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**Monthly Bulletin of Publications:
Faculty, Scientists and Students of IISER Pune.
SEPTEMBER 2022**

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BIOLOGY

Patent

Inventor (s) BRITTO, SANDANARAJ S.; BATHLA PUNITA; De, Abhijit; Mujawar Aaiyas
Title Assay for Determining Target Engagement in Real-Time in Living Systems
Assignee Indian Institute of Science Education and Research Pune
Patent No. US20220298541A1
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7382>
Date of Publication 2022-09

Journal Articles

Author(s) ADHAV, VISHAL ANNASAHEB; Pananghat, Balanarayan; SAIKRISHNAN, KAYARAT
Title Probing the Directionality of S···O/N Chalcogen Bond and Its Interplay with Weak C-H···O/N/S Hydrogen Bond Using Molecular Electrostatic Potential
Citation Journal of Physical Chemistry B.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.jpcc.2c03745>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7391>
Date of Publication 2022-09

Author(s) HARNE, SHRIKANT; GAYATHRI, PANANGHAT
Title Characterization of heterologously expressed Fibril, a shape and motility determining cytoskeletal protein of the helical bacterium Spiroplasma
Citation iScience, 25(10), 105055.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.isci.2022.105055>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7390>
Date of Publication 2022-10

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Author(s) Kumar, Pharvendra; SOORY, AMARENDRANATH; Mustfa, Salman Ahmad; Sarmah, Dipanka Tanu; Devvanshi, Himadri; Chatterjee, Samrat; Bossis, Guillaume; RATNAPARKHI, GIRISH S.; Srikanth, Chittur, V.

Title Bidirectional regulation between AP-1 and SUMOylation pathway genes modulates inflammatory signaling during Salmonella infection

Citation Journal of Cell Science, 135(16), jcs260096.

Publisher The Company of Biologist

URI <https://doi.org/10.1242/jcs.260096>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7381>

Date of Publication 2022-08

Author(s) Mehra, Surabhi; KUMAR, HARISH; UDGAONKAR, JAYANT B. et al.

Title α -Synuclein Aggregation Intermediates form Fibril Polymorphs with Distinct Prion-like Properties

Citation Journal of Molecular Biology, 434(19), 167761.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.jmb.2022.167761>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7357>

Date of Publication 2022-10

Author(s) NAG, SURYADEEPTO; Chakrabarty, Siddhartha P.

Title Modeling the Dynamics Of Covid-19 Transmission In India: Social Distancing, Regional Spread and Healthcare Capacity

Citation Journal of Biological Systems, 30(03), 647-672.

Publisher World Scientific Publishing Co Pte Ltd

URI <https://doi.org/10.1142/S0218339022500231>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7365>

Date of Publication 2022-09

Author(s) Oza, Chirantap; GOEL, PRANAY et al.

Title A comparison of bone age assessments using automated and manual methods in children of Indian ethnicity

Citation Pediatric Radiology.

Publisher Springer Nature

URI <https://doi.org/10.1007/s00247-022-05516-2>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7387>

Date of Publication 2022-09

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Author(s) SARKAR, DEBAYAN; Mishra, Satyajit; NISAL, RAHUL; Majhi, Sumita; Shrivastava, Rohit; SINGH, YASHASWI; Anusree, V. S.; KALIA, JEET

Title Site-Specific Fluorescent Labeling of the Cysteine-Rich Toxin, DkTx, for TRPV1 Ion Channel Imaging and Membrane Binding Studies

Citation Bioconjugate Chemistry, 33(9), 1761-1770.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.bioconjchem.2c00355>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7379>

Date of Publication 2022-09

Author(s) SEN, NEELADRI; MADHUSUDHAN, M. S.

Title A structural database of chain-chain and domain-domain interfaces of proteins

Citation Protein Science, 31(9), e4406.

Publisher Wiley

URI <https://doi.org/10.1002/pro.4406>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7356>

Date of Publication 2022-09

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CHEMISTRY

Patent

Inventor (s) BRITTO, SANDANARAJ S.; BATHLA PUNITA; De, Abhijit; Mujawar Aaiyas
Title Assay for Determining Target Engagement in Real-Time in Living Systems
Assignee Indian Institute of Science Education and Research Pune
Patent No. US20220298541A1
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7382>
Date of Publication 2022-09

Journal Articles

Author(s) DHARPURE, PANKAJ D.; BEHERA, MOUSUMI; KHADE, VIKAS V.; THUBE, ARCHANA S.; BHAT, RAMAKRISHNA G.
Title Direct Access to Thiocyno-Thioesters from Cyclic Thioacetals via Photoredox Catalysis: An Introduction of Two Functional Groups in One Pot
Citation Organic Letters, 24(38), 6919-6924.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.orglett.2c02601>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7388>
Date of Publication 2022-09

Author(s) PANWARIA, PRAKASH; Juanes, Marcos; MISHRA, KAMAL K.; Saragi, Rizalina; BORISH, KSHETRIMAYUM; Usabiaga, Imanol; Camiruaga, Ander; Fernandez, Jose A.; Lesarri, Alberto; DAS, ALOKE
Title Microhydration of Phenyl Formate: Gas-Phase Laser Spectroscopy, Microwave Spectroscopy, and Quantum Chemistry Calculations
Citation ChemPhysChem.
Publisher Wiley
URI <https://doi.org/10.1002/cphc.202200330>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7368>
Date of Publication 2022-08

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Author(s) SAMANTA, PARTHA; DUTTA, SUBHAJIT; LET, SUMANTA; SEN, ARUNABHA; Shirolkar, Mandar M.; GHOSH, SUJIT K.

Title Hydroxy-Functionalized Hypercrosslinked Polymers (HCPs) as Dual Phase Radioactive Iodine Scavengers: Synergy of Porosity and Functionality

Citation ChemPlusChem.

Publisher Wiley

URI <https://doi.org/10.1002/cplu.202200212>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7367>

Date of Publication 2022-08

Author(s) SARKAR, DEBAYAN; Mishra, Satyajit; NISAL, RAHUL; Majhi, Sumita; Shrivastava, Rohit; SINGH, YASHASWI; Anusree, V. S.; KALIA, JEET

Title Site-Specific Fluorescent Labeling of the Cysteine-Rich Toxin, DkTx, for TRPV1 Ion Channel Imaging and Membrane Binding Studies

Citation Bioconjugate Chemistry, 33(9), 1761-1770.

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URI <https://doi.org/10.1021/acs.bioconjchem.2c00355>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7379>

Date of Publication 2022-09

Author(s) SEN, NILANJANA; GOTHE, PRACHI; Sarkar, Pallavi; Das, Shubhajit; Tothadi, Srinu; Pati, Swapan K.; KHAN, SHABANA

Title Donor free stibenium cation as an efficient cyanosilylation catalyst

Citation Chemical Communications.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D2CC03158B>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7355>

Date of Publication 2022-08

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EARTH AND CLIMATE SCIENCE

Journal Articles

Author(s) SARKAR, SUDIPTA; Moser, Manuel et al.
Title Thermal State of the Guaymas Basin Derived From Gas Hydrate Bottom Simulating Reflections and Heat Flow Measurements
Citation Journal of Geophysical Research-Solid Earth, 127(8), e2021JB023909.
Publisher Wiley
URI <https://doi.org/10.1029/2021JB023909>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7353>
Date of Publication 2022-08

Author(s) Winter-Billington, Alex; Dadic, Ruzica; Moore, R. D.; Flerchinger, Gerald; Wagnon, Patrick; BANERJEE, ARGHA
Title Modelling Debris-Covered Glacier Ablation Using the Simultaneous Heat and Water Transport Model. Part 1: Model Development and Application to North Changri Nup
Citation Frontiers in Earth Science, 10.
Publisher Frontiers Media S.A.
URI <https://doi.org/10.3389/feart.2022.796877>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7366>
Date of Publication 2022-08

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MATHEMATICS

Journal Articles

Author(s) Balwe, Chetan; HOGADI, AMIT; Sawant, Anand
Title Geometric criteria for A^1 -connectedness and applications to norm varieties
Citation Journal of Algebraic Geometry.
Publisher American Mathematical Society
URI <https://doi.org/10.1090/jag/790>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7359>
Date of Publication 2022-08

Author(s) Toft, Joachim; BHIMANI, DIVYANG G.; Manna, Ramesh
Title Trace mappings on quasi-Banach modulation spaces and applications to pseudo-differential operators of amplitude type
Citation Analysis and Applications.
Publisher World Scientific Publishing Co Pte Ltd.
URI <https://doi.org/10.1142/S0219530522500063>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7360>
Date of Publication 2022-07

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PHYSICS

Journal Articles

- Author(s)** Agarwal, Pooja; Maiti, Tanmay; Purkait, Suvankar; ROY, DEEPAK; KABIR, MUKUL; Garg, Arti; Senapati, Dulal; Karmakar, Biswajit
- Title** Chemically Induced Surface Potential Modulation at Pd|Al₂O₃|Graphene Field Effect Transistors: Implications for Enhanced H₂ Sensing
- Citation** ACS Applied Nano Materials, 5(8), 10941-10950.
- Publisher** American Chemical Society
- URI** <https://doi.org/10.1021/acsnm.2c02211>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7358>
- Date of Publication** 2022-08
-
- Author(s)** BANERJEE, ARKA; Das, Subinoy; Maharana, Anshuman; Sharma, Ravi Kumar
- Title** Signatures of Light Massive Relics on non-linear structure formation
- Citation** Monthly Notices of the Royal Astronomical Society, 516(2), 2038-2049.
- Publisher** Oxford University Press
- URI** <https://doi.org/10.1093/mnras/stac2128>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7386>
- Date of Publication** 2022-10
-
- 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** Search for high-mass resonances decaying to a jet and a Lorentz-boosted resonance in proton-proton collisions at $\sqrt{s} = 13$ TeV
- Citation** Physics Letters B, 832,137263.
- Publisher** Elsevier B.V.
- URI** <https://doi.org/10.1016/j.physletb.2022.137263>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7369>
- Date of Publication** 2022-09

Author(s) KUMAR, JITENDER; DEY, KAUSTAV; PANJA, SOUMENDRA NATH; NAIR, SUNIL
Title Anomalous dielectric response in the triple perovskite ruthenate Ba₃BiRu₂O₉
Citation Journal of Physics: Condensed Matter, 34(46), 465401.
Publisher IOP Publishing
URI <https://doi.org/10.1088/1361-648X/ac8f7c>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7372>
Date of Publication 2022-09

Author(s) PAUL, DIPTABRATA; CHAND, RAHUL; KUMAR, G. V. PAVAN
Title Optothermal Evolution of Active Colloidal Matter in a Defocused Laser Trap
Citation ACS Photonics.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsp Photonics.2c01083>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7378>
Date of Publication 2022-09

Author(s) Rana, Deepti; R. Aswini; G. BASAVARAJA; Patra, Chandan; Howlader, Sandeep; Roy Chowdhury, Rajeswari; KABIR, MUKUL; Singh, Ravi P.; Sheet, Goutam
Title Spin-polarized supercurrent through the van der Waals Kondo-lattice ferromagnet Fe₃GeTe₂
Citation Physical Review B, 106(8), 085120.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevB.106.085120>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7377>
Date of Publication 2022-08

Author(s) SAHA, MADHUMITA; Venkatesh, B. Prasanna; AGARWALLA, BIJAY KUMAR
Title Quantum transport in quasiperiodic lattice systems in the presence of Buttiker probes
Citation Physical Review B, 105(22), 224204.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevB.105.224204>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7373>
Date of Publication 2022-09

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Author(s) Tiwari, Surbhi; Arya, Neeru; MISHRA, SANDEEP K.; Suryaprakash, N.
Title Sensitivity and resolution enhancement in the SERF experiment using perfect echo and by elimination of axial peaks and ghost couplings
Citation Journal of Magnetic Resonance Open, 10-11, 100037.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jmro.2022.100037>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7354>
Date of Publication 2022-06

Author(s) Tseng, Y.; BAG, R.; SINGH, SURJEET et al.
Title Crossover of high-energy spin fluctuations from collective triplons to localized magnetic excitations in $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ladders
Citation NPJ Quantum Materials, 7, 92.
Publisher Springer Nature
URI <https://doi.org/10.1038/s41535-022-00502-1>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7376>
Date of Publication 2022-09

Author(s) WABLE, MINAL; FURQUAN, MOHAMMAD; PAYGUDE, MEGHA; SHETTI, ANIL; OGALE, SATISHCHANDRA; Banerjee, Abhik
Title CO₂ Laser Direct-Write Process for Micro-Gradient-Patterned Carbon Composed of Graphene-like and Disordered Carbon Forms for a Robust Anode-Free Li-Metal Battery
Citation ACS Applied Energy Materials, 5(9), 10940-10951.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsaem.2c01621>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7352>
Date of Publication 2022-08

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Book Chapter

Author(s) Maksoud, Walid Al; MISHRA, SANDEEP K.; Saidi, Aya; Samantaray, Manoja K.; Basset, Jean Marie

Title Surface Organometallic Chemistry and Catalysis

Citation Comprehensive Organometallic Chemistry IV (Fourth Edition), 14, 463-533.

Publisher Elsevier B.V.

URI <https://www.sciencedirect.com/science/article/pii/B9780128202067001335>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/7350>

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