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

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# BIOLOGY

## Journal Articles

**Author(s)** Choubey, Deepak; DESHMUKH, BHAGYASHREE; RAO, ANJANI GOPAL; KANYAL, ABHISHEK; Hati, Amiya Kumar; Roy, Somenath; KARMODIYA, KRISHANPAL

**Title** Genomic analysis of Indian isolates of Plasmodium falciparum: Implications for drug resistance and virulence factors

**Citation** International Journal for Parasitology.

**Publisher** Elsevier B.V.

**URI** <https://doi.org/10.1016/j.ijpddr.2023.05.003>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8006>

**Date of Publication** 2023-05

**Author(s)** Lustenhouwer, Nicky; DEY, SUTIRTH et al.

**Title** Experimental evolution of dispersal: Unifying theory, experiments and natural systems

**Citation** Journal of Animal Ecology.

**Publisher** Wiley

**URI** <https://doi.org/10.1111/1365-2656.13930>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8011>

**Date of Publication** 2023-04

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# CHEMISTRY

## Journal Articles

**Author(s)** Kalbande, Ritesh; Kumar, Bipin; Maji, Sujit; Yadav, Ravi; ATEY, KAUSTUBH; Rathore, Devendra Singh; Beig, Gufran

**Title** Machine learning based quantification of VOC contribution in surface ozone prediction

**Citation** Chemosphere, 326, 138474.

**Publisher** Elsevier B.V.

**URI** <https://doi.org/10.1016/j.chemosphere.2023.138474>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7853>

**Date of Publication** 2023-06

**Author(s)** KHATIK, SADDAM Y.; Sudhakar, Sruthi; Mishra, Satyajit; Kalia, Jeet; Pradeepkumar, P.; SRIVATSAN, SEERGAZHI G.

**Title** Probing juxtaposed G-quadruplex and hairpin motifs using a responsive nucleoside probe: a unique scaffold for chemotherapy

**Citation** Chemical Science, 14(21), 5627-5637.

**Publisher** Royal Society of Chemistry

**URI** <https://doi.org/10.1039/D3SC00519D>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8008>

**Date of Publication** 2023-06

**Author(s)** KOTTAICHAMY, ALAGAR RAJA; BHAT, ZAHID MANZOOR; DEVENDRACHARI, MRUTHYUNJAYACHARI CHATTANAHALLI; THOTIYL, MUSTHAFA OTTAKAM et al.

**Title** Unprecedented Energy Storage in Metal-Organic Complexes via Constitutional Isomerism

**Citation** Chemical Science.

**Publisher** Royal Society of Chemistry

**URI** <https://doi.org/10.1039/D3SC01692G>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7999>

**Date of Publication** 2023-05

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**Author(s)** PANWARIA, PRAKASH; DAS, ALOKE  
**Title** Effect of Substituents on the Intramolecular  $n \rightarrow \pi^*$  Interaction in 3-[2-(Dimethylamino) phenyl] propanal: A Computational Study  
**Citation** Journal of Physical Chemistry A, 127(15), 3339-3346.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.jpca.2c08641>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7851>  
**Date of Publication** 2023-04

**Author(s)** ROY, PRADYUT; VIRMANI, MISHIKA; PILLAI, PRAMOD P.  
**Title** Blue-emitting InP quantum dots participate in an efficient resonance energy transfer process in water  
**Citation** Chemical Science, 14(19), 5167-5176.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/D3SC00164D>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8015>  
**Date of Publication** 2023-05

**Author(s)** SHAH, ATEEK; KUMAR, YASHWANT; ROHAN, S.; HAZRA, AMRITA B.  
**Title** Efficient Chemical and Enzymatic Syntheses of FAD Nucleobase Analogues and Their Analysis as Enzyme Cofactors  
**Citation** ChemBioChem.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1002/cbic.202300055>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7996>  
**Date of Publication** 2023-04

**Author(s)** Umar, Ahmed; THOTIYL, MUSTHAFA OTTAKAM  
**Title** Perovskite modified catalysts with improved coke resistance for steam reforming of glycerol to renewable hydrogen fuel  
**Citation** GCB Bioenergy: Bioproducts for a Sustainable Bioeconomy, 15(6), 791-804.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1111/gcbb.13050>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7720>  
**Date of Publication** 2023-06

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**Author(s)** VIJAY, AMAL; MUKHERJEE, ARNAB  
**Title** Molecular insights into the stereospecificity of arginine in RNA tetraloop folding  
**Citation** Physical Chemistry Chemical Physics, 25(16), 11301-11310.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/D3CP00448A>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7995>  
**Date of Publication** 2023-04

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# EARTH AND CLIMATE SCIENCE

## Journal Articles

- Author(s)** DATTA, ARJUN
- Title** Reply to comment on Malkoti et al. (2021) by Haney and Nakahara
- Citation** Geophysical Journal International, 234(3), 1965-1969.
- Publisher** Oxford University Press
- URI** <https://doi.org/10.1093/gji/ggad179>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8016>
- Date of Publication** 2023-09
- 
- Author(s)** Mandal, Reema; Das, Anirban; TRIPATHY, GYANA RANJAN; Sudheer, A.K.; Kumar, Sanjeev; Deshpande, R.D.; Padhya, Virendra
- Title** Impact of soil salinity on groundwater chemistry in semi-arid regions in Western India: Insights from major ion and stable isotopic  $\delta^2\text{H}_{\text{H}_2\text{O}}$ ,  $\delta^{18}\text{O}_{\text{H}_2\text{O}}$ , and  $\delta^{13}\text{C}_{\text{DIC}}$  characteristics.
- Citation** Groundwater for Sustainable Development, 21, 100939.
- Publisher** Elsevier B.V.
- URI** <https://doi.org/10.1016/j.gsd.2023.100939>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8001>
- Date of Publication** 2023-05

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# HUMANITIES AND SOCIAL SCIENCES

## Journal Article

**Author(s)** Date, Anuja Anil; Hiremath, Ankila J.; Joshi, Atul Arvind; LELE, SHARACHCHANDRA  
**Title** Silvicultural Practices in the Management of Diospyros melanoxylon (Tendu) Leaf Production: Options and Trade-offs  
**Citation** Economic Botany.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s12231-023-09572-z>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8002>  
**Date of Publication** 2023-04

## Popular Article

**Author(s)** THOMAS, BEJOY K. and Mulay, Radhika  
**Title** Why NEP 2020 provides an opportunity to include water in higher education curricula  
**Citation** The Indian Express  
**Publisher** The Indian Express  
**URI** <https://indianexpress.com/article/opinion/columns/nep-2020-include-water-higher-education-curricula-8612914/>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7884>  
**Date of Publication** 2023-05-16

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# PHYSICS

## Journal Articles

**Author(s)** ANAND, ABHISHEK; Pu, Songyang; SREEJITH, G. J.  
**Title** Torus geometry eigenfunctions of an interacting multi-Landau-level Hamiltonian  
**Citation** Physical Review B, 107(19), 195126.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.107.195126>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7997>  
**Date of Publication** 2023-05

**Author(s)** BARDHAN, DEBJYOTI; GHOSH, DIPTIMOY; SACHDEVA, DIVYA  
**Title**  $R_{K(*)}$  from RPV-SUSY sneutrinos  
**Citation** Nuclear Physics B, 986, 116059.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.nuclphysb.2022.116059>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8007>  
**Date of Publication** 2023-01

**Author(s)** Garcia, Rafael; Salazar, Edgar; Rozo, Eduardo; ADHIKARI, SUSMITA; Aung, Han; Diemer, Benedikt; Nagai, Daisuke; Wolfe, Brandon  
**Title** A better way to define dark matter haloes  
**Citation** Monthly Notices of the Royal Astronomical Society, 521(2), 2464-2476.  
**Publisher** Oxford University Press  
**URI** <https://doi.org/10.1093/mnras/stad660>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7852>  
**Date of Publication** 2023-05

**Author(s)** Jamwal, Gaurav; KUMAR, ANKIT; Warish, Mohd.; CHAKRAVARTY, SHRUTI; Muthiah, Saravanan; Kandasami, Asokan; Niazi, Asad  
**Title** Structural, electronic and thermoelectric properties of SnTe with dilute co-doping of Ag and Cu  
**Citation** Journal of Alloys and Compounds, 954, 170182.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.jallcom.2023.170182>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8009>  
**Date of Publication** 2022-09

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**Author(s)** KUMAR, AANJANEYA; Pal, Arnab  
**Title** Universal Framework for Record Ages under Restart  
**Citation** Physical Review Letters, 130(15), 157101.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevLett.130.157101>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8017>  
**Date of Publication** 2023-04

**Author(s)** MISHRA, SEEMANT; Basu, Urna  
**Title** Symmetric exclusion process under stochastic power-law resetting  
**Citation** Journal of Statistical Mechanics: Theory and Experiment, 2023 (5), 053202.  
**Publisher** IOP Publishing  
**URI** <https://doi.org/10.1088/1742-5468/accf06>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7998>  
**Date of Publication** 2023-05

**Author(s)** MOHD, ALI; VARDARAJAN, SUNEETA  
**Title** Note on the action with the Schwarzian at the stretched horizon  
**Citation** Physical Review D, 107(10), 104064.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.107.104064>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8014>  
**Date of Publication** 2023-05

**Author(s)** MUKHI, SUNIL; Rayhaun, Brandon C. C.  
**Title** Classification of Unitary RCFTs with Two Primaries and Central Charge Less Than 25  
**Citation** Communications in Mathematical Physics.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s00220-023-04681-1>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7994>  
**Date of Publication** 2023-03

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**Author(s)** RANA, ASHUTOSH; Thakare, Anup; Kumar, Nikhil; Mukherjee, Buddhadev; Torris, Arun; Das, Bidisa; OGALE, SATISHCHANDRA; Banerjee, Abhik  
**Title** Mitigating Dendrite Formation on a Zn Electrode in Aqueous Zinc Chloride by the Competitive Surface Chemistry of an Imidazole Additive  
**Citation** ACS Applied Materials & Interfaces, 15(19), 23093-23103.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acsami.3c01310>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8003>  
**Date of Publication** 2023-05

**Author(s)** Woo, Steffi Y.; ARORA, ASHISH et al.  
**Title** Excitonic absorption signatures of twisted bilayer WSe<sub>2</sub> by electron energy-loss spectroscopy  
**Citation** Physical Review B, 107(15), 155429.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.107.155429>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8010>  
**Date of Publication** 2023-04

**Author(s)** Yan, Tianyi; Collins, Matthew; NATH, REJISH; Li, Weibin  
**Title** Signatures of Quantum Chaos of Rydberg-Dressed Bosons in a Triple-Well Potential  
**Citation** Atoms, 11(6), 89.  
**Publisher** MDPI  
**URI** <https://doi.org/10.3390/atoms11060089>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8013>  
**Date of Publication** 2023-05

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