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

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PATENT

Inventor(s) BRITTO, SANDANARAJ S.; BHANDARI, PAVANKUMAR JANARDHAN; REDDY, MULLAPUDI MOHAN

Title Supramolecular protein assemblies with advanced functions and synthesis thereof

Assignee Indian Institute of Science Education and Research Pune

Patent No. 490760

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8439>

Date of Publication 2023-12

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BIOLOGY

Journal Articles

Author(s) BATHLA, PUNITA; Mujawar, Aaiyas; De, Abhijit; BRITTO, SANDANARAJ S.
Title Development of Noninvasive Activity-Based Protein Profiling-Bioluminescence Resonance Energy Transfer Platform Technology Enables Target Engagement Studies with Absolute Specificity in Living Systems
Citation ACS Pharmacology & Translational Science.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsptsci.3c00231>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8437>
Date of Publication 2024-01

Author(s) Dandia, Hiren Y.; Pillai, Mamatha M.; Sharma, Deepak; Suvarna, Meghna; Dalal, Neha; MADHOK, AYUSH; Ingle, Arvind; Chiplunkar, Shubhada V.; GALANDE, SANJEEV; Tayalia, Prakriti
Title Acellular scaffold-based approach for in situ genetic engineering of host T-cells in solid tumor immunotherapy
Citation Military Medical Research, 11, 3.
Publisher Springer Nature
URI <https://doi.org/10.1186/s40779-023-00503-6>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8401>
Date of Publication 2024-01

Author(s) Indari, Omkar; Ghosh, Subhrojyoti; Bal, Adhiraj Singh; James, Ajay; Garg, Mehek; Mishra, Amit; KARMODIYA, KRISHANPAL; Jha, Hem Chandra
Title Awakening the sleeping giant: Epstein-Barr Virus reactivation by biological agents
Citation Pathogens and Disease.
Publisher Oxford University Press
URI <https://doi.org/10.1093/femspd/ftae002>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8419>
Date of Publication 2024-01

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Author(s) VERMA, BHAVESH K.; Sengupta, Rakesh
Title Emergence of behavioral phenomena and adaptation effects in human numerosity decoder using recurrent neural networks
Citation Scientific Reports, 13, 19571.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41598-023-44535-3>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8430>
Date of Publication 2023-11

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CHEMISTRY

Journal Articles

- Author(s)** CHOUDHARY, BHARAT S.; KUMAR, T. ANAND; Vashishtha, Akshi; TEJASRI, SUSHMA; KUMAR, AMAL S.; Agarwal, Rachit; CHAKRAPANI, HARINATH
- Title** An esterase-cleavable persulfide donor with no electrophilic byproducts and a fluorescence reporter
- Citation** Chemical Communications
- Publisher** Royal Society of Chemistry
- URI** <https://doi.org/10.1039/D3CC04948E>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8432>
- Date of Publication** 2024-01
-
- Author(s)** FAJAL, SAHEL; GHOSH, DIPAYAN; MANDAL, WRITAKSHI; GHOSH, SUJIT K.
- Title** Preferential separation of a radioactive TcO_4^- surrogate from a mixture of oxoanions by a cationic MOF
- Citation** Chemical Communications
- Publisher** Royal Society of Chemistry
- URI** <https://doi.org/10.1039/D3CC05627A>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8418>
- Date of Publication** 2024-01
-
- Author(s)** JAIN, CHITVAN; KUSHWAHA, RINKU; RASE, DEEPAK; SHEKHAR, PRAGALBH; Shelke, Ankita; SONWANI, DISHA; Ajithkumar, Thalasseril G.; Vinod, Chathakudath Prabhakaran; VAIDHYANATHAN, RAMANATHAN
- Title** Tailoring COFs: Transforming Nonconducting 2D Layered COF into a Conducting Quasi-3D Architecture via Interlayer Knitting with Polypyrrole
- Citation** Journal of the American Chemical Society, 146(01), 487-499.
- Publisher** American Chemical Society
- URI** <https://doi.org/10.1021/jacs.3c09937>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8410>
- Date of Publication** 2024-01

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Author(s) JAMDADE, AKASH B.; SUTAR, DASHRAT V.; GNANAPRAKASAM, BOOPATHY
Title Synthesis of Macrolactams from Macrolactones Using Ru-/Ir-Catalytic System under Neutral Conditions
Citation Organic Letters, 25(50), 9058-9063.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.orglett.3c03885>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8405>
Date of Publication 2023-12

Author(s) JOSE, CAVYA; SARKAR, MEGHAMALA; RAJASEKAR, PRABHAKARAN; Tewari, Tanuja; BOOMISHANKAR, RAMAMOORTHY
Title Squarate-Tethered Enantiomeric Imido-Pd(II) Cages for Recognition and Separation of Chiral Organic Molecules
Citation Inorganic Chemistry, 62(47), 19375-19381.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.inorgchem.3c03105>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8427>
Date of Publication 2023-11

Author(s) SINDHU, POOJA; SAHA, SAUVIK; BHOI, UMASHIS; BALLAV, NIRMALYA
Title Bistable Interface: Reversible Switching of Rectifying to Nonrectifying Current Across Heterostructured Thin Films of MOFs
Citation Advanced Functional Materials.
Publisher Wiley
URI <https://doi.org/10.1002/adfm.202312515>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8406>
Date of Publication 2024-01

Author(s) THEKKAYIL, ZIYAD; MAQBOOL, SHABNUM; TANWAR, RITEEKA; MANDAL, PANKAJ
Title Broadband Tunability of Third Harmonic Upconversion in Pyridinium Lead Halides
Citation ACS Photonics, 11(1), 196-203.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsphotonics.3c01279>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8428>
Date of Publication 2024-01

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Author(s) Vijayan, Aswathy Panalukudiyil; Pallikkara, Athira; Ramakrishnan, Kala; KUMAR, RAKESH S.; Jayasree, Elambalassery G.

Title A Triazine Based Porous Organic Polymer as an Efficient Hydrogen-Bond Donor and Acceptor Cooperative Heterogeneous Catalyst for the Synthesis of 2-Substituted Benzimidazoles

Citation ChemistrySelect, 8(42).

Publisher Wiley

URI <https://doi.org/10.1002/slct.202303092>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8407>

Date of Publication 2023-11

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MATHEMATICS

Journal Articles

- Author(s)** AROTE, PRASHANT; MISHRA, MANISH
Title Prasad's Conjecture About Dualizing Involutions
Citation International Mathematics Research Notices, rnad296,
Publisher Oxford University Press
URI <https://doi.org/10.1093/imrn/rnad296>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8402>
Date of Publication 2023-12
- Author(s)** BHIMANI, DIVYANG G.; Manna, Ramesh; Nicola, Fabio; Thangavelu, Sundaram; Trapasso, S. Ivan
Title On heat equations associated with fractional harmonic oscillators
Citation Fractional Calculus and Applied Analysis, 26, 2470-2492.
Publisher Springer Nature
URI <https://doi.org/10.1007/s13540-023-00208-6>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8433>
Date of Publication 2023-12
- Author(s)** Biswas, Indranil; Chatterjee, Saikat; KOU SHIK, PRAPHULLA; Neumann, Frank
Title Connections on Lie groupoids and Chern-Weil theory
Citation Reviews in Mathematical Physics
Publisher World Scientific Publishing
URI <https://doi.org/10.1142/S0129055X24500028>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8421>
Date of Publication 2023-12
- Author(s)** CHATTERJEE, BIHAN; GOSWAMI, ANINDYA; Overbeck, Ludger
Title Locally risk minimizing pricing of Asian option in a semi-Markov modulated market
Citation Stochastic Analysis and Applications.
Publisher Taylor & Francis
URI <https://doi.org/10.1080/07362994.2023.2295246>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8403>
Date of Publication 2024-01

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Author(s) Chatterjee, Sanjoy; MONDAL, GOLAM MOSTAFA
Title A characterization of bounded balanced convex domains in C^n
Citation Journal of Mathematical Analysis and Applications, 533(02), 128008.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jmaa.2023.128008>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8431>
Date of Publication 2024-05

Author(s) GAIKWAD, AJINKYA; MAITY, SOUMEN
Title On Structural Parameterizations of the Harmless Set Problem
Citation Algorithmica.
Publisher Springer Nature
URI <https://doi.org/10.1007/s00453-023-01199-9>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8429>
Date of Publication 2024-01

Author(s) MAHAJAN, JEWEL; SINHA, KANEENIKA
Title Higher moments of the pair correlation function for Sato-Tate sequences
Citation Journal of Number Theory, 257, 24-97.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jnt.2023.10.008>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8404>
Date of Publication 2024-04

Author(s) Sahoo, Manas R.; SEN, ABHROJYOTI; Singh, Manish
Title Initial boundary value problem for 1D scalar balance laws with strictly convex flux
Citation Journal of Mathematical Analysis and Applications, 533(01), 128006.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jmaa.2023.128006>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8420>
Date of Publication 2024-05

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Author(s) SEN, ABHROJYOTI; Sen, Anupam
Title Existence of Global Entropy Solution for Eulerian Droplet Models and Two-phase Flow Model with Non-constant Air Velocity
Citation Journal of Dynamics and Differential Equations
Publisher Springer Nature
URI <https://doi.org/10.1007/s10884-023-10337-4>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8412>
Date of Publication 2024-01

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PHYSICS

Journal Articles

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 Dependence of the Hadron Production Fraction Ratios f_s/f_u and f_d/f_u on B Meson Kinematic Variables in Proton-Proton Collisions at $\sqrt{s}=13$ TeV

Citation Physical Review Letter, 131(12), 121901.

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevLett.131.121901>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8434>

Date of Publication 2023-09

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

Title Observation of τ Lepton Pair Production in Ultraperipheral Pb-Pb Collisions at $\sqrt{s_{NN}}=5.02$ TeV

Citation Physical Review Letter, 131(15), 151803.

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevLett.131.151803>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8436>

Date of Publication 2023-10

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

Title Observation of Same-Sign WW Production from Double Parton Scattering in Proton-Proton Collisions at $\sqrt{s}=13$ TeV

Citation Physical Review Letter, 131(09), 091803.

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevLett.131.091803>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8425>

Date of Publication 2023-09

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

Title Search for Z' bosons decaying to pairs of heavy Majorana neutrinos in proton-proton collisions at $\sqrt{s}=13$ TeV

Citation Journal of High Energy Physics, 2023(11), 181.

Publisher Springer Nature

URI [https://doi.org/10.1007/JHEP11\(2023\)181](https://doi.org/10.1007/JHEP11(2023)181)

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8435>

Date of Publication 2023-11

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

Title Search for pair-produced vector-like leptons in final states with third-generation leptons and at least three b quark jets in proton-proton collisions at $\sqrt{s}=13$ TeV

Citation Physics Letters B, 846, 137713.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.physletb.2023.137713>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8422>

Date of Publication 2023-11

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

Title Evidence for four-top quark production in proton-proton collisions at $\sqrt{s}=13$ TeV

Citation Physics Letters B, 844, 138076.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.physletb.2023.138076>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8424>

Date of Publication 2023-09

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

Title A search for decays of the Higgs boson to invisible particles in events with a top-antitop quark pair or a vector boson in proton-proton collisions at $\sqrt{s}=13$ TeV

Citation European Physical Journal C, 83, 933.

Publisher Springer Nature

URI <https://doi.org/10.1140/epjc/s10052-023-11952-7>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8423>

Date of Publication 2023-10

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Author(s) JAISWAL, SURABHI; Belt, Connor; Kananovich, Anton; Aguirre, E. M.
Title Structural transformation of dusty plasma crystal in dc discharge plasma by changing confinement ring bias
Citation Physical Review Research, 6(01), 013119.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevResearch.6.013119>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8443>
Date of Publication 2024-01

Author(s) LIGO Scientific Collaboration; Virgo Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.
Title Search for Gravitational Waves Associated with Fast Radio Bursts Detected by CHIME/FRB during the LIGO-Virgo Observing Run O3_a
Citation Astrophysical Journal, 955 (02).
Publisher IOP Publishing
URI <https://doi.org/10.3847/1538-4357/acd770>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8409>
Date of Publication 2023-10

Author(s) To, Chun-Hao; DeRose, Joseph; Wechsler, Risa H.; Rykoff, Eli; Wu, Hao-Yi; ADHIKARI, SUSMITA; Krause, Elisabeth; Rozo, Eduardo; Weinberg, David H.
Title Buzzard to Cardinal: Improved Mock Catalogs for Large Galaxy Surveys
Citation Astrophysical Journal, 961, 1.
Publisher IOP Publishing
URI <https://doi.org/10.3847/1538-4357/ad0e61>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/8413>
Date of Publication 2024-01

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