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Monthly Bulletin of Publications:
Faculty, Scientists and Students of IISER Pune.
August 2019

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BIOLOGY

- Author(s)** HARISH, ROHIT KRISHNAN; TENDULKAR, SHWETA; DEIVASIGAMANI, SENTHILKUMAR; Ratnaparkhi, Anuradha; RATNAPARKHI, GIRISH S.
- Title** Monensin Sensitive 1 Regulates Dendritic Arborization in Drosophila by Modulating Endocytic Flux
- Citation** Frontiers in Cell and Developmental Biology,7.
- Publisher** Frontiers Media SA
- URI** <https://doi.org/10.3389/fcell.2019.00145>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3803>
- Date of Publication** 02-08-2019
-
- Author(s)** KONDHARE, KIRTIKUMAR R.; VETAL, PALLAVI V.; KALSI, HARPREET S.; BANERJEE, ANJAN K.
- Title** BEL1-like protein (StBEL5) regulates CYCLING DOF FACTOR1 (StCDF1) through tandem TGAC core motifs in potato
- Citation** Journal of Plant Physiology, 241.
- Publisher** Elsevier B.V.
- URI** <https://doi.org/10.1016/j.jplph.2019.153014>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3808>
- Date of Publication** 31-07-2019
-
- Author(s)** KUMAR, AMIT; KONDHARE, RAMESHKIRTIKUMAR; VETAL, PALLAVI VIJAY; BANERJEE, ANJAN K.
- Title** PcG proteins MSI1 and BMI1 function upstream of miR156 to regulate aerial tuber formation in potato
- Citation** Plant Physiology.
- Publisher** The American Society of Plant Biologists
- URI** <https://doi.org/10.1104/pp.19.00416>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3807>
- Date of Publication** AUG-2019
-
- Author(s)** MISHRA, KAMAL K.; SINGH, SANTOSH K.; KUMAR, SATISH; SINGH, GULZAR; Sarkar, Biplab; MADHUSUDHAN, M. S.; DAS, ALOKE
- Title** Water-Mediated Selenium Hydrogen-Bonding in Proteins: PDB Analysis and Gas-Phase Spectroscopy of Model Complexes
- Citation** Journal of Physical Chemistry A, 123(28), 5995-6002.
- Publisher** American Chemical Society
- URI** <https://doi.org/10.1021/acs.jpca.9b04159>
- DR URI** <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3816>
- Date of Publication** 21-06-2019

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Author(s) MUNGI, CHAITANYA; BAPAT, NIRAJA; Hongo, Yayoi; RAJAMANI, SUDHA
Title Formation of Abasic Oligomers in Nonenzymatic Polymerization of Canonical Nucleotides
Citation Life, 9(3).
Publisher MDPI
URI <https://doi.org/10.3390/life9030057>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3818>
Date of Publication 04-07-2019

Author(s) Pandey, Siddharth; RAJAMANI, SUDHA; MUNGI, CHAITANYA; BAPAT, NIRAJA et al.
Title Ladakh: diverse, high-altitude extreme environments for off-earth analogue and astrobiology research
Citation International Journal of Astrobiology.
Publisher Cambridge University Press
URI <https://doi.org/10.1017/S1473550419000119>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3817>
Date of Publication 13-06-2019

CHEMISTRY

Author(s) Dutta, Sanjay; Vikas; YADAV, ASHOK; BOOMISHANKAR, RAMAMOORTHY; Bala, Anu; Kumar, Vijay; Chakraborty, Tirthankar; Elizabeth, Suja; Munshi, Parthapratim
Title Record-high thermal stability achieved in a novel single-component all-organic ferroelectric crystal exhibiting polymorphism
Citation Chemical Communications, 55(65), 9610-9613.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/c9cc04434e>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3810>
Date of Publication 09-07-2019

Author(s) CHAKRABORTY, DEBANJAN; NANDI, SHYAMAPADA; Illathvalappil, Rajith; MULLANGI, DINESH; MAITY, RAHUL; Singh, Santosh; HALDAR, SATTWICK; Vinod, Chathakudath P.; Kurungot, Sreekumar; VAIDHYANATHAN, RAMANATHAN
Title Carbon Derived from Soft Pyrolysis of a Covalent Organic Framework as a Support for Small-Sized RuO₂ Showing Exceptionally Low Overpotential for Oxygen Evolution Reaction
Citation ACS Omega, 4(8), 3465-13473.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acsomega.9b01777>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3836>
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Author(s) MISHRA, KAMAL K.; SINGH, SANTOSH K.; KUMAR, SATISH; SINGH, GULZAR; Sarkar, Biplab; MADHUSUDHAN, M. S.; DAS, ALOKE

Title Water-Mediated Selenium Hydrogen-Bonding in Proteins: PDB Analysis and Gas-Phase Spectroscopy of Model Complexes

Citation Journal of Physical Chemistry A, 123(28), 5995-6002.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.jpca.9b04159>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3816>

Date of Publication 21-06-2019

Author(s) MOLLICK, SAMRAJ; FAJAL, SAHEL; MUKHERJEE, SOUMYA; GHOSH, SUJIT K.

Title Stabilizing Metal-Organic Polyhedra (MOP): Issues and Strategies

Citation Chemistry: An Asian Journal.

Publisher Wiley

URI <https://doi.org/10.1002/asia.201900800>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3834>

Date of Publication 30-07-2019

Author(s) NAVALE, BALU S.; LAHA, DEBASISH; BHAT, RAMAKRISHNA G

Title Propargyl alpha-aryl-alpha-diazoacetates as robust reagents for the effective C-H bond functionalization of 1,3-diketones via scandium catalysis

Citation Tetrahedron Letters, 60(29), 1899-1903.

Publisher Elsevier B.V.

URI <https://doi.org/10.1016/j.tetlet.2019.06.026>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3813>

Date of Publication 18-07-2019

Author(s) RAJENDRA, RANGUWAR; ROY, DEBASHREE; Tripathi, Shalini; BALLAV, NIRMALYA

Title Facile Synthesis of Concave Cuboid Au NCs with Precisely Tunable Dimensions and Mechanistic Insight

Citation Langmuir, 35(29), 9456-9463.

Publisher American Chemical Society

URI <https://doi.org/10.1021/acs.langmuir.9b00557>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3821>

Date of Publication 01-07-2019

- Author(s)** RANA, SHAMMI; SINDHU, POOJA; BALLAV, NIRMALYA
Title Perspective on the Interfacial Reduction Reaction
Citation Langmuir, 35(30), 9647-9659.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.langmuir.9b01250>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3806>
Date of Publication 08-07-2019
- Author(s)** RAUT, RAVINDRA K.; SAHOO, PADMINI; CHIMNAPURE, DIPTI; MAJUMDAR, MOUMITA
Title Versatile coordinating abilities of acyclic N-4 and N2P2 ligand frameworks in conjunction with Sn[N(SiMe3)(2)](2)
Citation Dalton Transactions, 48(29), 10953-10961.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/c9dt00617f>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3829>
Date of Publication 04-06-2019
- Author(s)** SINGH, SACHIN KUMAR; MUDULI, SUBAS; DHAKRAS, DIPTI; Pandey, Richa; BABAR, ROHIT; SINGH, ANKUR; Kabra, Dinesh; KABIR, MUKUL; BOOMISHANKAR,
Title High power mechanical energy harvester based on exfoliated black phosphorous-polymer composite and its multiple applications
Citation Sustainable Energy & Fuels, 3(8), 1943-1950.
Publisher Royal Society of Chemistry
URI <https://doi.org/10.1039/c9se00267g>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3822>
Date of Publication 26-06-2019
- Author(s)** VIJAYAKANTH, THANGAVEL; Ram, Farsa; Praveenkumar, Balu; Shanmuganathan, Kadhiraivan; BOOMISHANKAR, RAMAMOORTHY
Title All-Organic composites of Ferro- and Piezoelectric Phosphonium salts for mechanical energy harvesting application
Citation Chemistry of Materials, 31(15), 5964-5972.
Publisher American Chemical Society
URI <https://doi.org/10.1021/acs.chemmater.9b02409>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3832>
Date of Publication 23-07-2019

EARTH AND CLIMATE SCIENCE

Author(s) Voort, Tessa Sophia van der; MANNU, UTSAV; Hagedorn, Frank; McIntyre, Cameron; Walthert, Lorenz; Schleppe, Patrick; Haghypour, Negar; Eglinton, Timothy Ian

Title Dynamics of deep soil carbon - insights from 14C time series across a climatic gradient

Citation Biogeosciences, 16, 3233-3246.

Publisher Copernicus Publications

URI <https://doi.org/10.5194/bg-16-3233-2019>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3833>

Date of Publication 29-08-2019

HUMANITIES AND SOCIAL SCIENCES

Author(s) Shylaja, B.S.; PAI, VENKETESWARA R.

Title Identification of the stars of the Saptarsi Mandala and its vicinity

Citation Journal of Astronomical History and Heritage, 22(2), 294–300.

Publisher National Astronomical Research Institute of Thailand

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3835>

Date of Publication AUG-2019

MATHEMATICS

Author(s) Arapostathis, Ari; BISWAS, ANUP; Caffarelli, Luis

Title On uniqueness of solutions to viscous HJB equations with a subquadratic nonlinearity in the gradient

Citation Communications in Partial Differential Equations.

Publisher Taylor & Francis Inc

URI <https://doi.org/10.1080/03605302.2019.1645697>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3809>

Date of Publication 26-07-2019

Author(s) Balakumar, G. P.; BORAH, DIGANTA; Mahajan, Prachi; Verma, Kaushal

Title Remarks on the Higher Dimensional Suita Conjecture

Citation Proceedings of the American Mathematical Society, 147(8), 3401-3411.

Publisher American Mathematical Society

URI <https://doi.org/10.1090/proc/14421>

DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3814>

Date of Publication 08-05-2019

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PHYSICS

- Author(s)** BABAR, ROHIT; KABIR, MUKUL
Title Mechanistic insights in phosphorene degradation
Citation Physical Review Materials, 3(7).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevMaterials.3.074008>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3826>
Date of Publication 29-07-2019
- Author(s)** Barman, Basabendu; Bhattacharya, Subhaditya; Ghosh, Purusottam; KADAM, SAURABH; Sahu, Narendra
Title Fermion dark matter with scalar triplet at direct and collider searches
Citation Physical Review D, 100(1).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevD.100.015027>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3820>
Date of Publication 18-07-2019
- Author(s)** BHALERAO, RAJEEV S.; Giacalone, Giuliano; Ollitrault, Jean-Yves
Title Primordial non-Gaussianity in heavy-ion collisions
Citation Physical Review C, 100(1).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevC.100.014909>
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Date of Publication 26-07-2019
- Author(s)** CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, S.; SHARMA, S. et al.
Title Search for charged Higgs bosons in the $H_{\pm} \rightarrow \tau_{\pm} \nu_{\tau}$ decay channel in proton-proton collisions at $\sqrt{s}=13$ TeV
Citation Journal of High Energy Physics.
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URI [https://doi.org/10.1007/JHEP07\(2019\)142](https://doi.org/10.1007/JHEP07(2019)142)
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3825>
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Author(s) CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, S.; 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 muons and two b quarks in pp collisions at 13 TeV
Citation Physics Letters B, 795, 398-423.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.physletb.2019.06.021>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3800>
Date of Publication 10-08-2019

Author(s) CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, S.; SHARMA, S. et al.
Title Measurement of electroweak WZ boson production and search for new physics in WZ plus two jets events in pp collisions at root s=13 TeV
Citation Physics Letters B, 795, 281-307.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.physletb.2019.05.042>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3800>
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Author(s) CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, S.; SHARMA, S. et al.
Title Search for dark matter in events with a leptoquark and missing transverse momentum in proton-proton collisions at 13 TeV
Citation Physics Letters B, 795, 76-99.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.physletb.2019.05.046>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3802>
Date of Publication 10-08-2019

Author(s) CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, S.; SHARMA, S. et al.
Title Search for the production of (WWW -/+)-W+/-W+/- events at root s=13 TeV
Citation Physical Review D, 100(1).
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URI <https://doi.org/10.1103/PhysRevD.100.012004>
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Title Centrality and pseudorapidity dependence of the transverse energy density in pPb collisions at $\sqrt{s(NN)}=5.02$ TeV
Citation Physical Review C, 100(2).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevC.100.024902>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3798>
Date of Publication 01-08-2019

Author(s) CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; SHARMA, S. et al.
Title Centrality and pseudorapidity dependence of the transverse energy density in pPb collisions at $\sqrt{s(NN)}=5.02$ TeV
Citation Physical Review C, 100(2).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevC.100.024902>
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Date of Publication 01-08-2019

Author(s) Dey, Kaustav; Hergett, Waldemar; TELANG, PRACHI; Abdel-Hafiez, Mahmoud M.; Klingeler, Rudiger
Title Magnetic properties of high-pressure optical floating-zone grown LaNiO₃ single crystals
Citation Journal of Crystal Growth, 524.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.jcrysgro.2019.125157>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3812>
Date of Publication 15-10-2019

Author(s) Kamboj, Suman; ROY, DEEPAK K.; Roy, Susmita; Chowdhury, Rajeswari Roy; Mandal, Prabhat; KABIR, MUKUL; Sheet, Goutam
Title Temperature dependent transport spin-polarization in the low Curie temperature complex itinerant ferromagnet EuTi_{1-x}Nb_xO₃
Citation Journal of Physics-Condensed Matter, 31(41).
Publisher IOP Publishing
URI <https://doi.org/10.1088/1361-648X/ab2cbd>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3819>
Date of Publication 15-07-2019

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Author(s) MONDAL, KRISHNAKANTA; GHOSH, PRASENJIT
Title Exfoliation of Ti₂C and Ti₃C₂ Mxenes from bulk trigonal phases of titanium carbide: A theoretical prediction
Citation Solid State Communications, 299.
Publisher Elsevier B.V.
URI <https://doi.org/10.1016/j.ssc.2019.113657>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3823>
Date of Publication SEP-2019

Author(s) PANDEY, PADMINI; SHARMA, NEHA; PANCHAL, REENA A.; Gosavi, S. W.; OGALE, SATISHCHANDRA
Title Realization of High Capacity and Cycling Stability in Pb-Free A(2)CuBr(4) (A=CH₃NH₃/Cs, 2 D/3 D) Perovskite-Based Li-Ion Battery Anodes
Citation ChemSusChem.
Publisher Wiley
URI <https://doi.org/10.1002/cssc.201900959>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3799>
Date of Publication 15-07-2019

Author(s) PARMAR, SWATI; BISWAS, ABHIJIT; SINGH, SACHIN KUMAR; Ray, Bishakha; Parmar, Saurabh; Gosavi, Suresh; Sathe, Vasant; Choudhary, Ram Janay; Datar, Suvarna; OGALE, SATISHCHANDRA
Title Coexisting 1T/2H-1 polymorphs, reentrant resistivity behavior, and charge distribution in MoS₂-hBN 2D/2D composite thin films
Citation Physical Review Materials, 3(7).
Publisher American Physical Society
URI <https://doi.org/10.1103/PhysRevMaterials.3.074007>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/3827>
Date of Publication 25-07-2019

Author(s) SINGH, DAYAL; RAJA, K. SASIKUMAR; SUBRAMANIAN, PRASAD; Ramesh, R.; Monstein, Christian
Title Automated detection of solar radio bursts using a statistical method
Citation Solar Physics.
Publisher Springer
URI <https://doi.org/10.1007/s11207-019-1500-0>
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Author(s) SINGH, SACHIN KUMAR; MUDULI, SUBAS; DHAKRAS, DIPTI; Pandey, Richa; BABAR, ROHIT; SINGH, ANKUR; Kabra, Dinesh; KABIR, MUKUL; BOOMISHANKAR, RAMAMOORTHY; OGALE. SATISHCHANDRA

Title High power mechanical energy harvester based on exfoliated black phosphorous-polymer composite and its multiple applications

Citation Sustainable Energy & Fuels, 3(8), 1943-1950.

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URI <https://doi.org/10.1039/c9se00267g>

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Date of Publication 26-06-2019

Author(s) VASISTA, ADARSH B.; CHAUBEY, SHAILENDRA K.; Gosztola, David J.; Wiederrecht, Gary P.; Gray, Stephen K.; KUMAR, G. V. PAVAN

Title Momentum-Resolved Surface Enhanced Raman Scattering from a Nanowire-Nanoparticle Junction Cavity

Citation Advanced Optical Materials, 7(15).

Publisher Wiley

URI <https://doi.org/10.1002/adom.201900304>

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Date of Publication 06-05-2019

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