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Monthly Bulletin of Publications:  
Faculty, Scientists and Students of IISER Pune.  
June 2021

## CONTENTS

Subject	Page No.
<a href="#">Patents</a>	2
Journal Articles	
<a href="#">Biology</a>	2
<a href="#">Chemistry</a>	4
<a href="#">Earth and Climate Science</a>	6
<a href="#">Mathematics</a>	7
<a href="#">Physics</a>	9

## PATENT

**Inventor/Creator** BRITTO, SANDANARAJ S.; BHANDARI, PAVANKUMAR JANARDHAN; REDDY, MULLAPUDI MOHAN  
**Title** Generation-Dependent Supramolecular Assemblies of Protein-Dendron Conjugates  
**Patent No.** US20210163916A1  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5943>  
**Date of Publication** 2021-06-03

## BIOLOGY

**Author(s)** CHAVHAN, YASHRAJ; MALUSARE, SARTHAK; DEY, SUTIRTH  
**Title** Interplay of population size and environmental fluctuations: A new explanation for fitness cost rarity in asexuals  
**Citation** Ecology Letters.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1111/ele.13831>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5993>  
**Date of Publication** 2021-06

**Author(s)** JACOB, TRESSA; CHAKRAVARTY, ANTARA; Panchal, Ankita; PATIL, MANJIRI; Ghodadra, Gautami; SUDHAKARAN, JYOTISH; Nuesslein-Volhard, Christiane  
**Title** Zebrafish twist2/dermo1 regulates scale shape and scale organization during skin development and regeneration  
**Citation** Cells & Development, 166, 203684.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.cdev.2021.203684>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5977>  
**Date of Publication** 2021-06

**Author(s)** KHETAN, NEHA; Pruliere, Gerard; Hebras, Celine; Chenevert, Janet; ATHALE, CHAITANYA A.  
**Title** Self-organized optimal packing of kinesin-5-driven microtubule asters scales with cell size  
**Citation** Journal of Cell Science, 134(10)  
**Publisher** The Company of Biologists  
**URI** <https://doi.org/10.1242/jcs.257543>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5992>  
**Date of Publication** 2021-06

[Go to top](#)

**Author(s)** MOHANASUNDARAM, BOOMINATHAN; BHIDE, AMEY J.; PALIT, SHIRSA; CHATURVEDI, GARGI; Lingwan, Maneesh; Masakapalli, Shyam Kumar; BANERJEE, ANJAN K.

**Title** The unique bryophyte-specific repeat-containing protein SHORT-LEAF regulates gametophore development in moss

**Citation** Plant Physiology.

**Publisher** Oxford University Press

**URI** <https://doi.org/10.1093/plphys/kiab261>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5934>

**Date of Publication** 2021-06

**Author(s)** Paul, Rachel; KHAN, SOUMEN; SHASHIDHARA, L. S. et al.

**Title** Hox dosage contributes to flight appendage morphology in Drosophila

**Citation** Nature Communications, 12, 2892.

**Publisher** Springer Nature

**URI** <https://doi.org/10.1038/s41467-021-23293-8>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5994>

**Date of Publication** 2021-06

**Author(s)** PUCADYIL, THOMAS J.; Kulkarni, Kiran; Sengupta, Durba

**Title** Molecular Interplay at the Membrane and Impact on Cellular Physiology

**Citation** Journal of Membrane Biology, 254, 239-242.

**Publisher** Springer Nature

**URI** <https://doi.org/10.1007/s00232-021-00183-0>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5919>

**Date of Publication** 2020-05

**Author(s)** Sagarkar, Sneha; Choudhary, Amit G.; Balasubramanian, Nagalakshmi; Awathale, Sanjay N.; Somalwar, Amita R.; Pawar, Namrata; Kokare, Dadasaheb M.; SUBHEDAR, NISHIKANT K.; Sakharkar, Amul J.

**Title** LSD1-BDNF activity in lateral hypothalamus-medial forebrain bundle area is essential for reward seeking behavior

**Citation** Progress in Neurobiology, 202, 102048.

**Publisher** Elsevier B.V.

**URI** <https://doi.org/10.1016/j.pneurobio.2021.102048>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5957>

**Date of Publication** 2021-07

**Author(s)** Yadav, Pragma D.; GOPAL, ANJANI et al.  
**Title** An Epidemiological Analysis of SARS-CoV-2 Genomic Sequences from Different Regions of India  
**Citation** Viruses, 13(5).  
**Publisher** MDPI  
**URI** <https://doi.org/10.3390/v13050925>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5938>  
**Date of Publication** 2021-05

**Author(s)** ZADEY, SIDDHESH; Buss, Stephanie S.; McDonald, Katherine; Press, Daniel Z.; Pascual-Leone, Alvaro; Fried, Peter J.  
**Title** Higher motor cortical excitability linked to greater cognitive dysfunction in Alzheimer's disease: results from two independent cohorts  
**Citation** Neurobiology of Aging.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.neurobiolaging.2021.06.007>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5978>  
**Date of Publication** 2021-06

## CHEMISTRY

**Author(s)** Ambalkar, Anuradha A.; Kawade, Ujjwala, V.; Sethi, Yogesh A.; KANADE, SANDIP C.; Kulkarni, Milind, V.; Adhyapak, Parag, V.; Kale, Bharat B.  
**Title** A nanostructured SnO<sub>2</sub>/Ni/CNT composite as an anode for Li ion batteries  
**Citation** RSC Advances, 11(32), 19531-19540.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/d1ra01678d>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5980>  
**Date of Publication** 2021-06

**Author(s)** BASAVARAJAPPA, ASHOKKUMAR; AMBHORE, MADAN D.; ANAND, V. G.  
**Title** Three dimensional isophlorinoid tetrapodal molecular cage  
**Citation** Chemical Communications, 57(35), 4299-4302.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/D1CC01002F>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5918>  
**Date of Publication** 2021-05

[Go to top](#)

**Author(s)** BHANDARI, PAVANKUMAR JANARDHAN; REDDY, MULLAPUDI MOHAN; RAO, KASULADEVU JEGANNADHA; SANDANARAJ, BRITTO S.  
**Title** Rapid Chemical Synthesis of Self-Assembling Semi-Synthetic Proteins  
**Citation** Journal of Organic Chemistry.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.joc.1c00195>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5961>  
**Date of Publication** 2021-06

**Author(s)** GUPTA, PRACHI; ANAND, V. G.  
**Title** Symmetric 32 $\pi$  (1.0.1.0.1.0.1) Core-Modified Heptaphyrins from Asymmetric Building Block  
**Citation** Organic Letters, 23(9), 3481-3485.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.orglett.1c00923>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5917>  
**Date of Publication** 2021-05

**Author(s)** MUKHERJEE, SOUMYA; GHOSH, SUJIT K.  
**Title** A decade of decoding  
**Citation** Nature Reviews Chemistry.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1038/s41570-021-00298-x>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5941>  
**Date of Publication** 2021-06

**Author(s)** Noy-Porat, Tal; KIKKERI, RAGHAVENDRA et al.  
**Title** Therapeutic antibodies, targeting the SARS-CoV-2 spike N-terminal domain, protect lethally infected K18-hACE2 mice  
**Citation** iScience, 24(5).  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.isci.2021.102479>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5964>  
**Date of Publication** 2021-05

[Go to top](#)

**Author(s)** RAJASEKAR, PRABHAKARAN; Swain, Abinash; Rajaraman, Gopalan; BOOMISHANKAR, RAMAMOORTHY  
**Title** Enantiopure Polyradical Tetrahedral Pd<sub>12</sub>L<sub>6</sub> Cages  
**Citation** Chemistry-A European Journal.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1002/chem.202101239>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5930>  
**Date of Publication** 2021-06

**Author(s)** SARKAR, SOHINI; BANERJEE, SNEHA; SWARNKAR, ABHISHEK; MANDAL, PANKAJ  
**Title** Effect of Capping Ligand Engineering on Transport Properties and Carrier Dynamics in Cubic CsPbI<sub>3</sub> Nanocrystal Film  
**Citation** Journal of Physical Chemistry C, 125(19), 10539-10548.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.jpcc.1c02350>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5965>  
**Date of Publication** 2021-05

**Author(s)** SINGH, DIVYA; MONDAL, KINJAL; CHAUDHURY, SRABANTI  
**Title** Effect of Memory and Inertial Contribution on Transition-Time Distributions: Theory and Simulations  
**Citation** Journal of Physical Chemistry B, 125(17), 4536-4545.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.jpcc.1c00173>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5922>  
**Date of Publication** 2021-05

## Earth and Climate Science

**Author(s)** CHATTOPADHYAY, DEVAPRIYA; Sarkar, Deepjay; BHATTACHERJEE, MADHURA  
**Title** The Distribution Pattern of Marine Bivalve Death Assemblage From the Western Margin of Bay of Bengal and Its Oceanographic Determinants  
**Citation** Frontiers in Marine Science.  
**Publisher** Frontiers Media S.A.  
**URI** <https://doi.org/10.3389/fmars.2021.675344>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5931>  
**Date of Publication** 2021-06

[Go to top](#)

**Author(s)** DANISH, MOHD; TRIPATHY, GYANA RANJAN; Mitra, Sirsha; ROUT, RAKESH KUMAR; Raskar, Shubhangi  
**Title** Non-conservative removal of dissolved rhenium from a coastal lagoon: Clay adsorption versus biological uptake  
**Citation** Chemical Geology, 580, 120378.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.chemgeo.2021.120378>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5954>  
**Date of Publication** 2021-10

**Author(s)** Govind, A. Vipin; Behera, Kamalesh; Dash, Jitendra Kumar; Balakrishnan, S.; Bhutani, Rajneesh; MANAGAVE, SHREYAS; Srinivasan, Ramaswamiah  
**Title** Trace element and isotope Geochemistry of Neoproterozoic carbonate rocks from the Dharwar craton, southern India: Implications for depositional environments and mantle influence on ocean chemistry  
**Citation** Precambrian Research, 357, 106137.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.precamres.2021.106137>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5782>  
**Date of Publication** 2021-06

## MATHEMATICS

**Author(s)** BANERJEE, DEBARGHA; Saha, Arnab  
**Title** Differential modular forms over totally real fields of integral weights  
**Citation** Research in Number Theory, 7, 42.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s40993-021-00269-7>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5940>  
**Date of Publication** 2021-06

**Author(s)** Dolfi, Silvio; SINGH, ANUPAM KUMAR; Yadav, Manoj K  
**Title** p-power conjugacy classes in  $U(n, q)$  and  $T(n, q)$   
**Citation** Journal of Algebra and its Applications, 20(7).  
**Publisher** World Scientific Publishing  
**URI** <https://doi.org/10.1142/S0219498821501218>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5981>  
**Date of Publication** 2021-07

[Go to top](#)

**Author(s)** GUPTA, PARUL  
**Title** Four-dimensional quadratic forms over  $C((t))(X)$   
**Citation** Archiv der Mathematik.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s00013-021-01626-9>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5932>  
**Date of Publication** 2021-06

**Author(s)** KAUR, YASHPREET; Srinivasan, Varadharaj R.  
**Title** Integration in finite terms: dilogarithmic integrals  
**Citation** Applicable Algebra in Engineering Communication and Computing.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s00200-021-00518-3>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5988>  
**Date of Publication** 2021-06

**Author(s)** MISHRA, MANISH  
**Title** A note on sign of a self-dual representation  
**Citation** Communications in Algebra.  
**Publisher** Taylor & Francis  
**URI** <https://doi.org/10.1080/00927872.2021.1928152>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5956>  
**Date of Publication** 2021-06

**Author(s)** MISHRA, RAMA; Staffeldt, Ross  
**Title** Polynomial invariants, knot homologies, and higher twist numbers of weaving knots  $W(3,n)$   
**Citation** Journal of Knot Theory and Its Ramifications, 30(4).  
**Publisher** World Scientific Publishing  
**URI** <https://doi.org/10.1142/S0218216521500255>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5972>  
**Date of Publication** 2021-04



# PHYSICS

**Author(s)** Abbas, A. H.; Meng, X.; PATIL, R. S.; Ross, J. A.; Truscott, A. G.; Hodgman, S. S.  
**Title** Rapid generation of metastable helium Bose-Einstein condensates  
**Citation** Physical Review A, 103(5).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevA.103.053317>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5942>  
**Date of Publication** 2021-05

**Author(s)** Anupam, A. H.; KHAIRNAR, ANIKET; Kundu, Arpan  
**Title** Generalized BMS algebra at timelike infinity  
**Citation** Physical Review D, 103(10).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.103.104030>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5959>  
**Date of Publication** 2021-05

**Author(s)** Bardhan, Debjyoti; GHOSH, DIPTIMOY; JAIN, PRASHAM; THALAPILLIL, ARUN M.  
**Title** Towards constraining triple gluon operators through tops  
**Citation** Physical Review D, 103(11).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.103.115003>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5970>  
**Date of Publication** 2021-06

**Author(s)** CMS Collaboration; Sirunyan, A. M.; DUBE, SOURABH; KANSAL, B.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, SEEMA et al.  
**Title** Measurements of the differential cross sections of the production of Z + jets and  $\gamma$  + jets and of Z boson emission collinear with a jet in pp collisions at  $\sqrt{s} = 13$  TeV  
**Citation** Journal of High Energy Physics, 2021(5).  
**Publisher** Springer Nature  
**URI** [https://doi.org/10.1007/JHEP05\(2021\)285](https://doi.org/10.1007/JHEP05(2021)285)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5969>  
**Date of Publication** 2021-05

[Go to top](#)

**Author(s)** CMS Collaboration; Sirunyan, A. M.; DUBE, SOURABH; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, SEEMA et al.  
**Title** Study of Drell-Yan dimuon production in proton-lead collisions at  $\sqrt{s_{NN}} = 8.16$  TeV  
**Citation** Journal of High Energy Physics, 2021(5).  
**Publisher** Springer Nature  
**URI** [https://doi.org/10.1007/JHEP05\(2021\)182](https://doi.org/10.1007/JHEP05(2021)182)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5955>  
**Date of Publication** 2021-05

**Author(s)** CMS Collaboration; Sirunyan, A. M.; DUBE, SOURABH; KANSAL, B.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, SEEMA et al.  
**Title** Measurement of the Z boson differential production cross section using its invisible decay mode ( $Z \rightarrow \nu\bar{\nu}$ ) in proton-proton collisions at  $\sqrt{s} = 13$  TeV  
**Citation** Journal of High Energy Physics, 2021(5).  
**Publisher** Springer Nature  
**URI** [https://doi.org/10.1007/JHEP05\(2021\)205](https://doi.org/10.1007/JHEP05(2021)205)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5960>  
**Date of Publication** 2021-05

**Author(s)** CMS Collaboration; Sirunyan, A. M.; DUBE, SOURABH; KANSAL, B.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, SEEMA et al.  
**Title** Measurements of production cross sections of the Higgs boson in the four-lepton final state in proton-proton collisions at  $\sqrt{s}=13$ TeV  
**Citation** European Physical Journal C, 81(6).  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1140/epjc/s10052-021-09200-x>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5971>  
**Date of Publication** 2021-06

**Author(s)** Gadde, Janardhan Rao; KARMAKAR, ANASUYA et al.  
**Title** Two-dimensional ReS<sub>2</sub>: Solution to the unresolved queries on its structure and inter-layer coupling leading to potential optical applications  
**Citation** Physical Review Materials, 5(5).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevMaterials.5.054006>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5929>  
**Date of Publication** 2021-05

**Author(s)** GHOSH, DIPTIMOY; SACHDEVA, DIVYA  
**Title** Constraining light dark photons from GW190517\_055101 and GW190426\_152155  
**Citation** Physical Review D, 103(9).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.103.095028>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5962>  
**Date of Publication** 2021-05

**Author(s)** Goswami, Partha Pratim; RATHOUR, RAJEEV SINGH; Goswami, Aruna  
**Title** Spectroscopic study of CEMP-(s & r/s) stars: Revisiting classification criteria and formation scenarios, highlighting i-process nucleosynthesis  
**Citation** Astronomy & Astrophysics, 649, A49.  
**Publisher** EDP Sciences  
**URI** <https://doi.org/10.1051/0004-6361/202038258>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5936>  
**Date of Publication** 2021-05

**Author(s)** Hazra, Soumitra; BAG, RABINDRANATH; SINGH, SURJEET; Kini, Rajeev N.  
**Title** Effect of doping on the pseudogap behaviour and the related terahertz modes in the hybrid chain-ladder compound,  $\text{Sr}_{14}\text{Cu}_{24}\text{O}_{41}$   
**Citation** Physics Letters A, 408, 127489.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.physleta.2021.127489>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5953>  
**Date of Publication** 2021-08

**Author(s)** Kalantar, Na'im; AGARWALLA, BIJAY KUMAR; Segal, Dvira  
**Title** Harmonic chains and the thermal diode effect  
**Citation** Physical Review E, 103(5).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevE.103.052130>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5935>  
**Date of Publication** 2021-05

[Go to top](#)

**Author(s)** Ksoll, P.; MANDAL, R.; Meyer, C.; Schuler, L.; Roddatis, V.; Moshnyaga, V.  
**Title** Emergent double perovskite phase at LaMnO<sub>3</sub>/LaNiO<sub>3</sub> interfaces: Coupled charge transfer and structural reconstruction  
**Citation** Physical Review B, 103(19).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.103.195120>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5937>  
**Date of Publication** 2021-05

**Author(s)** KULKARNI, SUMAN; Capano, Collin D.  
**Title** Reliability of parameter estimates in the first observing run of Advanced LIGO  
**Citation** Physical Review D, 103(10).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.103.104002>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5920>  
**Date of Publication** 2021-05

**Author(s)** KUMAR, AANJANEYA; Grassberger, Peter; DHAR, DEEPAK  
**Title** Chase-Escape percolation on the 2D square lattice  
**Citation** Physica A-Statistical Mechanics and Its Applications, 577, 126072.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.physa.2021.126072>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5991>  
**Date of Publication** 2021-09

**Author(s)** LIGO Scientific Collaboration; Virgo Collaboration; KAGRA Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.  
**Title** Constraints on Cosmic Strings Using Data from the Third Advanced LIGO-Virgo Observing Run  
**Citation** Physical Review Letters, 126(24), 24112.  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevLett.126.241102>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5974>  
**Date of Publication** 2021-06

[Go to top](#)

**Author(s)** LIGO Scientific Collaboration; Virgo Collaboration; KAGRA Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.

**Title** Tests of general relativity with binary black holes from the second LIGO-Virgo gravitational-wave transient catalog

**Citation** Physical Review D, 103(12), 122002.

**Publisher** American Physical Society

**URI** <https://doi.org/10.1103/PhysRevD.103.122002>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5975>

**Date of Publication** 2021-06

**Author(s)** LIGO Scientific Collaboration; Virgo Collaboration; KAGRA Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.

**Title** GWTC-2: Compact Binary Coalescences Observed by LIGO and Virgo during the First Half of the Third Observing Run

**Citation** Physical Review X, 11(2).

**Publisher** American Physical Society

**URI** <https://doi.org/10.1103/PhysRevX.11.021053>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5976>

**Date of Publication** 2021-06

**Author(s)** LIGO Scientific Collaboration; Virgo Collaboration; KAGRA Collaboration; Abbott, R.; RAPOL, UMAKANT D.; SOURADEEP, TARUN et al.

**Title** Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910

**Citation** Astrophysical Journal Letters, 913(2).

**Publisher** IOP Publishing

**URI** <https://doi.org/10.3847/2041-8213/abffcd>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5939>

**Date of Publication** 2021-06

**Author(s)** MAHAJAN, MANI; SINGLA, GOURAV; OGALE, SATISHCHANDRA

**Title** Polypyrrole Encapsulated Polyoxomolybdate Decorated MXene As a Functional 2D/3D Nanohybrid for a Robust and High Performance Li-Ion Battery

**Citation** ACS Applied Energy Materials, 4(5), 4541-4550.

**Publisher** American Chemical Society

**URI** <https://doi.org/10.1021/acsaem.1c00175>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5963>

**Date of Publication** 2021-05

[Go to top](#)

**Author(s)** MANDAL, S.; SEN,A.; BAPAT, BHAS et al.  
**Title** Coincident angle-resolved state-selective photoelectron spectroscopy of acetylene molecules: a candidate system for time-resolved dynamics  
**Citation** Faraday Discussions, 228, 242-265.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/d0fd00120a>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5968>  
**Date of Publication** 2021-05

**Author(s)** PAL, SOHAM; BATRA, PRIYA; Krisnanda, Tanjung; Paterek, Tomasz; MAHESH, T. S.  
**Title** Experimental localisation of quantum entanglement through monitored classical mediator  
**Citation** Quantum, 5, 478.  
**Publisher** Verein zur Forderung des Open Access Publizierens in den Quantenwissenschaften  
**URI** <https://doi.org/10.22331/q-2021-06-17-478>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5987>  
**Date of Publication** 2021-06

**Author(s)** PARMAR, SWATI; BISWAS, ABHIJIT; Ray, Bishakha; Gosavi, Suresh; Datar, Suwarna; OGALE, SATISHCHANDRA  
**Title** Stabilizing Metastable Polymorphs of van der Waals Solid MoS<sub>2</sub> on Single Crystal Oxide Substrates: Exploring the Possible Role of Surface Chemistry and Structure  
**Citation** Journal of Physical Chemistry C, 125(20), 11216-11224.  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.jpcc.1c02303>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5966>  
**Date of Publication** 2021-05

**Author(s)** Raja, K. Sasikumar; SUBRAMANIAN, PRASAD; INGALE, MADHUSUDAN; Ramesh, R.and; Maksimovic, Milan  
**Title** Turbulent Proton Heating Rate in the Solar Wind from 5-45 R<sub>⊙</sub>  
**Citation** Astrophysical Journal, 914(2).  
**Publisher** IOP Publishing  
**URI** <https://doi.org/10.3847/1538-4357/abfcd1>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5989>  
**Date of Publication** 2021-06

[Go to top](#)

**Author(s)** Rammohan, S.; Chauhan, A. K.; NATH, REJISH; Eisfeld, A.; Wüster, S.  
**Title** Tailoring Bose-Einstein-condensate environments for a Rydberg impurity  
**Citation** Physical Review A, 103(6).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevA.103.063307>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5979>  
**Date of Publication** 2021-06

**Author(s)** Samantaray, Manoja K.; MISHRA, SANDEEP K.; Saidi, Aya; Basset, Jean-Marie  
**Title** Surface organometallic chemistry: A sustainable approach in modern catalysis  
**Citation** Journal of Organometallic Chemistry, 945, 121864.  
**Publisher** Elsevier B.V.  
**URI** <https://doi.org/10.1016/j.jorganchem.2021.121864>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5990>  
**Date of Publication** 2021-07

**Author(s)** Sen, Debashree; GUHA, ATANU  
**Title** Implications of feebly interacting dark sector on neutron star properties and constraints from GW170817  
**Citation** Monthly Notices of the Royal Astronomical Society, 504(3), 3354-3363.  
**Publisher** Oxford University Press  
**URI** <https://doi.org/10.1093/mnras/stab1056>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5958>  
**Date of Publication** 2021-07

**Author(s)** SINGH, CHANDAN K.; KABIR, MUKUL  
**Title** Long-range anisotropic Heisenberg ferromagnets and electrically tunable ordering  
**Citation** Physical Review B, 103(21).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.103.214411>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5967>  
**Date of Publication** 2021-06

[Go to top](#)

**Author(s)** Tiwari, Surbhi; Arya, Neeru; MISHRA, SANDEEP KUMAR; Suryaprakash, N.  
**Title** Competing HB acceptors: an extensive NMR investigations corroborated by single crystal XRD and DFT calculations  
**Citation** RSC Advances, 11(25), 15195-15202.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/D1RA02538D>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5928>  
**Date of Publication** 2021-04

**Author(s)** YADAV, JYOTI; KUMAR, YASHWANT; Singaraju, Gayathri S.; PATIL, SHIVPRASAD  
**Title** Interaction of chloramphenicol with titin I<sub>27</sub> probed using single-molecule force spectroscopy  
**Citation** Journal of Biological Physics, 47, 191-204.  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1007/s10867-021-09573-w>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5921>  
**Date of Publication** 2021-06

[Go to top](#)

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