



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.
SEPTEMBER 2023**

Contents

Department	Page No.
Biology	2
Chemistry	4
Mathematics	6
Physics	8

BIOLOGY

Journal Articles

Author(s) Chavhan, Yashraj; DEY, SUTIRTH; Lind, Peter A.
Title Bacteria evolve macroscopic multicellularity by the genetic assimilation of phenotypically plastic cell clustering
Citation Nature Communications, 14, 3555.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41467-023-39320-9>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8177>
Date of Publication 2023-06

Author(s) MALANKAR, NILAM N.; KONDHARE, KIRTIKUMAR R.; SAHA, KISHAN; MANTRI, MOHIT; BANERJEE, ANJAN K.
Title The phased short-interfering RNA siRD29(-) regulates GIBBERELLIN 3-OXIDASE 3 during stolon-to-tuber transitions in potato
Citation Plant Physiology.
Publisher Oxford University Press
URI <https://doi.org/10.1093/plphys/kiad493>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8204>
Date of Publication 2023-09

Author(s) PARDASANI, MEENAKSHI; RAMAKRISHNAN, ANANTHA MAHARASI; MAHAJAN, SARANG; KANTROO, MEHER; MCGOWAN, ELEANOR; DAS, SUSOBHAN; SRIKANTH, PRIYADHARSHINI; PANDEY, SANYUKTA; ABRAHAM, NIXON M.
Title Perceptual learning deficits mediated by somatostatin releasing inhibitory interneurons of olfactory bulb in an early life stress mouse model
Citation Molecular Psychiatry.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41380-023-02244-3>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8203>
Date of Publication 2023-09

[Go to top](#)

Author(s) PALIT, SHIRSA; BHIDE, AMEY J.; Mohanasundaram, Boominathan; PALA, MADHUSMITA; BANERJEE, ANJAN K.

Title Peptides from conserved tandem direct repeats of SHORT-LEAF regulate gametophore development in moss *P. patens*

Citation Plant Physiology.

Publisher Oxford University Press

URI <https://doi.org/10.1093/plphys/kiad515>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8213>

Date of Publication 2023-09

Author(s) PURKAYASTHA, DEVATRISHA; KARMODIYA, KRISHANPAL

Title RNA Polymerase II evolution and adaptations: Insights from Plasmodium and other parasitic protists

Citation Infection, Genetics and Evolution, 11, 105505.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.meegid.2023.105505>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8207>

Date of Publication 2023-11

[Go to top](#)

CHEMISTRY

Journal Articles

Author(s) DARGILY, NEETHU CHRISTUDAS; KUNTOJI, GIDDAERAPPA; MENDHE, RAHUL MAHADEO; HARIDAS, AKSHAY; THIMMAPPA, RAVIKUMAR; Sharma, Surbhi; THOTIYL, MUSTHAFA OTTAKAM

Title Electro Fenton's reaction coupled Zn-air battery for in situ pollutant degradation

Citation Green Chemistry.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D3GC03155A>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8210>

Date of Publication 2023-09

Author(s) KUSHWAHA, RINKU; JAIN, CHITVAN; SHEKHAR, PRAGALBH; RASE, DEEPAK; ILLATHVALAPPIL, RAJITH; MEKAN, DEEP; CAMELLUS, AUGASTUS; Vinod, Chathakudath Prabhakaran; VAIDHYANATHAN, RAMANATHAN

Title Made to Measure Squaramide COF Cathode for Zinc Dual-Ion Battery with Enriched Storage via Redox Electrolyte

Citation Advanced Energy Materials, 13(34), 2301049.

Publisher Wiley

URI <https://doi.org/10.1002/aenm.202301049>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8176>

Date of Publication 2023-09

Author(s) REDDY, MALLU CHENNA; Dey, Ashutosh; Jeganmohan, Masilamani; Padala, Kishor

Title The isolation-biological activities (2014-2022), bio, semi, total synthesis (1978-2022) and SAR studies of a potential naturally engineered scaffold aristolactam

Citation New Journal of Chemistry, 47(35), 16266-16307.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D3NJ02565A>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8179>

Date of Publication 2023-09

[Go to top](#)

Author(s) SINDHU, POOJA; Ananthram, K. S.; Jain, Anil; Tarafder, Kartick; BALLAV, NIRMALYA

Title Insulator-to-metal-like transition in thin films of a biological metal-organic framework

Citation Nature Communications, 14, 2857.

Publisher Springer Nature

URI <https://doi.org/10.1038/s41467-023-38434-4>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8200>

Date of Publication 2023-05

Author(s) YOUSF, SALEEM; MALLA, JAVID A.; Sardesai, Devika M.; Sharma, Shilpy; TALUKDAR, PINAKI; CHUGH, JEETENDER

Title Mapping metabolic perturbations induced by glutathione activatable synthetic ion channels in human breast cancer cells

Citation Journal of Pharmaceutical and Biomedical Analysis, 235, 115605.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.jpba.2023.115605>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8178>

Date of Publication 2023-10

[Go to top](#)

MATHEMATICS

Book Chapter

Author(s) GAIKWAD, AJINKYA; MAITY, SOUMEN
Title Parameterized Complexity of the T_{h+1} -Free Edge Deletion Problem
Citation Fundamentals of Computation Theory, 221-233.
Publisher Springer Nature
URI https://doi.org/10.1007/978-3-031-43587-4_16
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8209>
Date of Publication 2023-09

Journal Articles

Author(s) BHIMANI, DIVYANG G.; Haque, Saikatul
Title Strong ill-posedness for fractional Hartree and cubic NLS equations
Citation Journal of Functional Analysis, 285(11), 110157.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jfa.2023.110157>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8188>
Date of Publication 2023-12

Author(s) Chatterjee, Saikat; KOUSHIK, PRAPHULLA
Title Extension of Topological Groupoids and Hurewicz Morphisms
Citation Applied Categorical Structures, 31, 33.
Publisher Springer Nature
URI <https://doi.org/10.1007/s10485-023-09744-x>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8187>
Date of Publication 2023-08

[Go to top](#)

Author(s) Toft, Joachim; BHIMANI, DIVYANG G.; Manna, Ramesh
Title Fractional Fourier transforms, harmonic oscillator propagators and Strichartz estimates on Pilipović and modulation spaces
Citation Applied and Computational Harmonic Analysis, 67, 101580.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.acha.2023.101580>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8189>
Date of Publication 2023-11

[Go to top](#)

PHYSICS

Journal Articles

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, K.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Strange hadron collectivity in pPb and PbPb collisions

Citation Journal of High Energy Physics, 2023(05), 007.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP05\(2023\)007](https://doi.org/10.1007/JHEP05(2023)007)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8186>

Date of Publication 2023-05

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for long-lived particles decaying to a pair of muons in proton-proton collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(05), 228.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP05\(2023\)228](https://doi.org/10.1007/JHEP05(2023)228)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8183>

Date of Publication 2023-05

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for Higgs boson decays to a Z boson and a photon in proton-proton collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(05), 233.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP05\(2023\)233](https://doi.org/10.1007/JHEP05(2023)233)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8193>

Date of Publication 2023-05

[Go to top](#)

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for CP violation using $t\bar{t}$ events in the lepton+jets channel in pp collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(06), 81.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP06\(2023\)081](https://doi.org/10.1007/JHEP06(2023)081)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8194>

Date of Publication 2023-06

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for top squarks in the four-body decay mode with single lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(06), 060.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP06\(2023\)060](https://doi.org/10.1007/JHEP06(2023)060)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8195>

Date of Publication 2023-06

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for nonresonant Higgs boson pair production in the four leptons plus twob jets final state in proton-proton collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(06), 130.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP06\(2023\)130](https://doi.org/10.1007/JHEP06(2023)130)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8196>

Date of Publication 2023-06

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, A.; DUBE, SOURABH; KANSAL, B.; LAHA, A.; PANDEY, S.; RASTOGI, A.; SHARMA, SEEMA et al.

Title Search for heavy resonances and quantum black holes in $e\mu$, $e\tau$, and $\mu\tau$ final states in proton-proton collisions at $\sqrt{s} = 13$ TeV

Citation Journal of High Energy Physics, 2023(05), 227.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP05\(2023\)227](https://doi.org/10.1007/JHEP05(2023)227)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8197>

Date of Publication 2023-05

[Go to top](#)

Author(s) Dabholkar, Bhupen; Ran, Xiaoxue; Rong, Junchen; Yan, Zheng; SREEJITH, G. J.; Meng, Zi Yang; Alet, Fabien
Title Classical fully packed loop model with attractive interactions on the square lattice
Citation Physical Review B, 108(12), 125112.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevB.108.125112>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8180>
Date of Publication 2023-09

Author(s) Das, Arpan; Mahunta, Shishira; AGARWALLA, BIJAY KUMAR; Mukherjee, Victor
Title Precision bound and optimal control in periodically modulated continuous quantum thermal machines
Citation Physical Review E, 108(01), 014137.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.108.014137>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8185>
Date of Publication 2023-07

Author(s) KRITHIKA, V. R.; SANTHANAM, M. S.; MAHESH, T. S.
Title NMR investigations of dynamical tunneling in spin systems
Citation Physical Review A, 108, (3), 032207.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevA.108.032207>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8184>
Date of Publication 2023-09

Author(s) KUMAR, AANJANEYA; Scher, Yuval; Reuveni, Shlomi; SANTHANAM, M. S.
Title Inference from gated first-passage times
Citation Physical Review Research, 5(03), L032043.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevResearch.5.L032043>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8208>
Date of Publication 2023-09

[Go to top](#)

Author(s) Mandal, Dipanjan; Rakala, Geet; Damle, Kedar; DHAR, DEEPAK; Rajesh, R.
Title Phases of the hard-plate lattice gas on a three-dimensional cubic lattice
Citation Physical Review E, 107(06), 064136.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.107.064136>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8191>
Date of Publication 2023-06

Author(s) MOHD, ALI; VARDARAJAN SUNEETA
Title Generalized entropy in higher curvature gravity and entropy of algebra of observables
Citation Physical Review D, 108(06), 066017.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevD.108.066017>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8212>
Date of Publication 2023-09

Author(s) PAL, RITAM; KUMAR, AANJANEY; SANTHANAM, M. S.
Title Depolarization of opinions on social networks through random nudges
Citation Physical Review E, 108(03), 034307.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.108.034307>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8206>
Date of Publication 2023-09

Author(s) Rakala, Geet; Mandal, Dipanjan; Biswas, Soham; Damle, Kedar; DHAR, DEEPAK; Rajesh, R.
Title Spontaneous layering and power-law order in the three-dimensional fully packed hard-plate lattice gas
Citation Physical Review E, 107(06), 064137.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevE.107.064137>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8192>
Date of Publication 2023-06

[Go to top](#)

Author(s) Rana, Deepti; Bhakar, Monika; BASAVARAJA,G.; Bera, Satyabrata; Saini, Neeraj; Pradhan, Suman Kalyan; Mondal, Mintu; KABIR, MUKUL; Sheet, Goutam
Title High transport spin polarization in the van der Waals ferromagnet Fe₄GeTe₂
Citation Physical Review B, 107(22), 224422
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevB.107.224422>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8211>
Date of Publication 2023-06

Author(s) Thomas, Anoop; TELANG, PRACHI; ROUT, DIBYATA; MISHRA, KSHITI; Pal, Anand; Muthu, D.V. S.; Kumar, P. S. Anil; SINGH, SURJEET; Sood, A. K.
Title Anomalous pressure dependence of phonon line widths in metallic pyrochlore iridates (Eu_{1-x}Bi_x)₂Ir₂O₇: crossover from incoherent to coherent metal
Citation Pramana, 97 (3), 138.
Publisher Indian Academy of Sciences
URI <https://doi.org/10.1007/s12043-023-02620-2>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8190>
Date of Publication 2023-08

Author(s) VEDHANTH, S. V. U.; DATTA, SHOUVIK
Title Direct determination of 2D momentum space from 2D spatial coherence of light using a modified Michelson interferometer
Citation Review of Scientific Instruments, 94(09), 095113.
Publisher AIP Publishing
URI <https://doi.org/10.1063/5.0160614>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8205>
Date of Publication 2023-09

[Go to top](#)
