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## Monthly Bulletin

Publications of Faculty, Scientists and Students of IISER Pune  
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# Biology

**Author(s)** Ahaley, Shital Sarah  
**Title** Synaptojanin regulates Hedgehog signalling by modulating phosphatidylinositol 4-phosphate levels  
**Citation** Journal of Biosciences, Vol.43(5) pp867-876.  
**Publisher** Indian Academy of Sciences  
**URI** <https://doi.org/10.1007/s12038-018-9799-5>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1381>  
**Date of Publication** DEC-2018

**Author(s)** Gellon, Lionel; Lahiri, Mayurika et al.  
**Title** Mrc1 and Tof1 prevent fragility and instability at long CAG repeats by their fork stabilizing function  
**Citation** Nucleic Acids Research.  
**Publisher** Oxford Academic  
**URI** <https://doi.org/10.1093/nar/gky1195>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1384>  
**Date of Publication** 2018-11-23

**Author(s)** Kondhare, Kirtikumar Ramesh; Malankar, Nilam Namdeo; Devani, Ravi Suresh; Banerjee, Anjan Kumar  
**Title** Genome-wide transcriptome analysis reveals small RNA profiles involved in early stages of stolon-to-tuber transitions in potato under photoperiodic conditions  
**Citation** BMC Plant Biology, Vol.18.  
**Publisher** BioMed Central Ltd  
**URI** <https://doi.org/10.1186/s12870-018-1501-4>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1343>  
**Date of Publication** 2018-11-16

**Author(s)** Naik, Rutika; Galande, Sanjeev  
**Title** SATB family chromatin organizers as master regulators of tumor progression  
**Citation** Oncogene  
**Publisher** Springer Nature  
**URI** <https://doi.org/10.1038/s41388-018-0541-4>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1361>  
**Date of Publication** 2018-11-09

**Author(s)** Richu, Avinipully; **Dahanukar, Neelesh**; Ali, Anvar; Ranjeet, Kutty; Raghavan, Rajeev  
**Title** Population dynamics of a poorly known serranid, the duskytail grouper *Epinephelusbleekeri* in the Arabian Sea  
**Citation** Journal of Fish Biology, Vol.93(4) pp741-744.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1111/jfb.13762>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1334>  
**Date of Publication** 2018-10

## Chemistry

**Author(s)** **Ghosh, Sudeb; Puranik, Mrinalini**  
**Title** Deep ultraviolet initiated excited state dynamics of riboflavin and flavin mononucleotide  
**Citation** Journal of Raman Spectroscopy, Vol.49(10) pp1628-1644.  
**Publisher** Wiley  
**URI** <https://doi.org/10.1002/jrs.5428>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1344>  
**Date of Publication** 2018-10

**Author(s)** **Krishnamurthy, Shrreya; Naphade, Rounak; Mir, Wasim J.; Gosavi, Suresh; Chakraborty, Sudip; Vaidhyanathan, Ramanathan; Ogale, Satishchandra**  
**Title** Molecular and Self-Trapped Excitonic Contributions to the Broadband Luminescence in Diamine-Based Low-Dimensional Hybrid Perovskite Systems  
**Citation** Advanced Optical Materials, Vol.6(20).  
**Publisher** Wiley  
**URI** <https://doi.org/10.1002/adom.201800751>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1331>  
**Date of Publication** 2018-10-18

**Author(s)** **Maity, Rahul; Chakraborty, Debanjan; Nandi, Shyamapada; Rinku, Kushwaha; Vaidhyanathan, Ramanathan**  
**Title** Microporous mixed-metal mixed-ligand metal organic framework for selective CO<sub>2</sub> capture  
**Citation** Crystengcomm, Vol.20(39) pp6088-6093.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/c8ce00752g>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1348>  
**Date of Publication** 2018-09-18

**Author(s)** Panchal, Santosh P.; Reddy, Baddigam Kiran; Anand, Venkataramanarao G.  
**Title** Syntheses and Redox Chemistry of Antiaromatic Core-Modified Isophlorinoids  
**Citation** Synlett, Vol.29(18) pp2362-2371.  
**Publisher** Georg ThiemeVerlag KG  
**URI** <https://doi.org/10.1055/s-0037-1609907>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1346>  
**Date of Publication** 2018-10-28

**Author(s)** Rana, Shammi; Prasoon, Anupam; Sadhukhan, Pampa; Jha, Plawan Kumar; Sathe, Vasant; Barman, Sudipta Roy; Ballav, Nirmalya  
**Title** Spontaneous Reduction of Copper(II) to Copper(I) at Solid-Liquid Interface  
**Citation** Journal of Physical Chemistry Letters, Vol.9(21) pp6364-6371.  
**Publisher** ACS publications  
**URI** <https://doi.org/10.1021/acs.jpcllett.8b02844>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1365>  
**Date of Publication** 2018-10-12

**Author(s)** Roy, Soumendu; Roy, Sumit; Rao, Anish; Devatha, Gayathri; Pillai, Pramod P.  
**Title** Precise Nanoparticle-Reactant Interaction Outplays Ligand Poisoning in Visible-Light Photocatalysis  
**Citation** Chemistry of Material  
**Publisher** American Chemical Society  
**URI** <https://doi.org/10.1021/acs.chemmater.8b03108>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1380>  
**Date of Publication** 2018-11-19

**Author(s)** Sabale, Pramod M.; Ambi, Uddhav B; Srivatsan, Seergazhi G.  
**Title** Clickable PNA Probes for Imaging Human Telomeres and Poly(A) RNAs  
**Citation** ACS Omega, Vol.3(11), pp15343-15352.  
**Publisher** ACS publications  
**URI** <https://doi.org/10.1021/acsomega.8b02550>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1336>  
**Date of Publication** 2018-11-12

**Author(s)** Warghude, Prakash K.; Dharpure, Pankaj D.; Bhat, Ramakrishna G.  
**Title** Cycloaddition of isatin-derived MBH carbonates and 3-methyleneoxindoles to construct diastereoselectivecyclopentenylbis-spirooxindoles and cyclopropylspirooxindoles: Catalyst controlled [3+2] and [2+1] annulations  
**Citation** Tetrahedron Letters, Vol.59(46) pp4076-4079.  
**Publisher** Pergamon-Elsevier Science Ltd.  
**URI** <https://doi.org/10.1016/j.tetlet.2018.10.004>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1360>  
**Date of Publication** 2018-11-14

**Author(s)** Xavier, Jewel Ann Maria; Devatha, Gayathri; Roy, Soumendu; Rao, Anish; Pillai, Pramod  
**Title** Electrostatically regulated photoinduced electron transfer in 'cationic' eco-friendly CuInS<sub>2</sub>/ZnS quantum dots in water  
**Citation** Journal of Materials Chemistry A, Vol.6(44) pp22248-22255.  
**Publisher** Royal Society of Chemistry  
**URI** <https://doi.org/10.1039/C8TA05269G>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1379>  
**Date of Publication** 2018-09-12

## Physics

**Author(s)** Agarwalla, Bijay Kumar; Segal, Dvira  
**Title** Assessing the validity of the thermodynamic uncertainty relation in quantum systems  
**Citation** Physical Review B, Vol. 98(15).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevB.98.155438>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1335>  
**Date of Publication** 2018-10-26

**Author(s)** Ananth, Sudarshan; Brink, Lars; Majumdar, Sucheta  
**Title** A hidden symmetry in quantum gravity  
**Citation** Journal of High Energy Physics, No.11.  
**Publisher** Springer  
**URI** [https://doi.org/10.1007/JHEP11\(2018\)078](https://doi.org/10.1007/JHEP11(2018)078)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1350>  
**Date of Publication** 2018-11-13

**Author(s)** Bhosale, Udaysinh T.; Santhanam, M. S.  
**Title** Periodicity of quantum correlations in the quantum kicked top  
**Citation** Physical Review E, Vol.98(5)  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevE.98.052228>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1385>  
**Date of Publication** 2018-11-28

**Author(s)** Bhosale, Udaysinh T.; Tekur, S. Harshini; Santhanam, M. S.  
**Title** Scaling in the eigenvalue fluctuations of correlation matrices  
**Citation** Physical Review E, Vol.98(5).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevE.98.052133>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1386>  
**Date of Publication** 2018-11-26

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.  
**Title** Measurement of the production cross section for single top quarks at root s=13 TeV  
**Citation** Journal of High Energy Physics, No.10  
**Publisher** Springer  
**URI** [https://doi.org/10.1007/JHEP10\(2018\)117](https://doi.org/10.1007/JHEP10(2018)117)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1342>  
**Date of Publication** 2018-10-18

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.  
**Title** Measurement of the groomed jet mass in PbPb and pp collisions at root s(NN)=5:02 TeV  
**Citation** Journal of High Energy Physics, No.10  
**Publisher** Springer  
**URI** [https://doi.org/10.1007/JHEP10\(2018\)161](https://doi.org/10.1007/JHEP10(2018)161)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1356>  
**Date of Publication** 2018-10-25

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.

**Title** Charged-particle nuclear modification factors in XeXe collisions at root S-NN=5.44 TeV

**Citation** Journal of High Energy Physics, No.10.

**Publisher** Springer

**URI** [https://doi.org/10.1007/JHEP10\(2018\)138](https://doi.org/10.1007/JHEP10(2018)138)

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1357>

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**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.

**Title** Search for an exotic decay of the Higgs boson to a pair of light pseudoscalars in the final state with two bquarks and two tau leptons in proton-proton collisions at root s=13 TeV The CMS Collaboration

**Citation** Physics Letters B, Vol.785 pp462-488.

**Publisher** Elsevier

**URI** <https://doi.org/10.1016/j.physletb.2018.08.057>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1358>

**Date of Publication** 2018-10-10

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.

**Title** Study of jet quenching with isolated-photon plus jet correlations in PbPb and pp collisions at root s(NN)=5.02 TeV

**Citation** Physics Letters B, Vol.785 pp14-39.

**Publisher** Elsevier

**URI** <https://doi.org/10.1016/j.physletb.2018.07.061>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1359>

**Date of Publication** 2018-10-10

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.

**Title** Search for physics beyond the standard model in high-mass diphoton events from proton-proton collisions at root s=13 TeV

**Citation** Physical Review D, Vol.98(9).

**Publisher** American Physical Society

**URI** <https://doi.org/10.1103/PhysRevD.98.092001>

**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1362>

**Date of Publication** 2018-11-02

**Author(s)** CMS Collaboration; Sirunyan, A. M.; Chauhan, S.; Dube, S.; Hegde, V.; Kapoor, A.; Kotheekar, K.; Pandey, S.; Rane, A.; Sharma, S. et al.  
**Title** Precision measurement of the structure of the CMS inner tracking system using nuclear interactions  
**Citation** Journal of Instrumentation, Vol.13  
**Publisher** IOP Publishing  
**URI** <https://doi.org/10.1088/1748-0221/13/10/P10034>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1349>  
**Date of Publication** 2018-10

**Author(s)** Dey, Anshuman; Jain, Sachin et al.  
**Title** Duality and an exact Landau-Ginzburg potential for quasi-bosonic Chern-Simons-Matter theories  
**Citation** Journal of High Energy Physics, No.11.  
**Publisher** Springer  
**URI** [https://doi.org/10.1007/JHEP11\(2018\)020](https://doi.org/10.1007/JHEP11(2018)020)  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1364>  
**Date of Publication** 2018-11-06

**Author(s)** Goyal, S. K.; Bapat, B. et al.  
**Title** Aditya Solarwind Particle Experiment (ASPEX) onboard the Aditya-L1 mission  
**Citation** Planetary and Space Science, Vol.163 pp42-55.  
**Publisher** Elsevier  
**URI** <https://doi.org/10.1016/j.pss.2018.04.008>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1382>  
**Date of Publication** 2018-11-15

**Author(s)** Kashyap, G.; Ambika, G.  
**Title** Link deletion in directed complex networks  
**Citation** Physica A: Statistical Mechanics and its Applications, Vol.514 pp631-643  
**Publisher** Elsevier  
**URI** <https://doi.org/10.1016/j.physa.2018.09.156>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1332>  
**Date of Publication** 2019-01-15



**Author(s)** Khanapurkar, Swanand; Pradhan, Arnab; Dhruv, Vedant; Singh, Tejinder P.  
**Title** Nonrelativistic limit of Einstein-Cartan-Dirac equations  
**Citation** Physical Review D, Vol. 98(10).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.98.104027>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1354>  
**Date of Publication** 2018-11-19

**Author(s)** Korwar, Mrunal and Thalapillil, Arun M.  
**Title** Finite temperature Schwinger pair production in coexistent electric and magnetic fields  
**Citation** Physical Review D, Vol.98(07).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevD.98.076016>  
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**Date of Publication** 2018-10-29

**Author(s)** Krishnamurthy, Shreya; Naphade, Rounak; Mir, Wasim J.; Gosavi, Suresh; Chakraborty, Sudip; Vaidhyanathan, Ramanathan; Ogale, Satishchandra  
**Title** Molecular and Self-Trapped Excitonic Contributions to the Broadband Luminescence in Diamine-Based Low-Dimensional Hybrid Perovskite Systems  
**Citation** Advanced Optical Materials, Vol.6(20).  
**Publisher** Wiley  
**URI** <https://doi.org/10.1002/adom.201800751>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1331>  
**Date of Publication** 2018-10-18

**Author(s)** Kumar, C. S. Sudheer; Mahesh, T. S.  
**Title** Ancilla-induced amplification of quantum Fisher information  
**Citation** European Physical Journal Plus, Vol.133(11).  
**Publisher** Springer  
**URI** <https://doi.org/10.1140/epjp/i2018-12260-2>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1363>  
**Date of Publication** 2018-11-12

**Author(s)** Mozumdar, Kunal; Ambika, G.  
**Title** Frequency locking and travelling burst sequences in community structured network of inhibitory neurons with differing time-scales  
**Citation** Communications in Nonlinear Science and Numerical Simulation, Vol.69 pp320-328  
**Publisher** Elsevier  
**URI** <https://doi.org/10.1016/j.cnsns.2018.09.026>  
**DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/1333>  
**Date of Publication** APR-2019

**Author(s)** Sarkar, Sumit; Mangaonkar, Jay; Vishwakarma, Chetan; Rapol, Umakant D.  
**Title** Diffraction of an atom laser in the Raman-Nath regime  
**Citation** Physical Review A, Vol.98(4).  
**Publisher** American Physical Society  
**URI** <https://doi.org/10.1103/PhysRevA.98.043625>  
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