



SRINIVASA RAMANUJAN LIBRARY
Indian Institute of Science Education and Research Pune
Dr. Homi Bhabha Road, Pune - 411008. India.
e-mail: libraryservices@iiserpune.ac.in

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

Contents

Department	Page No.
<u>Biology</u>	2
<u>Chemistry</u>	6
<u>Data Science</u>	8
<u>Earth and Climate Science</u>	9
<u>Mathematics</u>	10
<u>Physics</u>	12

BIOLOGY

Journal Articles

- Author(s)** ADHAV, VISHAL ANNASAHEB; KAYARAT, SAIKRISHNAN
- Title** The Realm of Unconventional Noncovalent Interactions in Proteins: Their Significance in Structure and Function
- Citation** ACS Omega, 8(25), 22268-22284.
- Publisher** American Chemical Society
- URI** <https://doi.org/10.1021/acsomega.3c00205>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8060>
- Date of Publication** 2023-06
-
- Author(s)** ADHAV, VISHAL ANNASAHEB; SHELKE, SANKET SATISH; Pananghat Balanarayan; KAYARAT, SAIKRISHNAN
- Title** Sulfur-mediated chalcogen versus hydrogen bonds in proteins: a see-saw effect in the conformational space
- Citation** QRB Discovery ,4, e5.
- Publisher** Cambridge University Press
- URI** <https://doi.org/10.1017/qrd.2023.3>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8054>
- Date of Publication** 2023-04
-
- Author(s)** DAGAR, SHIKHA; SARKAR, SUSOVAN; RAJAMANI, SUDHA
- Title** Nonenzymatic Template-Directed Primer Extension Using 2 '-3 ' Cyclic Nucleotides Under Wet-Dry Cycles
- Citation** Origins of Life and Evolution of Biospheres.
- Publisher** Springer Nature
- URI** <https://doi.org/10.1007/s11084-023-09636-z>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8046>
- Date of Publication** 2023-05

[Go to top](#)

Author(s) DIXIT, ADITI; KALIA, JEET
Title Protein-Metabolite Interactions: Discovery and Significance
Citation ChemBioChem.
Publisher Wiley
URI <https://doi.org/10.1002/cbic.202200755>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8047>
Date of Publication 2023-04

Author(s) Karyakarte, Rajesh P.; KARMODIYA, KRISHANPAL et al.
Title Chasing SARS-CoV-2 XBB.1.16 Recombinant Lineage in India and the Clinical Profile of XBB.1.16 Cases in Maharashtra, India
Citation Cureus 15(6), e39816.
Publisher Springer Nature
URI <https://doi.org/10.7759/cureus.39816>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8030>
Date of Publication 2023-06

Author(s) KHURANA, HIMANI; Baratam, Krishnakanth; BHATTACHARYYA, SOUMYA; Srivastava, Anand; PUCADYIL, THOMAS J.
Title Mechanistic analysis of a novel membrane-interacting variable loop in the pleckstrin-homology domain critical for dynamin function
Citation Proceeding of the National Academy of Science, 120 (11) e2215250120.
Publisher National Academy of Science
URI <https://doi.org/10.1073/pnas.2215250120>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8044>
Date of Publication 2023-03

Author(s) KIRUBESWARAN, O. R.; Storrs, Katherine R.
Title Inconsistent illusory motion in predictive coding deep neural networks
Citation Vision Research, 206, 108195.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.visres.2023.108195>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8036>
Date of Publication 2023-05

[Go to top](#)

Author(s) MAHAJAN, SARANG; SEN, DEEPSHIKHA; SUNIL, ANANTU; SRIKANTH, PRIYADHARSHINI; MARATHE, SHRUTI D.; SHAW, KARISHMA; SAHARE, MAHESH; GALANDE, SANJEEV; ABRAHAM, NIXON M.

Title Knockout of angiotensin converting enzyme-2 receptor leads to morphological aberrations in rodent olfactory centers and dysfunctions associated with sense of smell

Citation Frontiers in Neuroscience, 17.

Publisher Frontiers Media S.A.

URI <https://doi.org/10.3389/fnins.2023.1180868>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8061>

Date of Publication 2023-06

Author(s) Niveditha, Divya; KHAN, SOUMEN; BHALERAO, UNNATI; KADAM, PRADNYA; SHAH, NIKITA; SAWANT, RUTUJA; TUPEKAR, MANISHA; NAGAR, DHRITI; RAO, ANJANI G.; PATHAK, MAITRYEE; GHOSE, AURNAB; SHASHIDHARA, L. S.; MONTEIRO, JOY MERWIN; KARMODIYA, KRISHANPAL et al.

Title A tale of two waves: Delineating diverse genomic and transmission landscapes driving the covid19 pandemic In Pune, India

Citation Journal of Infection and Public Health, 16(8), 1290-1300.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.jiph.2023.06.004>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8033>

Date of Publication 2023-08

Author(s) RAJESHWARI, B. R.

Title First person - Rajeshwari B. R.

Citation Biology Open, 12 (4), bio059944.

Publisher The Company of Biologists

URI <https://doi.org/10.1242/bio.059944>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8058>

Date of Publication 2023-05

Author(s) SAHARAN, OJAL; KAMAT, SIDDHESH S.

Title Mapping lipid pathways during phagocytosis

Citation Biochemical Society Transactions, 51(3), 1279-1287.

Publisher Portland Press

URI <https://doi.org/10.1042/BST20221424>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8053>

Date of Publication 2023-06

[Go to top](#)

Author(s) Sen, Devashish; CHAKRABORTY, ARNAB; MEHENDEALE, NEELAY; KAMAT, SIDDHESH S. et al.

Title Metabolic regulation of CTCF expression and chromatin association dictates starvation response in mice and flies

Citation iScience, 26(7), 107128.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.isci.2023.107128>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8052>

Date of Publication 2023-06

Author(s) Sugatha, Jini; Priya, Amulya; Raj, Prateek; Jaimon, Ebsy; SWAMINATHAN, UMA; Jose, Anju; PUCADYIL, THOMAS JOHN; Datta, Sunando

Title Insights into cargo sorting by SNX32 and its role in neurite outgrowth

Citation eLife 12, e84396.

Publisher eLife Sciences Publications Ltd.

URI <https://doi.org/10.7554/eLife.84396>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8035>

Date of Publication 2023-05

[Go to top](#)

CHEMISTRY

Journal Articles

- Author(s)** DIXIT, ADITI; KALIA, JEET
Title Protein-Metabolite Interactions: Discovery and Significance
Citation ChemBioChem.
Publisher Wiley
URI <https://doi.org/10.1002/cbic.202200755>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8047>
Date of Publication 2023-04
- 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, 14(23), 6383-6392.
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 2023-06
- Author(s)** MONDAL, UNMESH; Giroto, Ivan; Hassanali, Ali; GHOSH, PRASENJIT
Title Effect of Quantum Delocalization on Temperature Dependent Double Proton Transfer in Molecular Crystals of Terephthalic Acid
Citation Journal of Physical Chemistry B, 127(23), 5263-5272.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.jpcc.3c00474>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8066>
Date of Publication 2023-06

[Go to top](#)

Author(s) MUKHOPADHYAY, SANCHAYITA; KOTTAICHAMY, ALAGAR RAJA; CHAME, PALLAVI VYANKURAM; GHOSH, PRASENJIT; Chathakudath, Prabhakaran Vinod; Kotresh, Harish Makri Nimbegondi; KANADE, SANDEEP C.; THOTIYL, MUSTHAFA OTTAKAM

Title Unusual Ligand Assistance in Molecular Electrocatalysis via Interfacial Proton Charge Assembly

Citation Journal of Physical Chemistry Letters, 14(23), 5377-5385.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.jpcllett.3c01262>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8032>

Date of Publication 2023-06

Author(s) PUNIA, BHAWAKSHI; CHAUDHURY, SRABANTI

Title Microscopic Mechanism of Macromolecular Crowder-Assisted DNA Capture and Translocation through Biological Nanopores

Citation Journal of Physical Chemistry B

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.jpccb.3c02792>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8062>

Date of Publication 2023-06

Author(s) SABALE, ABHIJEET S.; WARGHUDE, PRAKASH K.; BHAT, RAMAKRISHNA G.

Title An Efficient Route to Access Spirooxindole-Pyrazolone-Fused Cyclopentenones by a Diastereoselective [3+2] Annulation

Citation Synlett.

Publisher Thieme

URI <https://doi.org/10.1055/a-2014-2813>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8039>

Date of Publication 2023-05

Author(s) SUR, SOUMODIP; MONDAL, RITWIK; THOTIYL, MUSTHAFA OTTAKAM

Title OH⁻/H⁺ dual-ion energy assisted electricity effective photoelectrochemical water splitting

Citation Journal of Photochemistry and Photobiology, 16, 100190.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.jpap.2023.100190>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8050>

Date of Publication 2023-08

[Go to top](#)

DATA SCIENCE

Journal Article

Author(s) Niveditha, Divya; KHAN, SOUMEN; BHALERAO, UNNATI; KADAM, PRADNYA; SHAH, NIKITA; SAWANT, RUTUJA; TUPEKAR, MANISHA; NAGAR, DHRITI; RAO, ANJANI G.; PATHAK, MAITRYEE; GHOSE, AURNAB; SHASHIDHARA, L. S.; MONTEIRO, JOY MERWIN; KARMODIYA, KRISHANPAL et al.

Title A tale of two waves: Delineating diverse genomic and transmission landscapes driving the covid19 pandemic In Pune, India

Citation Journal of Infection and Public Health, 16(8), 1290-1300.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.jiph.2023.06.004>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8033>

Date of Publication 2023-08

[Go to top](#)

EARTH AND CLIMATE SCIENCE

Journal Articles

Author(s) KUMAR, VIVEK; RAI, SHYAM S.
Title 3-D geometry of the Lonar impact crater, India, imaged from cultural seismic noise
Citation Geophysical Journal International, 234(3), 1933-1942.
Publisher Oxford University Press
URI <https://doi.org/10.1093/gji/ggad177>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8037>
Date of Publication 2023-09

Author(s) Niveditha, Divya; KHAN, SOUMEN; BHALERAO, UNNATI; KADAM, PRADNYA; SHAH, NIKITA; SAWANT, RUTUJA; TUPEKAR, MANISHA; NAGAR, DHRITI; RAO, ANJANI G.; PATHAK, MAITRYEE; GHOSE, AURNAB; SHASHIDHARA, L. S.; MONTEIRO, JOY MERWIN; KARMODIYA, KRISHANPAL et al.
Title A tale of two waves: Delineating diverse genomic and transmission landscapes driving the covid19 pandemic In Pune, India
Citation Journal of Infection and Public Health, 16(8), 1290-1300.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jiph.2023.06.004>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8033>
Date of Publication 2023-08

Author(s) SURYAVANSHI, DEEPAK; DEHIYA, RAHUL
Title A Mimetic Finite-Difference Method for Two-Dimensional DC Resistivity Modeling
Citation Mathematical Geosciences.
Publisher Springer Nature
URI <https://doi.org/10.1007/s11004-023-10068-8>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8040>
Date of Publication 2023-05

[Go to top](#)

MATHEMATICS

Journal Articles

Author(s) Balwe, Chetan; HOGADI, AMIT; Sawant, Anand
Title Strong A^1 -invariance of A^1 -connected components of reductive algebraic groups
Citation Journal of Topology, 16(2), 634-649.
Publisher Wiley
URI <https://doi.org/10.1112/topo.12298>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8057>
Date of Publication 2023-06

Author(s) BHAKTA, MOUSOMI; CHAKRABORTY, SOUPTIK; Ganguly, Debdeep
Title Existence and multiplicity of positive solutions of certain nonlocal scalar field equations
Citation Mathematische Nachrichten
Publisher Wiley
URI <https://doi.org/10.1002/mana.202000473>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8065>
Date of Publication 2023-06

Author(s) De Bruyn, Bart; PRADHAN, PUSPENDU; Sahoo, Binod Kumar; Sahu, Bikramaditya
Title A characterization of the family of secant lines to a hyperbolic quadric in $PG(3, q)$, q odd, Part II
Citation Discrete Mathematics, 346(3), 113251.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.disc.2022.113251>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8043>
Date of Publication 2023-03

Author(s) GOSWAMI, ANINDYA; Saha, Subhamay; YADAV, RAVISHANKAR KAPILDEV
Title Semimartingale Representation of a Class of Semi-Markov Dynamics
Citation Journal of Theoretical Probability.
Publisher Springer
URI <https://doi.org/10.1007/s10959-023-01259-4>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8067>
Date of Publication 2023-05

[Go to top](#)

Author(s) PANJA, SAIKAT; Prasad, Sachchidanand
Title The image of polynomials and Waring type problems on upper triangular matrix algebras
Citation Journal of Algebra, 631, 148-193.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jalgebra.2023.04.027>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8055>
Date of Publication 2023-10

Author(s) SEN, ABHROJYOTI
Title A note on Hopf's lemma and strong minimum principle for nonlocal equations with non-standard growth
Citation Forum Mathematicum.
Publisher Walter de Gruyter
URI <https://doi.org/10.1515/forum-2022-0331>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8048>
Date of Publication 2023-05

[Go to top](#)

PHYSICS

Journal Articles

Author(s) Aung, Han; Nagai, Daisuke; Rozo, Eduardo; Wolfe, Brandon; ADHIKARI, SUSMITA
Title Accurate model of the projected velocity distribution of galaxies in dark matter haloes
Citation Monthly Notices of the Royal Astronomical Society, 521(3), 3981-3990.
Publisher Oxford University Press
URI <https://doi.org/10.1093/mnras/stad601>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8049>
Date of Publication 2023-05

Author(s) BHUNIA, AMIT; SINGH, MOHIT KUMAR; Huwayz, Maryam Al; Henini, Mohamed; DATTA, SHOUVIK
Title 0D-2D heterostructure for making very large quantum registers using 'itinerant' Bose-Einstein condensate of excitons
Citation Materials Today Electronics, 4, 100039.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.mtelec.2023.100039>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8051>
Date of Publication 2023-06

Author(s) DEOPA, SURYA PRATAP S.; PATIL, SHIVPRASAD
Title Viscoelasticity of single folded proteins using dynamic atomic force microscopy
Citation Soft Matter, 19(23), 4188-4203.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/D3SM00219E>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8042>
Date of Publication 2023-06

[Go to top](#)

Author(s) GHOSH, DIPTIMOY; SINGH, AMARTYA HARSH; ULLAH, FARMAN
Title Probing the initial state of inflation: analytical structure of cosmological correlators
Citation Journal of Cosmology and Astroparticle Physics, 4.
Publisher IOP Publishing
URI <https://doi.org/10.1088/1475-7516/2023/04/007>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8059>
Date of Publication 2023-04

Author(s) GHOSH, SAGNIK; Ghosh, Swapan K.
Title A path integral approach to quantum fluid dynamics: application to double well potential
Citation Theoretical Chemistry Accounts, 142, 57.
Publisher Springer Nature
URI <https://doi.org/10.1007/s00214-023-02995-w>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8031>
Date of Publication 2023-06

Author(s) JAIN, SACHIN; Kundu, Nilay; Kundu, Suman; MEHTA, ABHISHEK; Sake, Sunil Kumar
Title A CFT interpretation of cosmological correlation functions in α -vacua in de-Sitter space
Citation Journal of High Energy Physics, 2023(05), 111.
Publisher Springer Nature
URI [https://doi.org/10.1007/JHEP05\(2023\)111](https://doi.org/10.1007/JHEP05(2023)111)
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8045>
Date of Publication 2023-05

Author(s) KUMAR, G. V. PAVAN
Title When Plasmonic Colloids Meet Optical Vortices - A Brief Review
Citation Indian Journal of Pure & Applied Physics, 61, 589-600.
Publisher Council of Scientific and Industrial Research National Institute of Science Communication and Policy Research
URI <https://or.niscpr.res.in/index.php/IJPAP/article/download/107/1255>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8064>
Date of Publication 2023-07

[Go to top](#)

Author(s) MONDAL, UNMESH; Giroto, Ivan; Hassanali, Ali; GHOSH, PRASENJIT
Title Effect of Quantum Delocalization on Temperature Dependent Double Proton Transfer in Molecular Crystals of Terephthalic Acid
Citation Journal of Physical Chemistry B, 127(23), 5263-5272.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.jpcc.3c00474>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8066>
Date of Publication 2023-06

Author(s) MUKHOPADHYAY, SANCHAYITA; KOTTAICHAMY, ALAGAR RAJA; CHAME, PALLAVI VYANKURAM; GHOSH, PRASENJIT; Chathakudath, Prabhakaran Vinod; Kotresh, Harish Makri Nimbegondi; KANADE, SANDEEP C.; THOTIYL, MUSTHAFA OTTAKAM
Title Unusual Ligand Assistance in Molecular Electrocatalysis via Interfacial Proton Charge Assembly
Citation Journal of Physical Chemistry Letters, 14, 23, 5377-5385.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.jpcclett.3c01262>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8032>
Date of Publication 2023-06

Author(s) Pandey, Kuldeep; Chakrabarty, D.; Kumar, A.; Bhardwaj, Anil; BISWAL, S.; Hussey, G. C.; Yadav, A. K.
Title Characteristics of X-class flares of solar cycles 23 and 24 in X-ray and EUV bands
Citation Advances in Space Research, 71(12), 5438-5452.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.asr.2023.02.022>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8068>
Date of Publication 2023-06

Author(s) Tseng, Yi; BAG, RABINDRANATH; SINGH, SURJEET et al.
Title Momentum-resolved spin-conserving two-triplon bound state and continuum in a cuprate ladder
Citation Communications Physics, 6, 138.
Publisher Springer Nature
URI <https://doi.org/10.1038/s42005-023-01250-9>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8034>
Date of Publication 2023-06

[Go to top](#)

Author(s) YADAV, YASHARTH; Elumalai, Pavithra; Williams, Nitin; Jost, Juergen; Samal, Areejit

Title Discrete Ricci curvatures capture age-related changes in human brain functional connectivity networks

Citation Frontiers in Aging Neuroscience, 15.

Publisher Frontiers Media SA

URI <https://doi.org/10.3389/fnagi.2023.1120846>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8056>

Date of Publication 2023-05

[Go to top](#)
