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New Publications of Faculty, Scientists and Students of IISER Pune - Nov 2017.

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Biology

Author(s) Barone V.; Lang, M.; Krens S.F.G.; **Pradhan, S.J.**; Shamipour, S.; Sako, K.; Sikora, M.; Guet, C.C. and Heisenberg C.P.
Title An Effective Feedback Loop between Cell-Cell Contact Duration and Morphogen Signaling Determines Cell Fate
Name of the Journal Developmental Cells
Vol. No. 43
Issue No. 02
Date of Publication 23-Oct-2017
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.devcel.2017.09.014>

Author(s) **Rale, Abhishek; Shendye, Ninad; Bodas, Devika S.; Subhedar, Nishikant and Ghose, Aurnab.**
Title CART neuropeptide modulates the extended amygdalar CeA-vBNST circuit to gate expression of innate fear
Name of the Journal Psychoneuroendocrinology
Vol. No. 85
Page No. 69-77
Date of Publication Nov-2017
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.psyneuen.2017.08.012>

Author(s) Choudhary, Amit G.; Somalwar, Amita R.; Sagarkar, Sneha; **Rale, Abhishek;** Sakharkar, Amul; **Subhedar, Nishikant K.** and Kokare, Dadasaheb M.
Title CART neurons in the lateral hypothalamus communicate with the nucleus accumbens shell via glutamatergic neurons in paraventricular thalamic nucleus to modulate reward behavior
Name of the Journal Brain Structure and Function
Page No. 1-16
Date of Publication 07-Nov-2017
Name of the Publisher Springer
DOI <https://doi.org/10.1007/s00429-017-1544-6>

Chemistry

Author(s) Sengupta, Soumyadipta; **Pant, Rakesh**; Komarov, Pavel;
Venkatnathan, Arun and Lyulin, Alexey V.
Title Atomistic simulation study of the hydrated structure and transport dynamics of a novel multi acid side chain polyelectrolyte membrane
Name of the Journal International Journal of Hydrogen Energy
Vol. No. 42
Issue No. 44
Page No. 27254-27268
Date of Publication 02-Nov-2017
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.ijhydene.2017.09.078>

Author(s) **Manae, Meghna A. and Hazra, Anirban.**
Title Interplay between Conjugation and Size-Driven Delocalization Leads to Characteristic Properties of Substituted Thymines.
Name of the Journal The Journal of Physical Chemistry A
Vol. No. 121
Issue No. 42
Page No. 8147–8153
Date of Publication 29-Sept-2017
Name of the Publisher American Chemical Society
DOI [10.1021/acs.jpca.7b08566](https://doi.org/10.1021/acs.jpca.7b08566)

Author(s) **Bisht, Girish Singh; Chaudhari, Moreshwar Bhagwan; Gupte, Vruta Sunil and Gnanaprakasam, Boopathy.**
Title Ru-NHC Catalyzed Domino Reaction of Carbonyl Compounds and Alcohols: A Short Synthesis of Donaxaridine
Name of the Journal ACS Omega
Vol. No. 02
Issue No. 11
Page No. 8234–8252
Date of Publication 20-Nov-2017
Name of the Publisher American Chemical Society
DOI [10.1021/acsomega.7b01152](https://doi.org/10.1021/acsomega.7b01152)

Author(s) **Pal, Jaya; Manna, Suman; Mondal, Anirban;** Das, Shyamashis;
Adarsh, K.V.; Nag, Angshuman.
Title Colloidal Synthesis and Photophysics of M₃Sb₂I₉ (M=Cs and Rb) Nanocrystals: Lead-Free Perovskites
Name of the Journal Angewandte Chemie-International Edition
Vol. No. 56
Issue No. 45
Page No. 14187-14191
Date of Publication 06-Nov-2017
Name of the Publisher Wiley
DOI [10.1002/anie.201709040](https://doi.org/10.1002/anie.201709040)

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Author(s) Manoharan, R. and **Jeganmohan, M.**
Title Cobalt-Catalyzed Oxidative Cyclization of Benzamides with Maleimides: Synthesis of Isoindolone Spirosuccinimides
Name of the Journal Organic Letters
Vol. No. 19
Issue No. 21
Page No. 5884-5887
Date of Publication 03-Nov-2017
Name of the Publisher American Chemical Society
DOI [10.1021/acs.orglett.7b02873](https://doi.org/10.1021/acs.orglett.7b02873)

Author(s) **Deshmukh, Mahesh S.**; Mane, Vishwanath S.; Kumbhar, Avinash S.; **Boomishankar, Ramamoorthy.**
Title Light-driven Hydrogen Evolution from Water by a Tripodal Silane Based (Co₆L₈1)-L-II Octahedral Cage
Name of the Journal Inorganic Chemistry
Vol. No. 56
Issue No. 21
Page.No 13286-13292
Date of Publication 06-Nov-2017
Name of the Publisher American Chemical Society
DOI [10.1021/acs.inorgchem.7b02074](https://doi.org/10.1021/acs.inorgchem.7b02074)

Author(s) **Neralkar, Mahesh; Mishra, Bijoyananda; Hotha, Srinivas.**
Title Nucleofuge Generating Glycosidations by the Remote Activation of Hydroxybenzotriazolyl Glycosides
Name of the Journal Journal of Organic Chemistry
Vol. No. 82
Issue No. 21
Page.No 11494-11504
Date of Publication 03-Nov- 2017
Name of the Publisher American Chemical Society
DOI [10.1021/acs.joc.7b02027](https://doi.org/10.1021/acs.joc.7b02027)

Mathematics

Author(s) **Kaipa, Krishna;** Beelen, Peter; Hoholdt, Tom and Glynn, David.
Title Counting generalized Reed--Solomon codes
Name of the Journal Advances in Mathematics of Communications
Vol. No. 11
Issue. No. 04
Page No. 777 - 790
Date of Publication Nov-2017
Name of the Publisher American Institute of Mathematical Sciences
DOI [10.3934/amc.2017057](https://doi.org/10.3934/amc.2017057)

Author(s) **Biswas, Anup**
Title Location of Maximizers of Eigenfunctions of Fractional Schrodinger's Equation
Name of the Journal Mathematical Physics Analysis and Geometry
Vol No. 20
Issue No. 04
Date of Publication 11-Nov-2017
Name of the Publisher Springer
DOI [10.1007/s11040-017-9256-y](https://doi.org/10.1007/s11040-017-9256-y)

Physics

Author(s) **Ananth, Sudarshan; Kar, Aditya; Majumdar, Sucheta and Shah, Nabha.**
Title Deriving spin-1 quartic interaction vertices from closure of the Poincaré algebra
Name of the Journal Nuclear Physics
Vol. No. 926
Page No. 11-19
Date of Publication Jan-2018
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.nuclphysb.2017.11.001>

Author(s) **Shekatkar, Snehal M.; Kotriwar, Yamini; Harikrishnan, K.P. and Ambika, G.**
Title Detecting abnormality in heart dynamics from multifractal analysis of ECG signals
Name of the Journal Scientific Reports
Vol. No. 07
Page No. 1-11
Date of Publication 09-Nov-2017
Name of the Publisher Springer Nature
DOI [10.1038/s41598-017-15498-z](https://doi.org/10.1038/s41598-017-15498-z)

Author(s) Kontar, E. P. ; Yu, S.; Kuznetsov, A. A.; Emslie, A. G.; Alcock, B.; Jeffrey, N. L. S.; Melnik, V. N.; Bian, N. H. & **Subramanian, P.**
Title Imaging spectroscopy of solar radio burst fine structures
Name of the Journal Nature Communications
Vol. No. 8
Date of Publication 15-Nov-2017
Name of the Publisher Springer Nature
DOI [10.1038/s41467-017-01307-8](https://doi.org/10.1038/s41467-017-01307-8)

Author(s) Brauner, Tomas and **Kadam, Saurabh V.**
Title Anomalous low-temperature thermodynamics of QCD in strong magnetic fields
Name of the Journal Journal of High Energy Physics
Date of Publication 17-Nov-2017
Name of the Publisher Springer
DOI [https://doi.org/10.1007/JHEP11\(2017\)103](https://doi.org/10.1007/JHEP11(2017)103)

Author(s) **Raja, K. Sasikumar; Subramanian, Prasad;** Ramesh, R.; Vourlidas, Angelos and Ingale, Madhusudan.
Title Turbulent density fluctuations and proton heating rate in the solar wind from 9-20~R
Name of the Journal The Astrophysical Journal
Vol. No. 850
Issue. No. 02
Date of Publication 27-Nov-2017
Name of the Publisher IOP Publishing
DOI <https://doi.org/10.3847/1538-4357/aa94cd>

Author(s) Dey, R. M.; Patil, D. and **Kulkarni, S.**
Title Integrated characterization study of diamond like carbon (DLC) synthesized by 2.45 GHZ microwave electron cyclotron resonance (ECR) plasma CVD
Name of the Journal Surface & Coatings Technology
Vol. No. 328
Page No. 30-43
Date of Publication 15-Nov-2017
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.surfcoat.2017.08.017>

Author(s) **Dube, S.; Hegde,V.; Kapoor, A.; Kothekar, K.; Pandey, S.; Rane, A.; Sharma, S.;**
Title Measurement of the triple-differential dijet cross section in proton-proton collisions at root s=8 TeV and constraints on parton distribution functions
Name of the Journal European Physical Journal C
Vol. No. 77
Issue. No. 11
Date of Publication 07-Nov-2017
Name of the Publisher Springer
DOI [10.1140/epjc/s10052-017-5286-7](https://doi.org/10.1140/epjc/s10052-017-5286-7)

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Author(s) **Dube, S.; Hegde,V.; Kapoor, A.; Kothekar, K.; Pandey, S.; Rane, A.; Sharma, S.;**
Title Search for a light pseudoscalar Higgs boson produced in association with bottom quarks in pp collisions at root s=8 TeV
Name of the Journal Journal of High Energy Physics
Vol. No. 11
Date of Publication 11-Nov-2017
Name of the Publisher Springer
DOI [10.1007/JHEP11\(2017\)010](https://doi.org/10.1007/JHEP11(2017)010)

Author(s) **Khurana, Deepak and Mahesh, T. S.**
Title Bang-bang optimal control of large spin systems: Enhancement of C-13-C-13 singlet-order at natural abundance
Name of the Journal Journal of Magnetic Resonance,
Vol. No. 284
Page No. 8-14
Date of Publication Nov-2017
Name of the Publisher Elsevier
DOI <https://doi.org/10.1016/j.jmr.2017.09.006>
