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August 2024

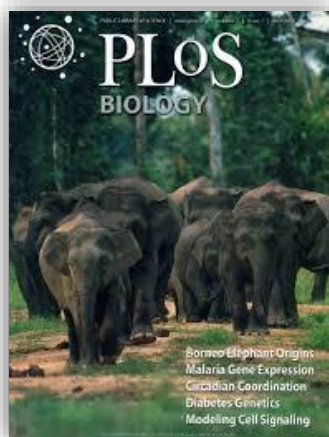


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Earth and Climate Science	6
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Physics	8

## BIOLOGY



Author(s): Aggarwal, Ayush; GOKHALE, RAJESH S. et al.

Title: Distinct melanocyte subpopulations defined by stochastic expression of proliferation or maturation programs enable a rapid and sustainable pigmentation response

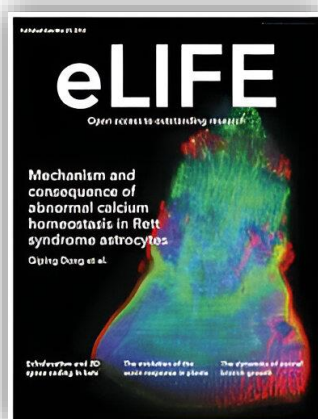
Citation: PLOS Biology, 22(08).

Publisher: PLOS

URI: <https://doi.org/10.1371/journal.pbio.3002776>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9062>

Publication Date: 2024-08



Author(s): Jyotsna, Binayak; GOKHALE, RAJESH S. et al.

Title: A hepatocyte-specific transcriptional program driven by Rela and Stat3 exacerbates experimental colitis in mice by modulating bile synthesis

Citation: eLife

Publisher: eLife Sciences Publications Ltd.

URI: <https://doi.org/10.7554/eLife.93273.3>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9052>

Publication Date: 2024-08



Author(s): Mochi, Jigneshkumar A.; Jani, Jaykumar; TAK, KIRAN; Lodhi, Krishna Kumar; PANANGHAT, GAYATHRI; Pappachan, Anju

Title: Arg40 is critical for stability and activity of Adenylosuccinate lyase; a purine salvage enzyme from Leishmania donovani

Citation: Archives of Biochemistry and Biophysics, 757, 110040.

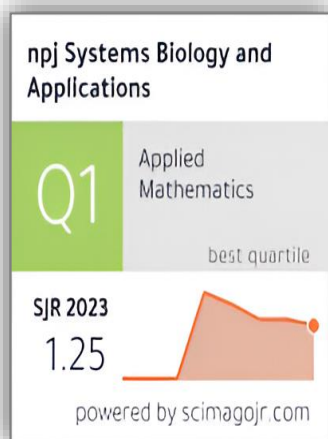
Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.abb.2024.110040>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9045>

Publication Date: 2024-07

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Author(s): MUKUNDAN, S.; DESHPANDE, GIRISH; MADHUSUDHAN, M. S.

Title: High-affinity biomolecular interactions are modulated by low-affinity binders

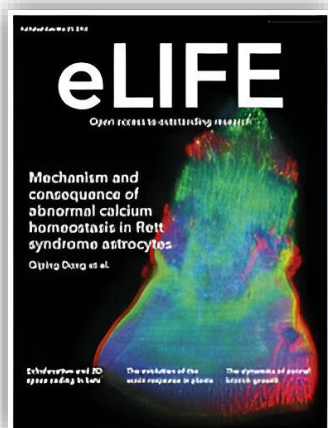
Citation: npj Systems Biology and Applications, 10, 85.

Publisher: Springer Nature

URI: <https://doi.org/10.1038/s41540-024-00410-z>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9046>

Publication Date: 2024-08



Author(s): PARVEZ, FIRDOUSI; Sangpal, Devika; PAITHANKAR, HARSHAD; AMIN, ZAINAB; CHUGH, JEETENDER

Title: Differential conformational dynamics in two type-A RNA-binding domains drive the double-stranded RNA recognition and binding

Citation: eLife, 13, RP94842.

Publisher: eLife Sciences Publications Ltd.

URI: <https://doi.org/10.7554/eLife.94842.3>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9047>

Publication Date: 2024-08



Author(s): Zambre, Sae; KADAM, PRADNYA; BHALERAO, UNNATI; TUPEKAR, MANISHA; KARMODIYA, KRISHANPAL et al.

Title: Wastewater surveillance of severe acute respiratory syndrome coronavirus-2 in open drains of two Indian megacities captures evolutionary lineage transitions: a zonation approach

Citation: Environmental Science and Pollution Research, 31, 49670- 49681.

Publisher: Springer Nature

URI: <https://doi.org/10.1007/s11356-024-34448-7>

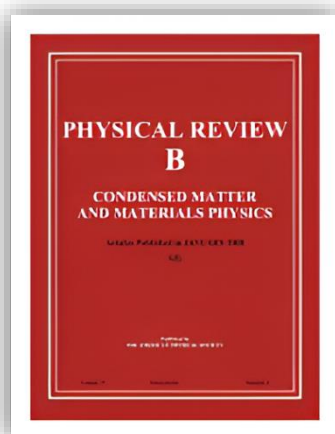
DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9037>

Publication Date: 2024-07

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## CHEMISTRY



Author(s): CHOWDHURY, TAMAGHNA; CHATTERJEE, SAGNIK; M. A., GOKUL; GHOSH, PRASENJIT; RAHMAN, ATIKUR et al.

Title: Brightening of dark excitons in WS<sub>2</sub> via tensile strain-induced excitonic valley convergence

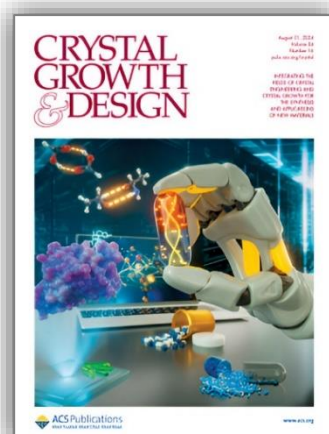
Citation: Physical Review B, 110(08), L081405.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.110.L081405>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9051>

Publication Date: 2024-08



Author(s): DEKA, NILOTPAL; SAHOO, SUPRIYA; GOSWAMI, ASHLESHA S.; Zaręba, Jan K.; RAMAMOORTHY BOOMISHANKAR

Title: Homochirality-Induced Piezoelectricity in a Single-Component Molecular System

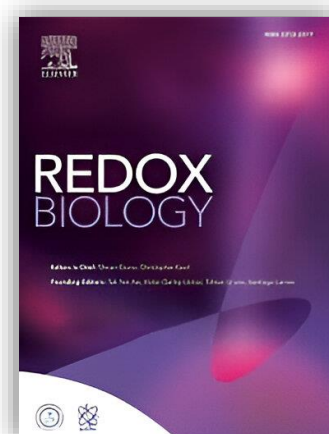
Citation: Crystal Growth & Design, 24(16), 6763-6770.

Publisher: American Chemical Society

URI: <https://doi.org/10.1021/acs.cgd.4c00742>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9039>

Publication Date: 2024-08



Author(s): Dewan, Arshiya; JAIN, CHARU; Das, Mayashree; Tripathi, Ashutosh; SHARMA, AJAY KUMAR; SINGH, HARSHIT; Malhotra, Nitish; Seshasayee, Aswin Sai Narain; CHAKRAPANI, HARINATH; Singh, Amit

Title: Intracellular peroxynitrite perturbs redox balance, bioenergetics, and Fe-S cluster homeostasis in Mycobacterium tuberculosis

Citation: Redox Biology, 75, 103285.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.redox.2024.103285>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9061>

Publication Date: 2024-09

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Author(s): KAULAGE, SANDEEP H.; PARVIN, NASRINA; Khopade, Kishor V.; KHAN, SHABANA

Title: A hybrid silylene-Pd catalyst: efficient C-N cross-coupling of sterically bulky amines and chiral amines

Citation: Chemical Communications

Publisher: Royal Society of Chemistry

URI: <https://doi.org/10.1039/D4CC03108C>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9060>

Publication Date: 2024-08



Author(s): MAHAPATRA, SOUVIK PANDA; PAHAN, SAIKAT; CHATTERJEE, ABHIJIT; ROY, SOUVIK; KUMAR, D. R. PUNEETH; GOPI, HOSAHUDYA N.

Title: Exploring Macroscopic Dipoles of Designed Cyclic Peptide Ordered Assemblies to Harvest Piezoelectric Properties

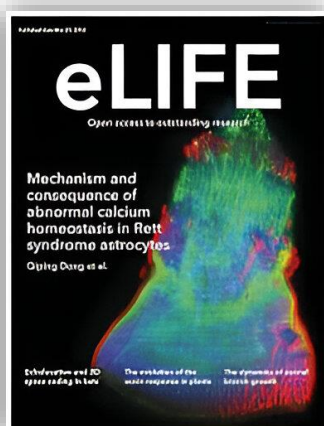
Citation: Angewandte Chemie International Edition

Publisher: Wiley

URI: <https://doi.org/10.1002/anie.202409969>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9044>

Publication Date: 2024-06



Author(s): PARVEZ, FIRDOUSI; Sangpal, Devika; PAITHANKAR, HARSHAD; AMIN, ZAINAB; CHUGH, JEETENDER

Title: Differential conformational dynamics in two type-A RNA-binding domains drive the double-stranded RNA recognition and binding

Citation: eLife, 13, RP94842.

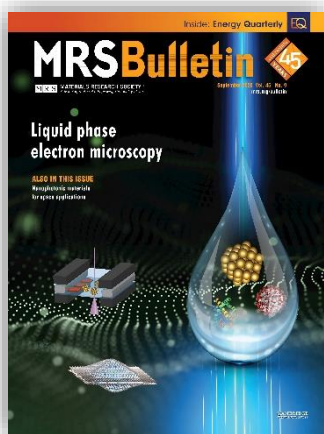
Publisher: eLife Sciences Publications Ltd.

URI: <https://doi.org/10.7554/eLife.94842.3>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9047>

Publication Date: 2024-08

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Author(s): Poonia, Ajay K.; SALUNKHE, PARASHURAMA; NAG, ANGSHUMAN; Adarsh, K. V.

Title: Emerging collective quantum phenomena of excitons in metal-halide perovskites

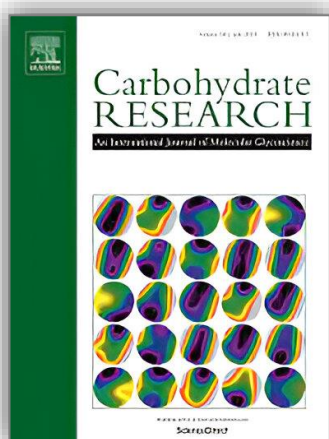
Citation: MRS Bulletin

Publisher: Springer Nature

URI: <https://doi.org/10.1557/s43577-024-00765-y>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9056>

Publication Date: 2024-08



Author(s): WALKE, GULAB; KASDEKAR, NITESH LAL; Pati, Soumyaranjan; Taillefer, Marc; Jaroschik, Florian; HOTH, SRINIVAS

Title: Activation of glycosyl methylpropiolates by TfOH

Citation: Carbohydrate Research, 539, 109106.

Publisher: Elsevier B.V.

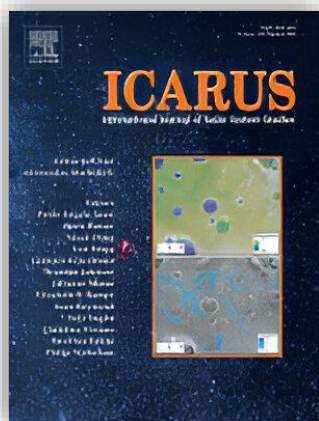
URI: <https://doi.org/10.1016/j.carres.2024.109106>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9050>

Publication Date: 2024-05

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## EARTH AND CLIMATE SCIENCE



Author(s): RAORANE, A.; Brassier, R.; Matsumura, S.; Lau, T. C. H.; Lee, M. H.; Bouvier, A.

Title: Giant planet formation in the Solar System

Citation: Icarus, 421, 116231.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.icarus.2024.116231>

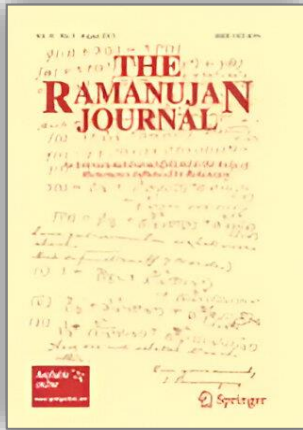
DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9059>

Publication Date: 2024-10

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## MATHEMATICS



Author(s): BANERJEE, DEBARGHA; Majumder, Priyanka

Title: Modular forms with non-vanishing central values and linear independence of Fourier coefficients

Citation: Ramanujan Journal

Publisher: Springer Nature

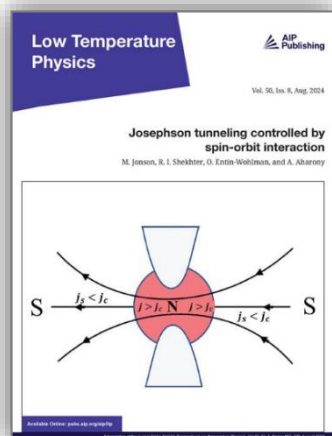
URI: <https://doi.org/10.1007/s11139-024-00931-5>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9057>

Publication Date: 2024-08

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## PHYSICS



Author(s): Bashlakov, D. L.; Kvitnitskaya, O. E.; Aswartham, S.; Shipunov, G.; HARNAGEA, LUMINITA; Efremov, D. V.; Büchner, B.; Naidyuk, Yu. G.

Title: Electron-phonon interaction, magnetic phase transition, charge density waves, and resistive switching in  $VS_2$  and  $VSe_2$  revealed by Yanson point-contact spectroscopy

Citation: Low Temperature Physics, 50(08), 676-682.

Publisher: AIP Publishing

URI: <https://doi.org/10.1063/10.0027924>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9038>

Publication Date: 2024-08



Author(s): CHATTERJEE, ARIJIT; MAHESH, T. S.; Nisse, Mounir; Lim, Yen-Kheng

Title: Observing algebraic variety of Lee-Yang zeros in asymmetrical systems via a quantum probe

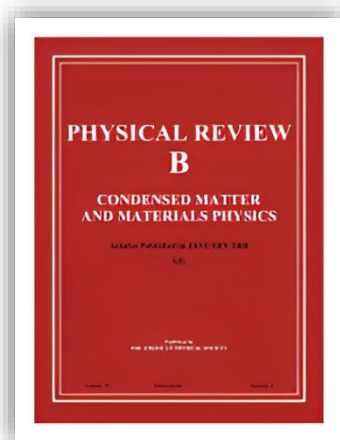
Citation: Physical Review A, 109(06), 062601.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevA.109.062601>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9043>

Publication Date: 2024-06



Author(s): CHOWDHURY, TAMAGHNA; CHATTERJEE, SAGNIK; M. A., GOKUL; GHOSH, PRASENJIT; RAHMAN, ATIKUR et al.

Title: Brightening of dark excitons in  $WS_2$  via tensile strain-induced excitonic valley convergence

Citation: Physical Review B, 110(08), L081405.

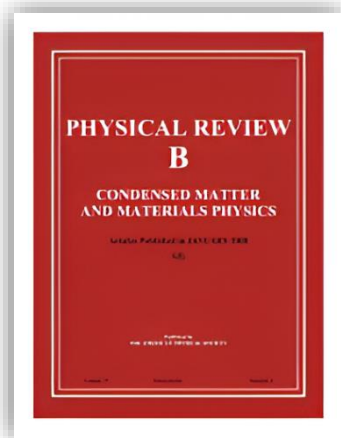
Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.110.L081405>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9051>

Publication Date: 2024-08

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Author(s): DHAWAN, ABHINAV; GANGULY, KATHA; Kulkarni, Manas; AGARWALLA, BIJAY KUMAR

Title: Anomalous transport in long-ranged open quantum systems

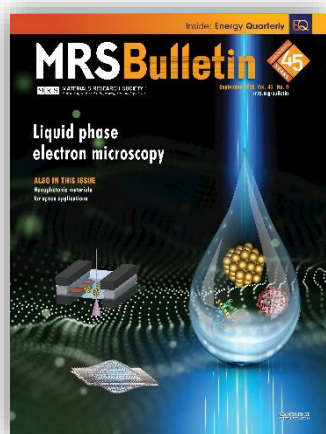
Citation: Physical Review B, 110(08), L081403.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.110.L081403>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9049>

Publication Date: 2024-08



Author(s): DATTA, SHOUVIK; Marie, Xavier

Title: Excitons and excitonic materials

Citation: MRS Bulletin, 49(09).

Publisher: Springer Nature

URI: <https://doi.org/10.1557/s43577-024-00766-x>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9063>

Publication Date: 2024-09



Author(s): DHRUVA, K. S.; MAZUMDAR, DEEP; YADAV, SHIVANG

Title: n-point functions in conformal quantum mechanics: a momentum space odyssey

Citation: Journal of High Energy Physics, 08(2024)085.

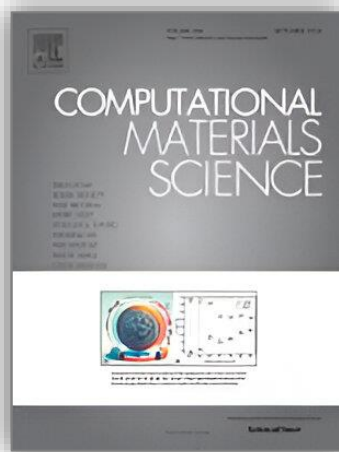
Publisher: Springer Nature

URI: [https://link.springer.com/article/10.1007/JHEP08\(2024\)085](https://link.springer.com/article/10.1007/JHEP08(2024)085)

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9058>

Publication Date: 2024-08

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Author(s): Khatri, Prakash; Adhikari, Narayan Prasad; GHOSH, PRASENJIT

Title: Thermoelectric properties of low thermal conductivity half Heuslers  $\text{TiXPb}$  ( $X = \text{Ni}, \text{Pd}, \text{Pt}$ ): A first principles investigation

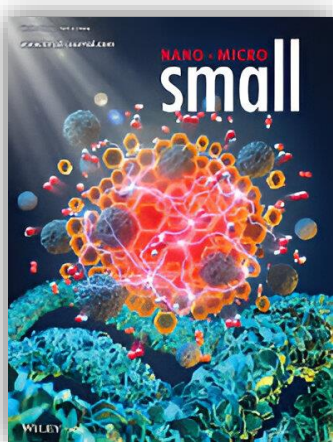
Citation: Computational Materials Science, 244, 113250.

Publisher: Elsevier B.V.

URI: <https://doi.org/10.1016/j.commatsci.2024.113250>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9042>

Publication Date: 2024-08



Author(s): Mallick, Sagar; MAJUMDER, SUDIPTA; Maiti, Paramita; Kesavan, Kamali; RAHMAN, ATIKUR; Rath, Ashutosh

Title: Development of Self-Doped Monolayered 2D  $\text{MoS}_2$  for Enhanced Photoresponsivity

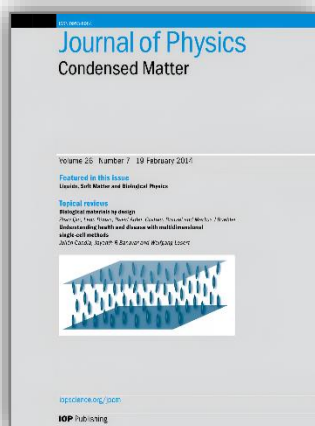
Citation: Small

Publisher: Wiley

URI: <https://doi.org/10.1002/sml.202403225>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9041>

Publication Date: 2024-08



Author(s): Rosalin, M.; Irshad, K. A.; Joseph, Bobby; TELANG, PRACHI; SINGH, SURJEET; Muthu, D., V.; Sood, A. K.

Title: Iso-structural phase transition in pyrochlore iridates ( $\text{Sm}_{1-x}\text{Bi}_x$ ) $_2\text{Ir}_2\text{O}_7$  ( $x = 0, 0.02, \text{ and } 0.10$ ): high-pressure Raman and x-ray diffraction studies

Citation: Journal of Physics: Condensed Matter, 36, 45.

Publisher: IOP Publishing

URI: <https://doi.org/10.1088/1361-648X/ad69ed>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9048>

Publication Date: 2024-08

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Author(s): Sharma, S.; GHARA, A. et al.

Title: Evidence for conventional superconductivity in Bi<sub>2</sub>PdPt and prediction of possible topological superconductivity in disorder-free  $\gamma$ -BiPd

Citation: Physical Review B, 109(22), 224509.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.109.224509>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9040>

Publication Date: 2024-06



Author(s): Su, Shi-Lei; Li, Lin; NATH, REJISH; Wu, Jin-Hui; Li, Weibin

Title: Rydberg superatoms: An artificial quantum system for quantum information processing and quantum optics

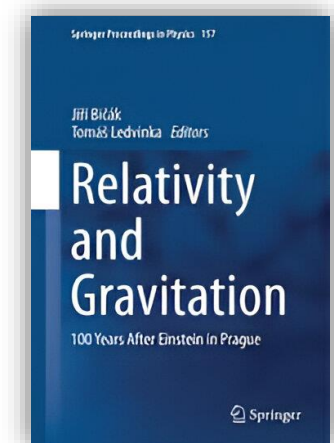
Citation: Applied Physics Reviews, 11(03).

Publisher: AIP Publishing

URI: <https://doi.org/10.1063/5.0211071>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9053>

Publication Date: 2024-09



Author(s): VARDARAJAN, SUNEETA

Title: Generalized entropy in higher curvature gravity

Citation: General Relativity and Gravitation, 56(96).

Publisher: Springer Nature

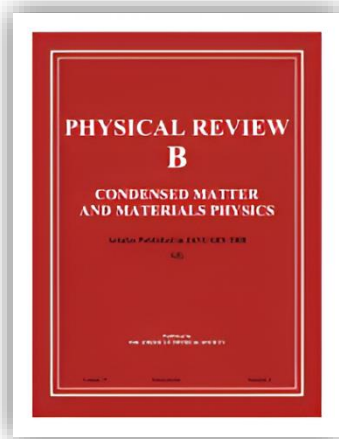
URI: <https://doi.org/10.1007/s10714-024-03280-2>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9054>

Publication Date: 2024-08

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Author(s): WALVE, VAIBHAV; PARAKH, PIYUSH; RAJPUT, UMASHANKAR; Mhase, Akash S.; Singh, Kirandeep; DESHPANDE, APARNA

Title: Unveiling different structural orderings in  $\text{Fe}_{5-x}\text{GeTe}_2$

Citation: Physical Review B, 110(07), 075119.

Publisher: American Physical Society

URI: <https://doi.org/10.1103/PhysRevB.110.075119>

DR URI: <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/9055>

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