/s42004-022-00762-9>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7458>
Date of Publication 2022-11

Author(s) Kawade, Harish M.; Awathale, Sanjay N.; SUBHEDAR, NISHIKANT K.; Kokare, Dadasaheb M.
Title Neuropeptide S facilitates extinction of fear via modulation of mesolimbic dopaminergic circuitry
Citation Neuropharmacology, 221, 109274.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.neuropharm.2022.109274>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7453>
Date of Publication 2022-12

Author(s) MARDHEKAR, SANDHYA; SUBRAMANI, BALAMURUGAN; SAMUDRA, PRASANNA; SRIKANTH, PRIYADHARSHINI; MAHIDA, VIRENDRASINH; BHOGE, PREETI RAVINDRA; TORASKAR, SURAJ; ABRAHAM, NIXON M.; KIKKERI, RAGHAVENDRA V.
Title Sulfation of Heparan and Chondroitin Sulfate Ligands Enables Cell Specific Homing of Nanoprobes
Citation Chemistry—A European Journal.
Publisher Wiley
URI <https://doi.org/10.1002/chem.202202622>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7455>
Date of Publication 2022-11

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Author(s) MITRA, DEBASMITA; SWAMINATHAN, AMRUTA; MUNDHE, GAYATRI; RIKHY, RICHA
Title Imaging and quantification of apical microvilli in the syncytial blastoderm of *Drosophila* embryos
Citation Star Protocol, 3(4), 101736.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.xpro.2022.101736>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7485>
Date of Publication 2022-12

Author(s) MOHAN, RAM; CHHAYA, VAIBHAV; KRISHNAN, ANAND
Title Seasonality and interspecific temporal partitioning in a semiarid grassland bat assemblage of northwestern India
Citation Journal of Arid Environments, 205, 104818.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jaridenv.2022.104818>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7466>
Date of Publication 2022-10

Author(s) Petridi, Stavroula; DUBAL, DNYANESH; RIKHY, RICHA; Ameen, Jelle van den
Title Mitochondrial respiration and dynamics of in vivo neural stem cells
Citation Development, 149 (23): dev200870.
Publisher The Company of Biologists
URI <https://doi.org/10.1242/dev.200870>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7484>
Date of Publication 2022-11

Author(s) Roy, Aiendriila; Padhi, Swati Shree; Khyriem, Ibakordor; NIKOSE, SAKET; Sankar, S. H. Harsha
Title Resetting the epigenome: Methylation dynamics in cancer stem cells
Citation Frontiers in Cell and Developmental Biology, 10, 909424.
Publisher Frontiers Media S.A.
URI <https://doi.org/10.3389/fcell.2022.909424>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7447>
Date of Publication 2022-09

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Book Chapter

Author(s) Pardasani, Meenakshi; ABRAHAM, NIXON M.
Title Neurotropic SARS-CoV-2: Causalities and Realities
Citation COVID-19 Pandemic, Mental Health and Neuroscience - New Scenarios for Understanding and Treatment [Working Title]
Publisher IntechOpen
URI <https://doi.org/10.5772/intechopen.108573>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7449>
Date of Publication 2022-11

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CHEMISTRY

Journal Articles

Author(s) DARGILY, NEETHU CHRISTUDAS; THIMMAPPA, RAVIKUMAR; DEVENDRACHARI, MRUTHUNJAYACHARI CHATTANAHALLI; THOTIYL, MUSTHAFA OTTAKAM

Title An air chargeable hydrogen battery by reversible electrochemical trapping of the protons

Citation Green Chemistry.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D2GC02927H>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7450>

Date of Publication 2022-10

Author(s) DEWAN, ANWESHI; Narayanan, Remya; THOTIYL, MUSTHAFA OTTAKAM

Title A multi-chromic supercapacitor of high coloration efficiency integrating a MOF derived V₂O₅ electrode

Citation Nanoscale.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D2NR04841H>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7457>

Date of Publication 2022-11

Author(s) Gabbani, Alessio; Sangregorio, Claudio; TANDON, BHARAT; NAG, ANGSHUMAN; Gurioli, Massimo; Pineider, Francesco

Title Magnetoplasmonics beyond Metals: Ultrahigh Sensing Performance in Transparent Conductive Oxide Nanocrystals

Citation Nano Letters, 22(22), 9036-9044.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.nanolett.2c03383>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7475>

Date of Publication 2022-11

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Author(s) Kulkarni, Pradnya; Datta, Dhruvajyoti; GANESH, KRISHNA N.
Title Gemdimethyl Peptide Nucleic Acids (α / β / γ -gdm-PNA): E/Z-Rotamers Influence the Selectivity in the Formation of Parallel/Antiparallel gdm-PNA:DNA/RNA Duplexes
Citation ACS Omega, 7(44), 40558-40568.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsomega.2c05873>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7465>
Date of Publication 2022-11

Author(s) MANDAL, WRITAKSHI; FAJAL, SAHEL; SAMANTA, PARTHA; DUTTA, SUBHAJIT; Shirolkar, Mandar M.; MORE, YOGESHWAR D.; GHOSH, SUJIT K.
Title Selective and Sensitive Recognition of Specific Types of Toxic Organic Pollutants with a Chemically Stable Highly Luminescent Porous Organic Polymer (POP)
Citation ACS Applied Polymer Materials, 4(11), 8633-8644.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsapm.2c01538>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7463>
Date of Publication 2022-11

Author(s) MARDHEKAR, SANDHYA; SUBRAMANI, BALAMURUGAN; SAMUDRA, PRASANNA; SRIKANTH, PRIYADHARSHINI; MAHIDA, VIRENDRASINH; BHOGE, PREETI RAVINDRA; TORASKAR, SURAJ; ABRAHAM, NIXON M.; KIKKERI, RAGHAVENDRA V.
Title Sulfation of Heparan and Chondroitin Sulfate Ligands Enables Cell Specific Homing of Nanoprobes
Citation Chemistry—A European Journal.
Publisher Wiley
URI <https://doi.org/10.1002/chem.202202622>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7455>
Date of Publication 2022-11

Author(s) MONDAL, DEBASHIS; AHMAD, MANZOOR; Dey, Bijoy; MONDAL, ABHISHEK; TALUKDAR, PINAKI
Title Formation of supramolecular channels by reversible unwinding-rewinding of bis(indole) double helix via ion coordination
Citation Nature Communications, 13, 6507.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41467-022-34159-y>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7468>
Date of Publication 2022-10

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Author(s) Rawat, Shivam; Boobalan, Thangavel; Krishna, Bhavya B.; Sathish, Marappan; HOTHAS, SRINIVAS; Bhaskar, Thallada
Title Biochar for Supercapacitor Application: A Comparative Study
Citation Chemistry - An Asian Journal
Publisher Wiley
URI <https://doi.org/10.1002/asia.202200982>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7478>
Date of Publication 2022-10

Author(s) SHAIKH, MOSEEN A.; Samal, Pragnya Paramita; UBALE, AKASH S.; Krishnamurty, Sailaja; GNANAPRAKASAM, BOOPATHY
Title Lewis Acid-Catalyzed Chemodivergent and Regiospecific Reaction of Phenols with Quaternary Peroxyoxindoles
Citation Journal of Organic Chemistry, 87(21), 14155-14167.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.joc.2c01701>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7462>
Date of Publication 2022-10

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DATA SCIENCE

Journal Articles

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/123456789/7483>
Date of Publication 2022-12

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EARTH AND CLIMATE SCIENCE

Journal Articles

Author(s) DUTTA, ARIJEET; MANI, NEENA JOSEPH
Title Exploring the circum-global teleconnection—Indian summer monsoon interactions in the interannual and multidecadal timescales
Citation Frontiers in Earth Science.
Publisher Frontiers Media S.A.
URI <https://doi.org/10.3389/feart.2022.973468>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7445>
Date of Publication 2022-10

Author(s) Kumar, Bipin; ABHISHEK, NAMIT; Chattopadhyay, Rajib; George, Sandeep; Singh, Bhupendra Bahadur; SAMANTA, ARYA; Patnaik, B. S., V.; Gill, Sukhpal Singh; Nanjundiah, Ravi S.; Singh, Manmeet
Title Deep learning based short-range forecasting of Indian summer monsoon rainfall using earth observation and ground station datasets
Citation Geocarto International.
Publisher Taylor & Francis
URI <https://doi.org/10.1080/10106049.2022.2136262>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7456>
Date of Publication 2022-10

Author(s) MANI, NEENA JOSEPH; ETTAMMAL, SUHAS; Jiang, Xianan
Title Modulation of the Convectively Coupled Kelvin Waves by the MJO over Different Domains
Citation Journal of Climate, 35(21), 3425-3439.
Publisher American Meteorological Society
URI <https://doi.org/10.1175/JCLI-D-21-0641.1>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7477>
Date of Publication 2022-11

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Author(s) TRIVEDI, AKASH; SARKAR, SUDIPTA; Marin-Moreno, Hector; Minshull, Timothy A.; Whitehouse, Pippa L.; SINGH, UTPAL

Title Reassessment of Hydrate Destabilization Mechanisms Offshore West Svalbard Confirms Link to Recent Ocean Warming

Citation JCR: Solid Earth, 127(11), e2022JB025231.

Publisher Wiley

URI <https://doi.org/10.1029/2022JB025231>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7469>

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MATHEMATICS

Journal Articles

Author(s)	Bhattacharyya, Tirthankar; Das, B. Krishna; SAU, HARIPADA
Title	Toeplitz operators and Hilbert modules on the symmetrized polydisc
Citation	International Journal of Mathematics, 33(12), 2250076.
Publisher	World Scientific Publishing
URI	https://doi.org/10.1142/S0129167X22500768
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7454
Date of Publication	2022-11

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PHYSICS

Journal Articles

- Author(s)** BHATTACHARJEE, DEBESH; SUBRAMANIAN, PRASAD; Nieves-Chinchilla, Teresa; Vourlidas, Angelos
- Title** Turbulence and Anomalous Resistivity inside Near-Earth Magnetic Clouds
- Citation** Monthly Notices of the Royal Astronomical Society, 518(1), 1185-1194.
- Publisher** Oxford University Press
- URI** <https://doi.org/10.1093/mnras/stac3186>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7451>
- Date of Publication** 2022-11
-
- Author(s)** CMS Collaboration; Tumasyan, A.; ALPANA, K.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.
- Title** Measurement of the Higgs boson width and evidence of its off-shell contributions to ZZ production
- Citation** Nature Physics, 18, 1329-1334.
- Publisher** Springer Nature
- URI** <https://doi.org/10.1038/s41567-022-01682-0>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7446>
- Date of Publication** 2022-10
-
- Author(s)** Dabholkar, Bhupen; SREEJITH, G. J.; Alet, Fabien
- Title** Reentrance effect in the high-temperature critical phase of the quantum dimer model on the square lattice
- Citation** Physical Review B, 106(20), 205121.
- Publisher** American Physical Society
- URI** <https://doi.org/10.1103/PhysRevB.106.205121>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7464>
- Date of Publication** 2022-11

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Author(s) DEWAN, ANWESHI; Narayanan, Remya; THOTIYL, MUSTHAFA OTTAKAM
Title A multi-chromic supercapacitor of high coloration efficiency integrating a MOF derived V₂O₅ electrode
Citation Nanoscale.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/D2NR04841H>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7457>
Date of Publication 2022-11

Author(s) Jaiswal, Sunil; Blaizot, Jean-Paul; BHALERAO, RAJEEV S.; Chen, Zenan; Jaiswal, Amaresh; Yan, Li
Title From moments of the distribution function to hydrodynamics: The nonconformal case
Citation Physical Review C, 106(4), 044912.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevC.106.044912>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7443>
Date of Publication 2022-10

Author(s) JAKHAR, NAVITA; Bisht, Neeta; Katre, Ankita; SINGH, SURJEET
Title Synergistic Approach Toward a Reproducible High zT in n-Type and p-Type Superionic Thermoelectric Ag₂Te
Citation ACS Applied Materials & Interfaces.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsami.2c17039>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7471>
Date of Publication 2022-11

Author(s) Klamser, Juliane U.; Sadhu, Tridib; DHAR, DEEPAK
Title Sequence of phase transitions in a model of interacting rods
Citation Physical Review E, 106(5), L052101
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.106.L052101>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7474>
Date of Publication 2022-11

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Author(s) MITRA, DEBARSHI; PANDE, SHREERANG; CHATTERJI, APRATIM
Title Topology-driven spatial organization of ring polymers under confinement
Citation Physical Review E, 106(5), 054502.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.106.054502>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7473>
Date of Publication 2022-11

Author(s) SAURABH, KUMAR; SINGH, SURJEET
Title Crystal growth of “defective” half-Heusler Nb_{0.83}CoSb
Citation Journal of Crystal Growth, 601, 126957.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jcrysgro.2022.126957>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7452>
Date of Publication 2023-01

Author(s) SRIVASTAV, SUMIT; BAPAT, BHAS
Title Post collision analyzer to study charge-exchange processes in ion-molecule collisions
Citation Review of Scientific Instruments 93(11), 113306.
Publisher AIP Publishing
URI <https://doi.org/10.1063/5.0121351>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7472>
Date of Publication 2022-11

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