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

Author(s) LABADE, AJAY S.; SALVI, ADWAIT; KAR, SASWATI; KARMODIYA, KRISHANPAL; SENGUPTA, KUNDAN

Title Nup93 and CTCF modulate spatiotemporal dynamics and function of the HOXA gene locus during differentiation

Citation Journal of Cell Science, 134(3), jcs259307.

Publisher The Company of Biologists Ltd

URI <https://doi.org/10.1242/jcs.259307>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6595>

Date of Publication 2021-12

Author(s) Mehdiratta, Kritee; SINGH, SHUBHAM; KAMAT, SIDDHESH S. et al.

Title Kupyaphores are zinc homeostatic metallophores required for colonization of Mycobacterium tuberculosis

Citation Proceedings of the National Academy of Sciences, 119 (8) e2110293119.

Publisher National Academy of Sciences

URI <https://doi.org/10.1073/pnas.2110293119>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6600>

Date of Publication 2022-02

Author(s) REDDY, MULLAPUDI MOHAN; BHANDARI, PAVANKUMAR; HATI, KSHITISH CHANDRA; SANDANARAJ, BRITTO S.

Title Rational Design of Self-Assembling Artificial Proteins Utilizing a Micelle-Assisted Protein Labeling Technology (MAPLabTech): Testing the Scope

Citation ChemBioChem.

Publisher Wiley

URI <https://doi.org/10.1002/cbic.202100607>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6597>

Date of Publication 2022-02

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Author(s) Varadi, Mihaly; MADHUSUDHAN, M. S.; SINGH, GULZAR et al.
Title PDBe-KB: collaboratively defining the biological context of structural data
Citation Nucleic Acids Research, 50(D1), D534-D542.
Publisher Oxford University Press
URI <https://doi.org/10.1093/nar/gkab988>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6557>
Date of Publication 2022-01

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CHEMISTRY

- Author(s)** AHMAD, MANZOOR; MONDAL, DEBASHIS; ROY, NAVEEN J.; Vijayakanth, Thangavel; TALUKDAR, PINAKI
- Title** Reversible Stimuli-Responsive Transmembrane Ion Transport using Phenylhydrazone-Based Photoswitches
- Citation** ChemPhotoChem.
- Publisher** Wiley
- URI** <https://doi.org/10.1002/cptc.202200002>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6583>
- Date of Publication** 2022-02
-
- Author(s)** Chandrasekaran, S.; SIVARAM, S.
- Title** Hiriyakkanavar Junjappa (1936-2021)
- Citation** Current Science, 122(1), 107-108.
- Publisher** Indian Academy of Sciences
- URI** <https://www.currentscience.ac.in/Volumes/122/01/0107.pdf>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6556>
- Date of Publication** 2022-01
-
- Author(s)** DEWAN, ANWESHI; SUR, SOUMODIP; Narayanan, Remya; THOTIYL, MUSTHAFA OTTAKAM
- Title** MOF derived carbon embedded NiO for an alkaline Zn-NiO electrochromic battery
- Citation** ChemElectroChem.
- Publisher** Wiley
- URI** <https://doi.org/10.1002/celc.202200001>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6599>
- Date of Publication** 2022-02

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Author(s) Kanade, Sandeep C.; Ambalkar, Anuradha A.; Sethi, Yogesh A.; THOTIYL, MUSTHAFA OTTAKAM; Kale, Bharat B.; Gambhire, Anil B.

Title A Nanostructured Mo₂C-rGO Heterostructure as a stable Anode with ultra-high capacity for Lithium-Ion Battery

Citation ChemistrySelect, 7(6), e202104252.

Publisher Wiley

URI <https://doi.org/10.1002/slct.202104252>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6584>

Date of Publication 2022-02

Author(s) Kanade, Sandeep; GAUTAM, MANU; Ambalkar, Anuradha; Sethi, Yogesh; THOTIYL, MUSTHAFA OTTAKAM; Kale, Bharat B.; Gambhire, Anil B.

Title Multilayered Vanadium Carbide-Reduced Graphene Oxide (VC@rGO) Nanocomposite as an Ultrahigh-Capacity Anode Material for Li- and Na-Ion Batteries

Citation ACS Applied Energy Materials, 5(2), 1972-1983.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acsaem.1c03496>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6566>

Date of Publication 2022-02

Author(s) KULKARNI, BHAGYASHREE; MALHOTRA, MEHAK; JAYAKANNAN, MANICKAM

Title Fluorescent ABC-Triblock Polymer Nanocarrier for Cisplatin Delivery to Cancer Cells

Citation Chemistry—An Asian Journal

Publisher Wiley

URI <https://doi.org/10.1002/asia.202101337>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6564>

Date of Publication 2022-01

Author(s) Maitra, Tamaghna; Mukherjee, Sukhendu; Pradhan, Anway; MUKHERJEE, SUMAN; Nayak, Arabinda; Bhunia, Satyaban

Title Spectral and temporal performance enhancement in a symmetric co-planar Au-Ge/AlGaAs/Au-Ge natural superlattice-based MSM photodetector

Citation Journal of Materials Science: Materials in Electronics.

Publisher Springer Nature

URI <https://doi.org/10.1007/s10854-022-07720-0>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6553>

Date of Publication 2022-01

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Author(s) PUNIA, BHAWAKSHI; CHAUDHURY, SRABANTI; Kolomeisky, Anatoly B.
Title Microscopic mechanisms of cooperative communications within single nanocatalysts
Citation Proceedings of the National Academy of Sciences, 119(3), e2115135119.
Publisher National Academy of Sciences
URI <https://doi.org/10.1073/pnas.2115135119>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6552>
Date of Publication 2022-01

Author(s) PUNIA, BHAWAKSHI; CHAUDHURY, SRABANTI; Kolomeisky, Anatoly B.
Title Understanding the Reaction Dynamics on Heterogeneous Catalysts Using a Simple Stochastic Approach
Citation Journal of Physical Chemistry Letters, 12(49), 11802-11810.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.jpcllett.1c03557>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6551>
Date of Publication 2021-12

Author(s) REDDY, MULLAPUDI MOHAN; BHANDARI, PAVANKUMAR; HATI, KSHITISH CHANDRA; SANDANARAJ, BRITTO S.
Title Rational Design of Self-Assembling Artificial Proteins Utilizing a Micelle-Assisted Protein Labeling Technology (MAPLabTech): Testing the Scope
Citation ChemBioChem.
Publisher Wiley
URI <https://doi.org/10.1002/cbic.202100607>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6597>
Date of Publication 2022-02

Author(s) SHARMA, RASHMI; VIJAY, AMAL; MUKHERJEE, ARNAB; TALUKDAR, PINAKI
Title Bis(cholyl)-based chloride channels with oxalamide and hydrazide selectivity filters
Citation Organic & Biomolecular Chemistry.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/D1OB02028E>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6582>
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Author(s) SINGH, HIMAN DEV; NANDI, SHYAMAPADA; CHAKRABORTY, DEBANJAN; Singh, Kirandeep; Vinod, Chathakudath P.; VAIDHYANATHAN, RAMANATHAN

Title Coordination Flexibility Aided CO₂-specific Gating in an Iron Isonicotinate MOF

Citation Chemistry-An Asian Journal, 17(4), e202101305.

Publisher Wiley

URI <https://doi.org/10.1002/asia.202101305>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6562>

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Humanities and Social Sciences

Author(s) Meyfroidt, Patrick; LELE, SHARACHANDRA et al.
Title Ten facts about land systems for sustainability
Citation Proceedings of the National Academy of Sciences
Publisher National Academy of Sciences
URI <https://doi.org/10.1073/pnas.2109217118>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6579>
Date of Publication 2022-01

Book Chapters

Author(s) Dodman, David; SHARMA, SHALINI et al.
Title Cities, Settlements and Key Infrastructure
Citation Climate Change 2022: Impact Adaptation and vulnerability - Summary for Policymakers
Publisher Intergovernmental Panel on Climate Change (IPCC)
Book URI <https://www.ipcc.ch/report/ar6/wg2/>
Book Chapter URI https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_Chapter06.pdf
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6607>
Date of Publication 2022-02

Author(s) Lisa, E.; THOMAS, BEJOY K. et al.
Title Climate Resilient Development Pathways
Citation Climate Change 2022: Impact Adaptation and vulnerability - Summary for Policymakers
Publisher Intergovernmental Panel on Climate Change (IPCC)
Book URI <https://www.ipcc.ch/report/ar6/wg2/>
Book Chapter URI https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_Chapter18.pdf
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6608>
Date of Publication 2022-02

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PHYSICS

Author(s) AHLAWAT, VIKHYAAT; DEOPA, SURYA PRATAP S.; PATIL, SHIVPRASAD
Title Quantitative Elasticity of Flexible Polymer Chains Using Interferometer-Based AFM
Citation Nanomaterials, 12(3), 526.
Publisher MDPI
URI <https://doi.org/10.3390/nano12030526>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6555>
Date of Publication 2022-02

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, K.; DUBE, S.; KANSAL, B.; LAHA, A.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S.
Title Measurement of double-parton scattering in inclusive production of four jets with low transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV
Citation Journal of High Energy Physics, 2022(1).
Publisher Springer Nature
URI [https://doi.org/10.1007/JHEP01\(2022\)177](https://doi.org/10.1007/JHEP01(2022)177)
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6565>
Date of Publication 2022-01

Author(s) CMS Collaboration; Tumasyan, A.; ALPANA, K.; DUBE, S.; KANSAL, B.; LAHA, A.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S.
Title Study of quark and gluon jet substructure in Z+jet and dijet events from pp collisions
Citation Journal of High Energy Physics, 2022(1).
Publisher Springer Nature
URI [https://doi.org/10.1007/JHEP01\(2022\)188](https://doi.org/10.1007/JHEP01(2022)188)
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6581>
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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 Long-Lived Particles Decaying in the CMS End Cap Muon Detectors in Proton-Proton Collisions at $\sqrt{s}=13$ TeV

Citation Physical Review Letters, 127(26).

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevLett.127.261804>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6558>

Date of Publication 2021-12

Author(s) CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.

Title Evidence for X(3872) in Pb-Pb Collisions and Studies of its Prompt Production at $\sqrt{s_{NN}}=5.02$ TeV

Citation Physical Review Letters, 128(3).

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevLett.128.032001>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6567>

Date of Publication 2022-01

Author(s) DEWAN, ANWESHI; SUR, SOUMODIP; Narayanan, Remya; THOTIYL, MUSTHAFA OTTAKAM

Title MOF derived carbon embedded NiO for an alkaline Zn-NiO electrochromic battery

Citation ChemElectroChem.

Publisher Wiley

URI <https://doi.org/10.1002/celec.202200001>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6599>

Date of Publication 2022-02

Author(s) GANDHI, GOVIND; SANTHANAM, M. S.

Title Biased random walkers and extreme events on the edges of complex networks

Citation Physical Review E, 105(1).

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevE.105.014315>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6580>

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Author(s) Jog, Harshvardhan; HARNAGEA, LUMINITA; Mele, Eugene J.; Agarwal, Ritesh
Title Exchange coupling-mediated broken symmetries in Ta₂NiSe₅ revealed from quadrupolar circular photogalvanic effect
Citation Science Advances, 8(7).
Publisher American Association for the Advancement of Science
URI <https://doi.org/10.1126/sciadv.abl9020>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6601>
Date of Publication 2022-02

Author(s) LIGO Scientific Collaboration; Virgo Collaboration; KAGRA Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.
Title Search for continuous gravitational waves from 20 accreting millisecond x-ray pulsars in O3 LIGO data
Citation Physical Review D, 105(2), 022002.
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevD.105.022002>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6594>
Date of Publication 2022-01

Author(s) NARAYANAN, VRINDA P.; GOKUL, M. A.; CHOWDHURY, TAMAGHNA; SINGH, CHANDAN K.; CHAUBEY, SHAILENDRA KUMAR; Taniguchi, Takashi; Watanabe, Kenii; KABIR. MUKUL; KUMAR. G. V. PAVAN; RAHMAN. ATIKUR
Title Giant Photoresponse Enhancement in Mixed-Dimensional Van der Waals Heterostructure through Dielectric Engineering
Citation Advanced Materials Interfaces, 2102054.
Publisher Wiley
URI <https://doi.org/10.1002/admi.202102054>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6561>
Date of Publication 2022-01

Author(s) SANTHANAM, M.S.; Paul, Sanku; KANNAN, BHARATHI J.
Title Quantum kicked rotor and its variants: Chaos, localization and beyond
Citation Physics Reports, 956.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.physrep.2022.01.002>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6598>
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Author(s) Sawhney, M. Anne; Wahid, Malik; Mukherjee, Santanu; Griffin, Rebecca; Roberts, Alexander; OGALE, SATISHCHANDRA; Baker, Jenny

Title Process-Structure-Formulation Interactions for enhanced sodium Ion Battery Development: A Review

Citation ChemPhysChem.

Publisher Wiley

URI <https://doi.org/10.1002/cphc.202100860>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6563>

Date of Publication 2022-01

Author(s) Sukumar, Anish; Bachhar, Nirmalya; CHATTERJI, APRATIM; Kumaraswamy, Guruswamy

Title Elastic response of polymer-nanoparticle composite sponges: Microscopic model for large deformations

Citation Physical Review Materials, 6(2).

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevMaterials.6.025604>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6603>

Date of Publication 2022-02

Author(s) Thomas, Anoop; TELANG, PRACHI; MISHRA, KSHITI; Cesnek, Martin; Bednarcik, Jozef; Muthu, D. V. S.; SINGH, SURJEET; Sood, A. K.

Title Role of spin-phonon and electron-phonon interactions in the phonon renormalization of $(\text{Eu}_{1-x}\text{Bi}_x)_2\text{Ir}_2\text{O}_7$ across the metal-insulator phase transition: Temperature-dependent Raman and x-ray studies

Citation Physical Review B, 105(7), 075145.

Publisher American Physical Society

URI <https://doi.org/10.1103/PhysRevB.105.075145>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/6605>

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