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**Monthly Bulletin of Publications:  
Faculty, Scientists and Students of IISER Pune.  
JULY 2024**

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# BIOLOGY

## Journal Articles

**Author(s)** CHANDRAMOULI, AAKASH; KAMAT, SIDDHESH S.  
**Title** A Facile LC-MS Method for Profiling Cholesterol and Cholesteryl Esters in Mammalian Cells and Tissues  
**Citation** Biochemistry  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.biochem.4c00160>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9013>  
**Date of Publication** 2024-07

**Author(s)** DAS, SOURADEEP; PATKI, GAURI M.; SRIDHAR, VANTHANAA; MULEWAR, SAHIL SUNIL; ROY, RAYA; BANDYOPADHYAY, UDITA; KULSHRESHTHA, NISHANT NITINIDHI; RAJAMANI, SUDHA  
**Title** Compartmentalization as a ubiquitous feature of life: from origins of life to biomimetics  
**Citation** European Physical Journal Special Topics  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1140/epjs/s11734-024-01203-5>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9009>  
**Date of Publication** 2024-06

**Author(s)** Pawar, Namrata; Dudhabhate, Biru B.; Borade, Vaishnavi; Sahare, Dipak K.; Bhute, Yogesh V.; SUBHEDAR, NISHIKANT K.; Kokare, Dadasaheb M.; Sakharkar, Amul J.  
**Title** CREB-Binding Protein Regulates Cocaine- and Amphetamine-Regulated Transcript Peptide Expression in the Lateral Hypothalamus: Implication in Reward and Reinforcement  
**Citation** Molecular Neurobiology  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s12035-024-04338-7>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9015>  
**Date of Publication** 2024-07

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**Author(s)** Sadiq, Mohammed Aamir; BHAT, ANANDA SHIKHARA; Guttal, Vishwesh; Balakrishnan, Rohini

**Title** Spatial structure could explain the maintenance of alternative reproductive tactics in tree cricket males

**Citation** Biology Open, 13 (6), bio060307.

**Publisher** The Company of Biologists

**URI** <https://doi.org/10.1242/bio.060307>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9025>

**Date of Publication** 2024-06

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# CHEMISTRY

## Journal Articles

**Author(s)** DUTT, SHIFALI; KOTTAICHAMY, ALAGAR RAJA; DARGILY, NEETHU CHRISTUDAS; MUKHOPADHYAY, SANCHAYITA; NAYAK, BHOJKUMAR; DEVENDRACHARI, MRUTHYUNJAYACHARI CHATTANHALLI; Vinod, Chatakudhath Prabakaran; Kotresh, Harish Makri Nimbegondi; THOTIYL, MUSTHAFA OTTAKAM

**Title** Switchable molecular electrocatalysis

**Citation** Chemical Science

**Publisher** Royal Society of Chemistry

**URI** <https://doi.org/10.1039/D4SC01284D>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9026>

**Date of Publication** 2024-07

**Author(s)** DUTTA, SWAGATA; SRIVATSAN, SEERGAZHI G.

**Title** Enzymatic functionalization of RNA oligonucleotides by terminal uridylyl transferase using fluorescent and clickable nucleotide analogs

**Citation** Chemistry—An Asian Journal.

**Publisher** Wiley

**URI** <https://doi.org/10.1002/asia.202400475>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9019>

**Date of Publication** 2024-07

**Author(s)** Gurung, Arun Bahadur; MUKHERJEE, ARNAB et al.

**Title** Nanostructured lipopeptide-based membranomimetics for stabilizing bacteriorhodopsin

**Citation** Biomaterials Science

**Publisher** Royal Society of Chemistry

**URI** <https://doi.org/10.1039/D4BM00250D>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9011>

**Date of Publication** 2024-06

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**Author(s)** METYA, SURAJIT; ROY, SUPRAVAT; MANDAL, SOURAV; Huang, Qian-Rui; Kuo, Jer-Lai; DAS, ALOKE

**Title** Modulation of the strength of weak S-H...O hydrogen-bond: Spectroscopic study of the complexes of 2-fluorothiophenol with methanol and ethanol

**Citation** Journal of Chemical Physics, 160(22).

**Publisher** AIP Publishing

**URI** <https://doi.org/10.1063/5.0208086>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9010>

**Date of Publication** 2024-06

**Author(s)** PARMAR, MUSKAN; MUKHOPADHYAY, SANCHAYITA; RITWIK MONDAL; NAYAK, BHOJKUMAR; DARGILY, NEETHU CHRISTUDAS; Kotresh, Harish Makri Nimbegondi; Vinod, Chathakudath Prabhakaran; THOTIYL, MUSTHAFA OTTAKAM

**Title** Synergistic Effects of Substrate-Ligand Interaction in Metal-Organic Complexes on the De-electronation Kinetics of a Vitamin C Fuel Cell

**Citation** Dalton Transactions

**Publisher** Royal Society of Chemistry

**URI** <https://doi.org/10.1039/D4DT01370K>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9032>

**Date of Publication** 2024-07

**Author(s)** Roy, Subhadip; Pan, Swagata; Choudhury, Neha; SIVARAM SWAMINATHAN; De, Priyadarsi

**Title** Water-soluble polymeric probe with tryptophan pendants for formaldehyde sensing

**Citation** European Polymer Journal, 215, 113241.

**Publisher** Elsevier B.V.

**URI** <https://doi.org/10.1016/j.eurpolymj.2024.113241>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8998>

**Date of Publication** 2024-07

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# EARTH AND CLIMATE SCIENCE

## Journal Articles

**Author(s)** CHAUHAN, IKTESH; DEHIYA, RAHUL  
**Title** Two-dimensional controlled source electromagnetic inversion algorithm based on a space domain forward modeling approach  
**Citation** Geophysical Prospecting  
**Publisher** Wiley  
**URI** <https://doi.org/10.1111/1365-2478.13575>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9027>  
**Date of Publication** 2024-07

**Author(s)** DEHIYA, RAHUL  
**Title** Error propagation and model update analysis in three-dimensional CSEM inversion  
**Citation** Geophysical Journal International  
**Publisher** Oxford University Press  
**URI** <https://doi.org/10.1093/gji/ggae251>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9028>  
**Date of Publication** 2024-07

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# HUMANITIES AND SOCIAL SCIENCES

## Journal Article

<b>Author(s)</b>	Martin, J.C.G.; Kanade, R.; Bhadbhade, N.; Joy, K.J.; THOMAS, B. K.; Willaarts, B.; Hanger-Kopp, S.
<b>Title</b>	Review of the food, water and biodiversity nexus in India
<b>Citation</b>	Environmental Science & Policy, 159, 103826.
<b>Publisher</b>	Elsevier B.V.
<b>URI</b>	<a href="https://doi.org/10.1016/j.envsci.2024.103826">https://doi.org/10.1016/j.envsci.2024.103826</a>
<b>DR URI</b>	<a href="http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9012">http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9012</a>
<b>Date of Publication</b>	2024-09

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# MATHEMATICS

## Journal Article

**Author(s)** Kannan, M. Rajesh; Pragada, Shivaramakrishna; WANKHEDE, HITESH  
**Title** Constructing cospectral graphs by unfolding non-bipartite graphs  
**Citation** Discrete Applied Mathematics, 357, 264-273.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.dam.2024.06.016>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9014>  
**Date of Publication** 2024-11

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# PHYSICS

## Journal Articles

**Author(s)** Adak, Debabrata; Shaikh, Shabbir; Sinha, Srijita; Ghosh, Tuhin; Boulanger, Francois; Lagache, Guilaine; SOURADEEP, TARUN; Miville-Deschenes, Marc-Antoine

**Title** Bayesian inference methodology to characterize the dust emissivity at far-infrared and submillimeter frequencies

**Citation** Monthly Notices of the Royal Astronomical Society, 531(04), 4876-4892.

**Publisher** Oxford University Press

**URI** <https://doi.org/10.1093/mnras/stae1365>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9016>

**Date of Publication** 2024-07

**Author(s)** Aditya, Sreemayee; DHAR, DEEPAK; Sen, Diptiman

**Title** Subspace-restricted thermalization in a correlated-hopping model with strong Hilbert space fragmentation characterized by irreducible strings

**Citation** Physical Review B, 110(04),045418.

**Publisher** American Physical Society

**URI** <https://doi.org/10.1103/PhysRevB.110.045418>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9024>

**Date of Publication** 2024-07

**Author(s)** Deswal, Sonia; Kumar, Deepu; ROUT, DIBYATA; SINGH, SURJEET; Kumar, Pradeep

**Title** Quasi-two-dimensional frustrated spin-1 triangular lattice antiferromagnet  $\text{Ca}_3\text{NiNb}_2\text{O}_9$ : A proximate spin liquid

**Citation** Physical Review B, 110(02), 024430.

**Publisher** American Physical Society

**URI** <https://doi.org/10.1103/PhysRevB.110.024430>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9031>

**Date of Publication** 2024-07

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**Author(s)** Dwari, Gourav; RAMAKRISHNAN, SITARAM et al.  
**Title** Unveiling the interplay of magnetic order and electronic band structure in the evolution of the anomalous Hall effect in single crystalline MnPtGa  
**Citation** Physical Review B, 110(04), 045111.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.110.045111>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9021>  
**Date of Publication** 2024-07

**Author(s)** GHOSH, RATHEEJIT; Ciardi, Matteo; NATH, REJISH; Cinti, Fabio  
**Title** Path integral Monte Carlo study of a doubly dipolar Bose gas  
**Citation** Physical Review B, 110(01), 014513.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.110.014513>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9020>  
**Date of Publication** 2024-07

**Author(s)** PISTAWALA, NASHRA; HARNAGEA, LUMINITA; Karmakar, Suman; Rawat, Rajeev; SINGH, SURJEET  
**Title** Crystal growth, magnetic and magnetocaloric properties of  $J_{\text{eff}} = 1/2$  quantum antiferromagnet  $\text{CeCl}_3$   
**Citation** Physical Review Materials, 8(07), 076201.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevMaterials.8.076201>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9030>  
**Date of Publication** 2024-07

**Author(s)** Pula, M.; GHARA, A. et al.  
**Title** Candidate for a quantum spin liquid ground state in the Shastry-Sutherland lattice material  $\text{Yb}_2\text{Be}_2\text{GeO}_7$   
**Citation** Physical Review B, 110(01), 014412.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.110.014412>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9023>  
**Date of Publication** 2024-07

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**Author(s)** ROY, DEEPAK K.; KABIR, MUKUL  
**Title** Robust magnetism and phase transitions in ultrathin Na<sub>2</sub>IrO<sub>3</sub> flakes  
**Citation** Physical Review B, 110(02), L020403.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.110.L020403>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9022>  
**Date of Publication** 2024-07

**Author(s)** SREEJITH, G. J.; Sau, Jay D.; Sarma, Sankar Das  
**Title** Eliashberg Theory for Dynamical Screening in Bilayer Exciton Condensation  
**Citation** Physical Review Letters, 133(05), 056501.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevLett.133.056501>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9033>  
**Date of Publication** 2024-08

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