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New Publications of Faculty, Scientists and Students of IISER Pune - October 2018.

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Biology

Author(s) Anoop, V. K.; **Dahanukar, Neelesh**; Philip, Siby; Thomas, Liju and Raghavan, Rajeev
Title Phylogeny of the hillstream loath genus *Mesonoemacheilus* reveals wide spread diversification through ancient drainage connections in the Western Ghats Biodiversity Hotspot
Name of the Journal Molecular Phylogenetics and Evolution
Vol. No. 129
Page No. 77-84
Date of Publication Dec-2018
Name of the Publisher Elsevier
DOI [10.1016/j.ympev.2018.08.013](https://doi.org/10.1016/j.ympev.2018.08.013)

Author(s) **Bapat, Niraja, V. and Rajamani, Sudha**
Title Templated replication (or lack thereof) under prebiotically pertinent conditions
Name of the Journal Scientific Reports
Vol. No. 8
Date of Publication 09-Oct-2018
Name of the Publisher Springer Nature
DOI [10.1038/s41598-018-33157-9](https://doi.org/10.1038/s41598-018-33157-9)

Author(s) **Chawla, Suraj; Pund, Anagha; Vibishan, B.; Kulkarni, Shubhankar; Diwekar-Joshi, Manawa and Watve, Milind**
Title Inferring causal pathways among three or more variables from steady-state correlations in a homeostatic system
Name of the Journal PLOS One
Vol. No. 13
Issue No. 10
Date of Publication 11-Oct-2018
Name of the Publisher PLOS One
DOI [10.1371/journal.pone.0204755](https://doi.org/10.1371/journal.pone.0204755)

Author(s) Jethva, Prashant N. and **Udgaonkar, Jayant B.**
Title The Osmolyte TMAO Modulates Protein Folding Cooperativity by Altering Global Protein Stability
Name of the Journal Biochemistry
Vol. No. 57
Issue No. 40
Page No. 5851-5863
Date of Publication 10-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acs.biochem.8b00698](https://doi.org/10.1021/acs.biochem.8b00698)

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Author(s) **Mir, Rafeeq.; Sharma, Ankita; Pradhan, Saurabh J. and Galande, Sanjeev**
Title Regulation of transcription factor SP1 by β -catenin destruction complex modulates Wnt response.
Name of the Journal Molecular and Cellular Biology
Vol. No. 38
Issue No. 22
Date of Publication 04-Sep-2018
Name of the Publisher American Society for Microbiology
DOI [10.1128/MCB.00188-18](https://doi.org/10.1128/MCB.00188-18)

Author(s) **Mishra, Abhishek; Tung, Sudipta; Sruti, V. R. Shree; Sadiq, Mohammed Aamir; Srivathsa, Sahana and Dey, Sutirth**
Title Pre-dispersal context and presence of opposite sex modulate density dependence and sex bias of dispersal
Name of the Journal Oikos
Vol. No. 127
Issue No. 11
Page No. 1596-1604
Date of Publication 13-May-2018
Name of the Publisher Wiley
DOI [10.1111/oik.04902](https://doi.org/10.1111/oik.04902)

Chemistry

Author(s) **Agalave, Sandip G.; Chaudhari, Moreshwar B.; Bisht, Girish Singh and Gnanaprakasam, Boopathy**
Title Additive Free Fe-Catalyzed Conversion of Nitro to Aldehyde under Continuous Flow Module
Name of the Journal ACS Sustainable Chemistry & Engineering
Vol. No. 6
Issue No. 10
Page No. 12845-12854
Date of Publication 14-Aug-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acssuschemeng.8b02090](https://doi.org/10.1021/acssuschemeng.8b02090)

Author(s) Campanello, Gregory C.; **Gouda, Harsha et.al.**
Title Sacrificial Cobalt–Carbon Bond Homolysis in Coenzyme B12 as a Cofactor Conservation Strategy
Name of the Journal Journal of American Chemical Society
Vol. No. 140
Issue No. 41
Page No. 13205–13208
Date of Publication 03-Oct-2018
Name of the Publisher ACS Publications
DOI [10.1021/jacs.8b08659](https://doi.org/10.1021/jacs.8b08659)

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Author(s) Deb, Pranab; **Singh, Santosh K.; Das, Alope** et.al.
Title Interconverting Hydrogen-Bonding and Weak n -> pi* Interactions in Aqueous Solution: A Direct Spectroscopic Evidence
Name of the Journal Journal of Physical Chemistry Letters
Vol. No. 9
Issue No. 18
Page No. 5425-5429
Date of Publication 20-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acs.jpcllett.8b02398](https://doi.org/10.1021/acs.jpcllett.8b02398)

Author(s) **Haldar, Sattwick; Chakraborty, Debanjan; Roy, Bibhisian; Banappanavar, Gangadhar; Rinku, Kushwaha; Mullangi, Dinesh; Hazra, Partha;** Kabra, Dinesh and **Vaidhyanathan, Ramanathan**
Title Anthracene-Resorcinol Derived Covalent Organic Framework as Flexible White Light Emitter
Name of the Journal Journal of the American Chemical Society
Vol. No. 140
Issue No. 41
Page No. 13367–13374
Date of Publication 26-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/jacs.8b08312](https://doi.org/10.1021/jacs.8b08312)

Author(s) Kritikos, Georgios; **Pant, Rakesh;** Sengupta, Soumyadipta; Karatasos, Kostas; **Venkatnathan, Arun** and Lyulin, Alexey V.
Title Nanostructure and Dynamics of Humidified Nafion/Graphene-Oxide Composites via Molecular Dynamics Simulations
Name of the Journal Journal of Physical Chemistry C
Vol. No. 122
Issue No. 40
Page No. 22864–22875
Date of Publication 19-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acs.jpcc.8b07170](https://doi.org/10.1021/acs.jpcc.8b07170)

Author(s) **Majumdar, Moumita; Raut, Ravindra K.; Sahoo, Padmini and Kumar, Vikas**
Title Bis(chlorogermylumylidene) and its significant role in elusive reductive cyclization
Name of the Journal Chemical Communications
Vol. No. 54
Issue No. 77
Page No. 10839-10842
Date of Publication 04-Oct-2018
Name of the Publisher Royal Society of Chemistry
DOI [10.1039/c8cc06067c](https://doi.org/10.1039/c8cc06067c)

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Author(s) **Malla, Javid Ahmad; Roy, Arundhati and Talukdar, Pinaki**
Title Anion Selective Ion Channel Constructed from a Self-Assembly of Bis(cholate)-Substituted Fumaramide
Name of the Journal Organic Letters
Vol. No. 20
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Page No. 5991-5994
Date of Publication 27-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acs.orglett.8b02115](https://doi.org/10.1021/acs.orglett.8b02115)

Author(s) **Manoharan, Ramasamy** and Jeganmohan, Masilamani
Title Cobalt-catalyzed cyclization of benzamides with alkynes: a facile route to isoquinolones with hydrogen evolution
Name of the Journal Organic & Biomolecular Chemistry
Vol. No. 16
Issue No. 37
Page No. 7006-7011
Date of Publication 07-Oct-2018
Name of the Publisher Royal Society of Chemistry
DOI [10.1039/c8ob01924j](https://doi.org/10.1039/c8ob01924j)

Author(s) **Yadav, Ashok;** Kulkarni, Priyangi; Praveenkumar, Balu; Steiner, Alexander and **Boomishankar, Ramamoorthy**
Title Hierarchical Frameworks of Metal-Organic Cages with Axial Ferro electric Anisotropy
Name of the Journal Chemistry-A European Journal
Issue No. 24
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Name of the Publisher Wiley
DOI [10.1002/chem.201803863](https://doi.org/10.1002/chem.201803863)

Author(s) **Hridya, V. M. and Mukherjee, Arnab**
Title Probing the Viscosity Dependence of Rate: Internal Friction or the Lack of Friction?
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Date of Publication 11-Sep-2018
Name of the Publisher American Chemical Society
DOI [10.1021/acs.jpcc.8b05585](https://doi.org/10.1021/acs.jpcc.8b05585)

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Author(s) **Kumar, Vikash; Joshi, Niharika; Dhara, Barun; Jha, Plawan Kumar; Rana, Shammi; Ghosh, Prasenjit and Ballav, Nirmalya**
Title Stable Red Emission from Nanosheets of Molecularly Doped Hexagonal Boron Nitride
Name of the Journal Journal of Physical Chemistry C
Vol. No. 122
Issue No. 36
Page No. 21076-21082
Date of Publication 13-Sep-2018
Name of the Publisher American Chemical Society
DOI [0.1021/acs.jpcc.8b07660](https://doi.org/10.1021/acs.jpcc.8b07660)

Earth and Climate Science

Author(s) Geilert, Sonja; **Sarkar, Sudipta** et.al.
Title On the formation of hydrothermal vents and cold seeps in the Guaymas Basin, Gulf of California
Name of the Journal Biogeosciences
Vol. No. 15
Issue No. 18
Page No. 5715-5731
Date of Publication 27-Sep-2018
Name of the Publisher Copernicus Publications
DOI [10.5194/bg-15-5715-2018](https://doi.org/10.5194/bg-15-5715-2018)

Physics

Author(s) **Afle, Chaitanya** et. al.
Title Detection and characterization of spin-orbit resonances in the advanced gravitational wave detectors era
Name of the Journal Physical Review D
Vol. No. 98
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Date of Publication 16-Oct-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevD.98.083014](https://doi.org/10.1103/PhysRevD.98.083014)

Author(s) **Bhunia, Amit; Singh, Mohit Kumar;** Gobato, Y. Galvão;
Henini, Mohamed and **Datta, Shouvik**
Title Experimental Detection and Control of Trions and Fermi-Edge
Singularity in Single-Barrier GaAs/AlAs/GaAsHeterostructures
Using Photocapacitance Spectroscopy
Name of the Journal Physical Review Applied
Vol. No. 10
Issue No. 4
Date of Publication OCT 2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevApplied.10.044043](https://doi.org/10.1103/PhysRevApplied.10.044043)

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 Search for a heavy resonance decaying into a Z boson and a Z or W
boson in 2l2q final states at root s=13 TeV
Name of the Journal Journal of High Energy Physics
Vol. No. 9
Date of Publication 18-Sep-2018
Name of the Publisher Springer
DOI [10.1007/JHEP09\(2018\)101](https://doi.org/10.1007/JHEP09(2018)101)

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 Observation of Higgs Boson Decay to Bottom Quarks
Name of the Journal Physical Review Letters
Vol. No. 121
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Date of Publication 17-Sep-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevLett.121.121801](https://doi.org/10.1103/PhysRevLett.121.121801)

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 Performance of reconstruction and identification of tau leptons
decaying to hadrons and nu(tau) in pp collisions at root s=13 TeV
Name of the Journal Journal of Instrumentation
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Date of Publication Oct-2018
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DOI [10.1088/1748-0221/13/10/P10005](https://doi.org/10.1088/1748-0221/13/10/P10005)

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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.; Sharma, S.** et.al.
Title Search for top squarks decaying via four-body or chargino-mediated modes in single-lepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV
Name of the Journal Journal of High Energy Physics
Date of Publication 12-Sep-2018
Name of the Publisher Springer
DOI [10.1007/JHEP09\(2018\)065](https://doi.org/10.1007/JHEP09(2018)065)

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 Search for Pair-Produced Resonances Each Decaying into at Least Four Quarks in Proton-Proton Collisions at $\sqrt{s}=13$ TeV
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Date of Publication 05-Oct-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevLett.121.141802](https://doi.org/10.1103/PhysRevLett.121.141802)

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 Search for Z gamma resonances using leptonic and hadronic final states in proton-proton collisions at $\sqrt{s}=13$ TeV
Name of the Journal Journal of High Energy Physics
Issue No. 09
Date of Publication 26-Sep-2018
Name of the Publisher Springer
DOI [10.1007/JHEP09\(2018\)148](https://doi.org/10.1007/JHEP09(2018)148)

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 Search for new physics in dijet angular distributions using proton-proton collisions at $\sqrt{s}=13$ TeV and constraints on dark matter and other models
Name of the Journal European Physical Journal C
Vol. No. 78
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Date of Publication 28-Sep-2018
Name of the Publisher Springer
DOI [10.1140/epjc/s10052-018-6242-x](https://doi.org/10.1140/epjc/s10052-018-6242-x)

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 Pseudorapidity and transverse momentum dependence of flow harmonics in pPb and PbPb collisions
Name of the Journal Physical Review C
Vol. No. 98
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Date of Publication 05-Oct-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevC.98.044902](https://doi.org/10.1103/PhysRevC.98.044902)

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 Observation of the $Z \rightarrow \psi l^{+}l^{-}$ Decay in pp Collisions at $\sqrt{s}=13$ TeV
Name of the Journal Physical Review Letters
Vol. No. 121
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Date of Publication 04-Oct-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevLett.121.141801](https://doi.org/10.1103/PhysRevLett.121.141801)

Author(s) Grabowska, Iwona; **Sharma, Neha; Ogale, Satishchandra** et.al.
Title Electrochemical Aptamer-Based Biosensors for the Detection of Cardiac Biomarkers
Name of the Journal ACS Omega
Vol. No. 03
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Date of Publication 26-Sep-2018
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DOI [10.1021/acsomega.8b01558](https://doi.org/10.1021/acsomega.8b01558)

Author(s) Inbasekar, Karthik; **Jain, Sachin;** Nayak, Pranjal and Umesh, V.
Title All Tree Level Scattering Amplitudes in Chern-Simons Theories with Fundamental Matter
Name of the Journal Physical Review Letters
Vol. No. 121
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Date of Publication 15-Oct-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevLett.121.161601](https://doi.org/10.1103/PhysRevLett.121.161601)

Author(s) **Kumar, Vikash; Joshi, Niharika; Dhara, Barun; Jha, Plawan
Kumar; Rana, Shammi; Ghosh, Prasenjit and Ballav, Nirmalya**
Title Stable Red Emission from Nanosheets of Molecularly Doped
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DOI [0.1021/acs.jpcc.8b07660](https://doi.org/10.1021/acs.jpcc.8b07660)

Author(s) **Pendse, Abhijit and Bhattacharyay, A**
Title Probing non-locality of interactions in a Bose–Einstein
condensate using solitons
Name of the Journal Journal of Physics: Condensed Matter
Vol. No. 30
Issue No. 45
Date of Publication 22-Oct-2018
Name of the Publisher IOP Publishing Ltd.
DOI [10.1088/1361-648X/aae33f](https://doi.org/10.1088/1361-648X/aae33f)

Author(s) **Tekur, S. Harshini; Bhosale, Udaysinh T. and Santhanam, M. S.**
Title Higher-order spacing ratios in random matrix theory and complex
quantum systems
Name of the Journal Physical Review B
Vol. No. 98
Issue No. 10
Date of Publication 18-Sep-2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevB.98.104305](https://doi.org/10.1103/PhysRevB.98.104305)

Author(s) **Tekur, S. Harshini; Kumar, Santosh and Santhanam, M. S.**
Title Exact distribution of spacing ratios for random and localized states
in quantum chaotic systems
Name of the Journal Physical Review E
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Date of Publication 2018
Name of the Publisher American Physical Society
DOI [10.1103/PhysRevE.97.062212](https://doi.org/10.1103/PhysRevE.97.062212)

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