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March 2025



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BIOLOGY

Journal Articles



Author(s): CHAKRABORTY, ARNAB; DEVARAJAN, ARCHIT; KUMAR, KUNDAN; C. S., ROHITH; MADHUSUDHAN, M. S.; RATNAPARKHI, GIRISH S.; KAMAT, SIDDHESH S.

Title: Bioinformatics Analysis Identifies Sequence Determinants of Enzymatic Activity for the PHARC-Associated Lipase ABHD12

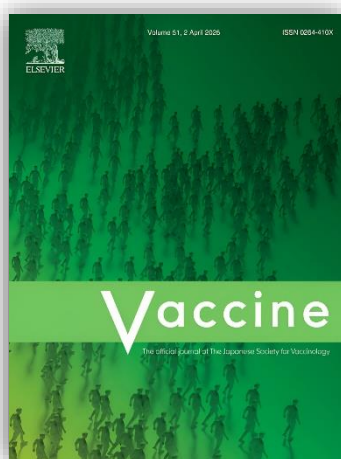
Citation: Biochemistry.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.biochem.4c00865>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9429>

Publication Date: 2025-03



Author(s): DESHMUKH, BHAGYASHREE; KHATRI, DHRUV; Kochar, Sanjay Kumar; ATHALE, CHAITANYA; KARMODIYA, KRISHANPAL

Title: In vitro evaluation of multi-protein chimeric antigens in effectively clearing the blood stage of Plasmodium falciparum

Citation: Vaccine, 53, 126952.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.vaccine.2025.126952>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9444>

Publication Date: 2025-04



Author(s): DESHPANDE, GIRISH; DAS, SUBHRADIP; ROY, ADHEENA ELSA; RATNAPARKHI, GIRISH S.

Title: A face-off between Smaug and Caspar modulates primordial germ cell count and identity in Drosophila embryos

Citation: Fly, 19(01).

Publisher: Taylor & Francis

URI: <https://doi.org/10.1080/19336934.2024.2438473>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9407>

Publication Date: 2025-04

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Author(s): McFadden, David; PODDER, SANTOSH et al.

Title: Characterization of the Photon Conversion Factor, Noise, and Dynamic Range of Light Microscope Detection Systems

Citation: Protocols.io.

Publisher: Protocols.io

URI: dx.doi.org/10.17504/protocols.io.14egn61pyl5d/v1

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9393>

Publication Date: 2025-01



Author(s): Patil, Prachi S.; GUPTA, EKTA; GALANDE, SANJEEV et. al.

Title: A randomized phase II/III trial of rosuvastatin with neoadjuvant chemo-radiation in patients with locally advanced rectal cancer

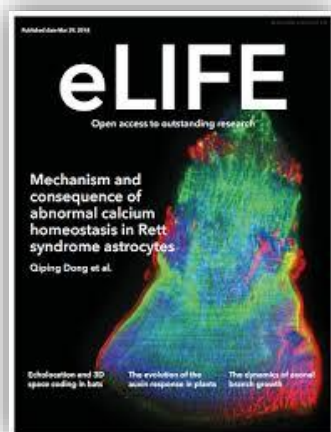
Citation: Frontiers in Oncology, 15.

Publisher: Frontiers Media S.A.

URI: <https://doi.org/10.3389/fonc.2025.1450602>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9421>

Publication Date: 2025-03



Author(s): Paissoni, Cristina; PURI, SARITA et al.

Title: A conformational fingerprint for amyloidogenic light chains

Citation: eLife, 13, RP102002.

Publisher: eLife Sciences Publications Ltd.

URI: <https://doi.org/10.7554/eLife.102002.3>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9405>

Publication Date: 2025-03

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Author(s): PURI, SARITA; Gadda, Angela et al.

Title: The Critical Role of the Variable Domain in Driving Proteotoxicity and Aggregation in Full-length Light Chains

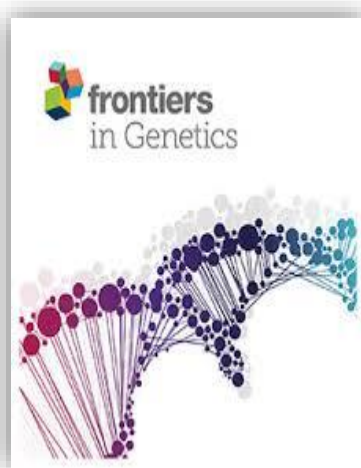
Citation: Journal of Molecular Biology, 437(05), 168958.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.jmb.2025.168958>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9404>

Publication Date: 2025-03



Author(s): SAW, AJAY KUMAR; MADHOK, AYUSH; Bhattacharya, Anupam; Nandi, Soumyadeep; GALANDE, SANJEEV

Title: Integrated promoter-capture Hi-C and Hi-C analysis reveals fine-tuned regulation of the 3D chromatin architecture in colorectal cancer

Citation: Frontiers in Genetics, 16.

Publisher: Frontiers Media S.A.

URI: <https://doi.org/10.3389/fgene.2025.1553469>

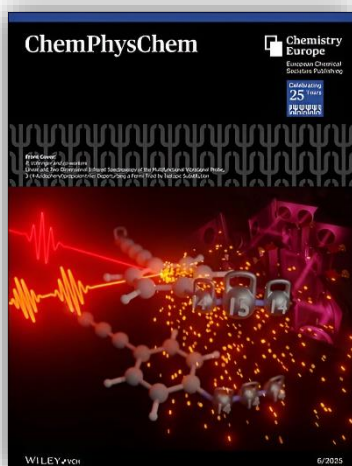
DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9422>

Publication Date: 2025-03

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CHEMISTRY

Journal Articles



Author(s): ARDHRA, SHYLENDRAN; Prakash, Prabhat; DEV, RABIN SIVA; Wunder, Stephanie L.; VENKATNATHAN, ARUN

Title: Interatomic Interactions and Ion-Transport in a Polyoligomeric Silsesquioxane-Based Multi-Ionic Salt Electrolyte for Lithium-Ion Batteries

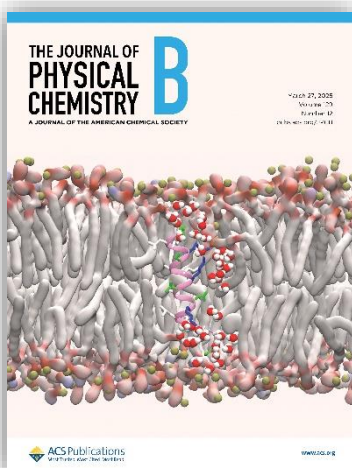
Citation: ChemPhysChem.

Publisher: Wiley

URI: <https://doi.org/10.1002/cphc.202400983>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9432>

Publication Date: 2025-02



Author(s): CHAUHAN, AKSHAY; CHAUDHURY, SRABANTI

Title: Understanding Anti-Polyelectrolyte Effect in Polyzwitterions Using Coarse-Grained Molecular Dynamics Simulations

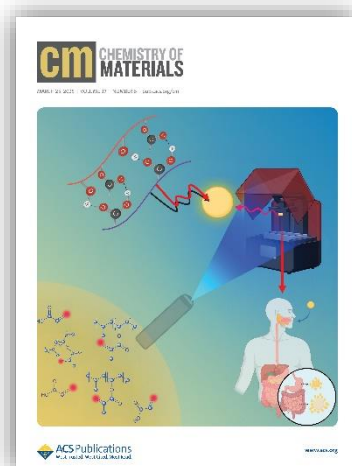
Citation: Journal of Physical Chemistry B, 129, 12, 3253-3262.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.jpccb.4c07728>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9419>

Publication Date: 2025-03



Author(s): DAM, GOURAB K.; LET, SUMANTA; Bhasin, Vidha; FAJAL, SAHEL; BISWAS, KISHALAY; Shirolkar, Mandar M.; Bhattacharyya, Dibyendu; GHOSH, SUJIT K.

Title: Chemically Robust Urea-Tethered Adaptable Ionic Porous Nanotrapping: Ultrafast Organic and Inorganic Arsenic Water Decontamination

Citation: Chemistry of Materials, 37(6), 2367-2378.

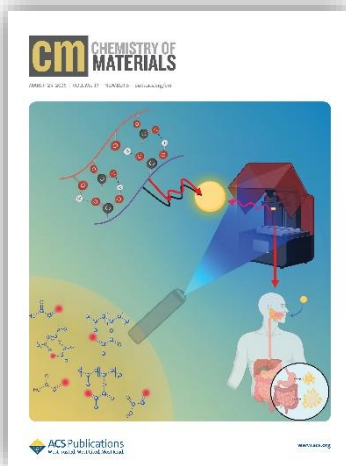
Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.chemmater.5c00304>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9440>

Publication Date: 2025-03

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Author(s): Fall, Birane; PRAKASH, PRABHAT; VENKATNATHAN, ARUN et al.

Title: Effect of Anion Mass on Conductivity and Lithium-Ion Transference Number in the Isomorphic Cocrystals $(\text{Adpn})_2\text{LiXF}_6$ (Adpn = Adiponitrile, X = P, As, Sb)

Citation: Chemistry of Materials, 37(05), 1798-1809.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.chemmater.4c01374>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9394>

Publication Date: 2025-02



Author(s): GOPALAKRISHNA, TULLIMILLI Y.; BASAVARAJAPPA, ASHOKKUMAR; UDAYA, HOSAHALLI S.; Furukawa, Ko; Wu, Jishan; ANAND, VENKATARAMANARAO G.

Title: Reversible Ring Oxidation of 48π Planar Nonaphyrins to Open Shell 46π Dications

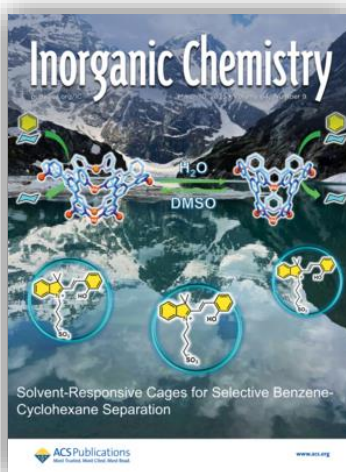
Citation: Chemistry- A European Journal

Publisher: Wiley

URI: <https://doi.org/10.1002/chem.202500555>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9439>

Publication Date: 2025-02



Author(s): KALYANI, MINI; Ananthram, Kekkar Subray; SAHA, SAUVIK; NINAWA, PRANAY; Tarafder, Kartick; BALLAV, NIRMALYA

Title: An Intricate Balance of Ionicity and Covalency: Metal-Like Conduction in All-Inorganic Halide Double Perovskite $\text{Cs}_2\text{AgSbCl}_6$

Citation: Inorganic Chemistry, 64(09), 4378-4386.

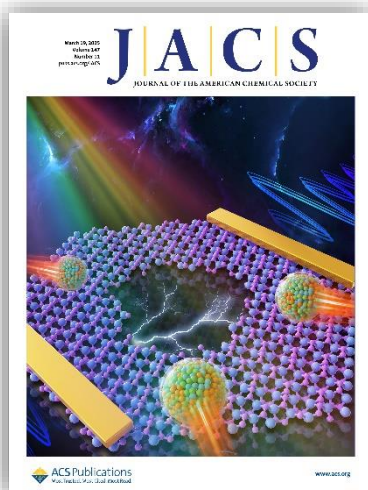
Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.inorgchem.4c05012>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9401>

Publication Date: 2025-03

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Author(s): Koner, Kalipada; SURY, ADHRA; PILLAI, PRAMOD P. et al.

Title: Photoconductivity Switching in Semiconducting Two-Dimensional Crystals via Molecular Tetris

Citation: Journal of the American Chemical Society, 147(11), 9972-9980.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/jacs.5c01223>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9402>

Publication Date: 2025-03



Author(s): MUKHERJEE, UTTAMA; Kormath Madam Raghupathy, Ramya; Pednekar, Minal Sachin; JAYAN, SRADHA

Title: Empowering through mentorship: The journey of women in interdisciplinary science

Citation: iScience. 28(3).

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.isci.2025.111865>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9431>

Publication Date: 2025-03



Author(s): RAZA, AKRAM; CHATTOPADHAYAY, SANDIP; MONDAL, DEBASHIS; TALUKDAR, PINAKI

Title: Carbonohydrizonoyl dicyanide-linked indole carboxamides as a new scaffold for transmembrane H⁺/Cl⁻ transport

Citation: Chemical Communications, 61(21), 4220-4223.

Publisher: Royal Society of Chemistry

URI: <https://doi.org/10.1039/D4CC06371F>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9396>

Publication Date: 2025-03

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Author(s): Roy, Subhadip; Pana, Swagata; SIVARAM, SWAMINATHAN; De, Priyadarsi

Title: Naphthalimide-based fluorescent polymeric probe: a dual-phase sensor for formaldehyde detection

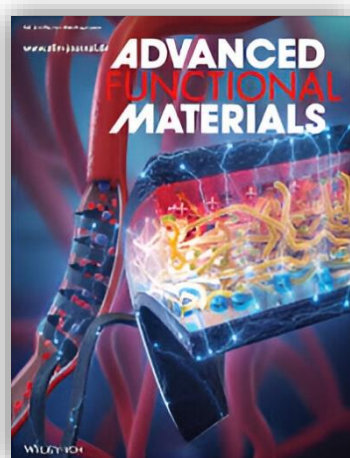
Citation: Science and Technology of Advanced Materials, 26(01).

Publisher: Taylor & Francis

URI: <https://doi.org/10.1080/14686996.2025.2469493>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9448>

Publication Date: 2025-03



Author(s): SAMANTA, RANITA; PANDAY, RISHUKUMAR; BOOMISHANKAR, RAMAMOORTHY et al.

Title: A Homochiral Neutral Organic Molecule as Active Ferroelectric for Memtransistor

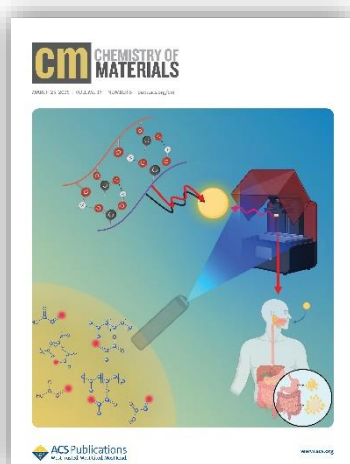
Citation: Advanced Functional Materials.

Publisher: Wiley

URI: <https://doi.org/10.1002/adfm.202501546>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9395>

Publication Date: 2025-03



Author(s): SINGH, PIYUSH; SINGH, HIMAN DEV; SHEKHAR, PRAGALBH; JAIN, CHITVAN; Song, Ping; Loloie, Mahsa; Edwin, Michael; Gao, Yan; Masoumifard, Nima; VAIDHYANATHAN, RAMANATHAN

Title: Ultra-Microporous Zinc-Diaminotriazolate-Oxalate Metal Organic Framework with Nonlayered-Pillared Structure Showing High Carbon Dioxide Uptakes at Low Partial Pressures

Citation: Chemistry of Materials

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.chemmater.4c03231>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9427>

Publication Date: 2025-03

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DATA SCIENCE

Journal Articles



Author(s): CHAKRABORTY, ARNAB; DEVARAJAN, ARCHIT; KUMAR, KUNDAN; C. S., ROHITH; MADHUSUDHAN, M. S.; RATNAPARKHI, GIRISH S.; KAMAT, SIDDHESH S.

Title: Bioinformatics Analysis Identifies Sequence Determinants of Enzymatic Activity for the PHARC-Associated Lipase ABHD12

Citation: Biochemistry.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.biochem.4c00865>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9429>

Publication Date: 2025-03



Author(s): Sun, Luyu; APTE, AMIT; Slivinski, Laura; Spiller, Elanine T.

Title: Exploring the Potential of Strongly Coupled Lagrangian Data Assimilation in an Ocean-Atmosphere System

Citation: Monthly Weather Review, 153(03), 425-445.

Publisher: American Meteorological Society

URI: <https://doi.org/10.1175/MWR-D-23-0284.1>

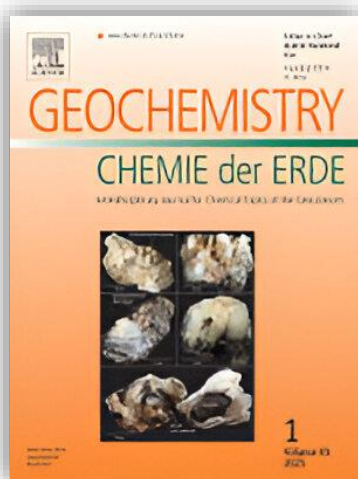
DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9399>

Publication Date: 2025-03

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EARTH AND CLIMATE SCIENCE

Journal Articles



Author(s): Das, Satyabrata; Singh, Sunil Kumar; Rai, Santosh K.; Singhal, Saurabh; Rahaman, Waliur; ROUT, RAKESH KUMAR; Ali, Sajid

Title: Tectonics and climate controlled sedimentary provenance in the Teesta basin since mid-Holocene

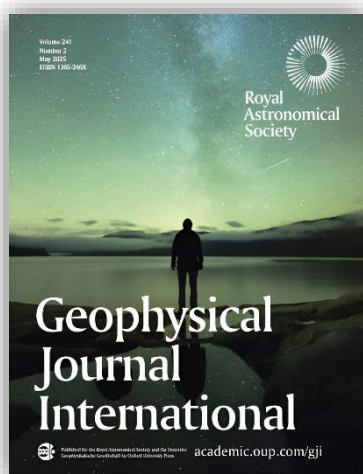
Citation: Geochemistry, 85(01), 126224.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.chemer.2024.126224>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9441>

Publication Date: 2025-04



Author(s): DATTA, ARJUN; Behera, Pragyant P.; Shekar, Bharath

Title: On the variability of sources in ambient seismic noise source inversion

Citation: Geophysical Journal International, 241 (2), 1262-1272.

Publisher: Oxford University Press

URI: <https://doi.org/10.1093/gji/ggaf099>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9433>

Publication Date: 2025-04

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HUMANITIES AND SOCIAL SCIENCES

Journal Articles



Author(s): Mulay, Radhika; GOKHALE, PALLAVEE

Title: Peshwa Nahar System: a value proposition for sustainable water management from an historic period

Citation: Blue Papers.

Publisher: Stichting OpenAccess

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9442>

Publication Date: 2025

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MATHEMATICS

Journal Articles



Author(s): BANERJEE, DEBARGHA; Mandal, Tathagata; Mondal, Sudipa

Title: Two properties of symmetric cube transfers of modular forms

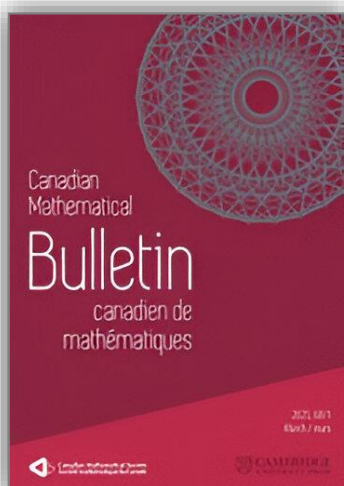
Citation: Journal of Number Theory, 275, 160-195.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.jnt.2024.12.013>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9438>

Publication Date: 2025-10



Author(s): BHAGWAT, CHANDRASHEEL; MONDAL, KAUSTABH; Sachdeva, Gunja

Title: On infinitesimal τ -isospectrality of locally symmetric spaces

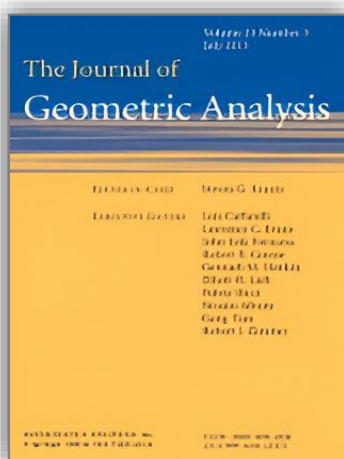
Citation: Canadian Mathematical Bulletin, 68(01), 246 - 261.

Publisher: Cambridge University Press

URI: <https://doi.org/10.4153/S0008439524000882>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9445>

Publication Date: 2025-01



Author(s): BHATNAGAR, ANJALI; BORAH, DIGANTA

Title: Some Remarks on the Carathéodory and Szegő Metrics on Planar Domains

Citation: Journal of Geometric Analysis, 35,128.

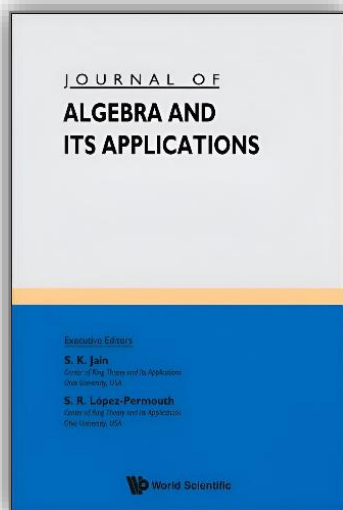
Publisher: Springer Nature

URI: <https://doi.org/10.1007/s12220-025-01969-7>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9418>

Publication Date: 2025-03

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Author(s): KAIPA, KRISHNA; PRADHAN, PUSPENDU

Title: Higher weight spectra of ternary codes associated to the quadratic Veronese 3-fold

Citation: Journal of Algebra and Its Applications.

Publisher: World Scientific Publishing Co.

URI: <https://doi.org/10.1142/S0219498825410075>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9430>

Publication Date: 2025-03



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>

Publication Date: 2025-04

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PHYSICS

Journal Articles



Author(s): AGRAWAL, GAURANG; Konar, Tanoy Kanti; Lakkaraju, Leela Ganesh Chandra; Sen(De), Aditi

Title: Tradeoff between noise and banding in a quantum adder with qudits

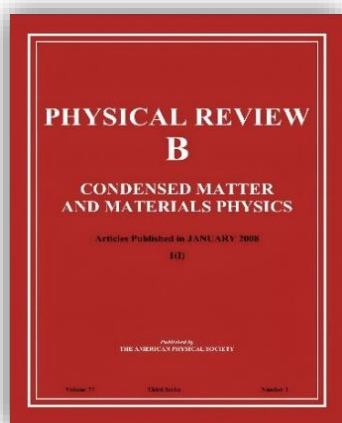
Citation: Physical Review A, 111, 032408.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevA.111.032408>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9428>

Publication Date: 2025-03



Author(s): Bachhar, Sanjay; PISTAWALA, NASHRA; Kundu, S; Barik, Maneesha; Baenitz, M.; Sichelschmidt, Jörg; Yokoyama, Koji; Khuntia, P.; SINGH, SURJEET; Mahajan, A. V.

Title: Gapless quantum spin liquid in the $S=1$ $4d^4$ honeycomb material $\text{Cu}_3\text{LiRu}_2\text{O}_6$

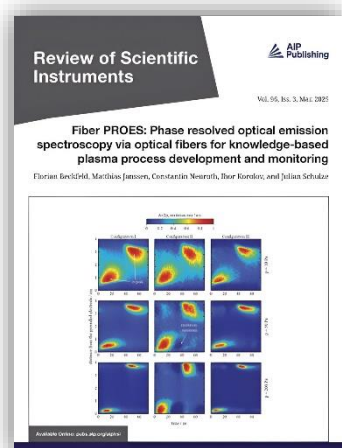
Citation: Physical Review B, 111, L10040.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.111.L100403>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9447>

Publication Date: 2025-03



Author(s): KEDIA, DINESH KUMAR; JAKHAR, NAVITA; SINGH, SURJEET

Title: Advancing precision in Hall effect through localized heating with a compact design

Citation: Review of Scientific Instruments, 96(03).

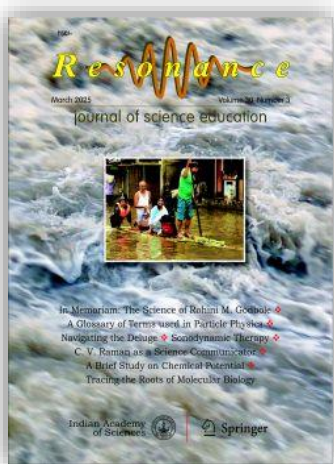
Publisher: AIP Publishing

URI: <https://doi.org/10.1063/5.0240792>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9434>

Publication Date: 2025-03

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Author(s): KUMAR, G. V. PAVAN

Title: C. V. Raman as a Science Communicator: A Historical Perspective

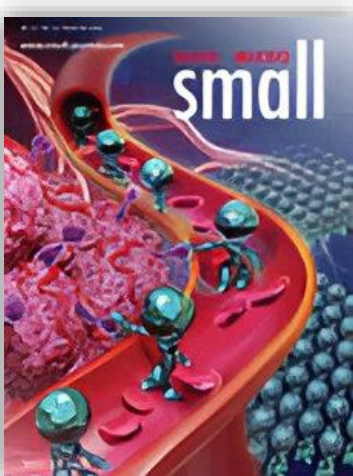
Citation: Resonance Journal of Science Education, 30(03), 355-366.

Publisher: Indian Academy of Sciences

URI: <https://www.ias.ac.in/describe/article/reso/030/03/0355-0366>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9446>

Publication Date: 2025-03



Author(s): Mishra, Bikash; Dutta, Supriti; Pal, Uttam; Rana, Subhajit; MISHRA, SANDEEP KUMAR; Saha-Dasgupta, Tanusri; Pachfule, Pradip

Title: Diketopyrrolopyrrole-based Donor-Acceptor Covalent Organic Frameworks for Iodine Capture

Citation: Small

Publisher: Wiley

URI: <https://doi.org/10.1002/sml.202411199>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9397>

Publication Date: 2025-03



Author(s): BANGER, PARAMJEET; Rajat; Sandeep Gautam

Title: Excitations of a supersolid annular stripe phase in a spin-orbital-angular-momentum-coupled spin-1 Bose-Einstein condensate

Citation: Physical Review A, 111, 023311.

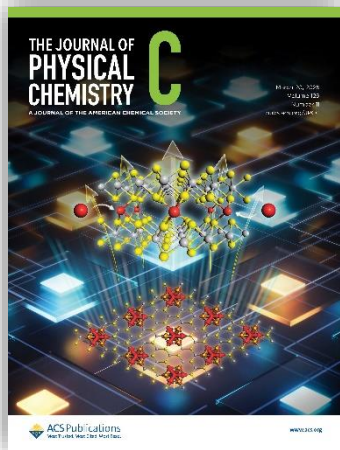
Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevA.111.023311>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9420>

Publication Date: 2025-02

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Author(s): SHUKLA, ASHUTOSH; CHAND, RAHUL; BOBY, SNEHA; KUMAR, G. V. PAVAN

Title: Synchronized Motion of Gold Nanoparticles in an Optothermal Trap

Citation: Journal of Physical Chemistry C, 129(11), 5656-5665. (special issue "Photothermal and Non-Fluorescent Imaging in Microscopy and Spectroscopy".)

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.jpcc.4c07912>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9400>

Publication Date: 2025-03

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