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Monthly Bulletin of Publications: Faculty, Scientists and Students of IISER Pune. March 2020

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BIOLOGY

Author(s) Agrawal, Raag; PRABAKARAN, SUDHAKARAN
Title Big data in digital healthcare: lessons learnt and recommendations for general practice
Citation Heredity, 124(4), 525-534.
Publisher Nature
URI <https://doi.org/10.1038/s41437-020-0303-2>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4500>
Date of Publication 2020-04

Author(s) ASSISI, COLLINS; Stopfer, Mark; Bazhenov, Maxim
Title Optimality of sparse olfactory representations is not affected by network plasticity
Citation PLOS Computational Biology, 16(2).
Publisher Public Library of Science
URI <https://doi.org/10.1371/journal.pcbi.1007461>
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Date of Publication 2020-02

Author(s) Chattopadhyay, Tandrika; Maniyadath, Babukrishna; Bagul, Hema P.; Chakraborty, Arindam; Shukla, Namrata; Budnar, Srikanth; RAJENDRAN, ABINAYA; Shukla, Arushi; KAMAT, SIDDHESH S.; Kolthur-Seetharam, Ullas
Title Spatiotemporal gating of SIRT1 functions by O-GlcNAcylation is essential for liver metabolic switching and prevents hyperglycemia
Citation Proceedings of the National Academy of Sciences, 117(12), 6890-6900.
Publisher National Academy of Sciences
URI <https://doi.org/10.1073/pnas.1909943117>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4485>
Date of Publication 2020-03

Author(s) Domingues, Ana Filipa; PRABAKARAN, SUDHAKARAN et al.
Title Loss of Kat2a enhances transcriptional noise and depletes acute myeloid leukemia stem-like cells
Citation eLife, 9.
Publisher eLife Sciences Publications Ltd.
URI <https://doi.org/10.7554/eLife.51754>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4493>
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Author(s)	MALLA, JAVID AHMAD; UMESH, RINTU M.; VIJAY, AMAL; MUKHERJEE, ARNAB; LAHIRI, MAYURIKA; TALUKDAR, PINAKI
Title	Apoptosis-inducing activity of a fluorescent barrel-rosette M^+/Cl^- channel
Citation	Chemical Science, 11(9), 2420-2428.
Publisher	Royal Society of Chemistry
URI	https://doi.org/10.1039/C9SC06520B
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4518
Date of Publication	2020-03

Author(s)	MANDA, SNEHA; Punekar, Jahnavi
Title	Experimental validation of the planktic foraminifera fragmentation index as proxy for the end-Cretaceous Ocean Acidification
Citation	Marine Micropaleontology, 155.
Publisher	Elsevier, B.V.
URI	https://doi.org/10.1016/j.marmicro.2020.101821
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Author(s)	PRADHAN, ROOPALI; NALLAPPA, MUHUNDEN JAYAKRISHNAN; SENGUPTA, KUNDAN
Title	Lamin A/C modulates spatial organization and function of the Hsp70 gene locus via nuclear myosin I
Citation	Journal of Cell Science, 133(4).
Publisher	The Company of Biologists Ltd
URI	https://doi.org/10.1242/jcs.236265
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Date of Publication	2020-02

CHEMISTRY

Author(s)	Amelot, Dylan; GOYAL, MAYANK; NAG, ANGSMAN et al.
Title	Revealing the Band Structure of FAPI Quantum Dot Film and Its Interfaces with Electron and Hole Transport Layer Using Time Resolved Photoemission
Citation	The Journal of Physical Chemistry C, 124(6), 3873-3880.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acs.jpcc.9b10946
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4520
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Author(s)	BISWAS, ABHIJIT; Patra, Astam K.; Sarkar, Sudeshna; Das, Dipankar; Chattopadhyay, Dipankar; De, Swati
Title	Synthesis of highly magnetic iron oxide nanomaterials from waste iron by one-step approach
Citation	Colloids and Surfaces A-Physicochemical and Engineering Aspects, 589.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.colsurfa.2020.124420
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 Author(s)	 DESAI, AAMOD V. V; SHARMA, SHIVANI; ROY, ARKENDU; Shirolkar, Mandar M. M.; GHOSH, SUJIT K.
Title	Specific recognition of toxic allyl alcohol by pore-functionalized metal-organic frameworks
Citation	Molecular Systems Design & Engineering, 5(2), 469-476.
Publisher	Royal Society of Chemistry
URI	https://doi.org/10.1039/C9ME00133F
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4502
Date of Publication	2020-01
 Author(s)	 GAUR, RAKESH; AMBHORE, MADAN D.; ANAND, VENKATARAMANARAO G.
Title	Non-planar core-modified dibenzi expanded isophlorin
Citation	Journal of Porphyrins and Phthalocyanines, 24(1), 298-302.
Publisher	World Scientific Publishing Co Pte Ltd
URI	https://doi.org/10.1142/S1088424619501050
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Date of Publication	2020-01
 Author(s)	 MALLA, JAVID AHMAD; UMESH, RINTU M.; VIJAY, AMAL; MUKHERJEE, ARNAB; LAHIRI, MAYURIKA; TALUKDAR, PINAKI
Title	Apoptosis-inducing activity of a fluorescent barrel-rosette M^+/Cl^- channel
Citation	Chemical Science, 11(9), 2420-2428.
Publisher	Royal Society of Chemistry
URI	https://doi.org/10.1039/C9SC06520B
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4518
Date of Publication	2020-03

Author(s) MISRA, RAJKUMAR; George, Gijo; REJA, RAHI M.; DEY, SANJIT; Raghothama, Srinivasarao; GOPI, HOSAHUDYA N.

Title Structural insight into hybrid peptide ε -elices

Citation Chemical Communications, 56(14), 2171-2173.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/C9CC07413A>

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Author(s) VANGALA, MADHURI; YOUSF, SALEEM; CHUGH, JEETENDER; HOTH, SRINIVAS

Title Solid-Phase Synthesis of Clickable Psicofuranose Glycocabamates and Application of Their Self-Assembled Nanovesicles for Curcumin Encapsulation

Citation Chemistry Select, 5(9), 2672-2677.

Publisher Wiley

URI <https://doi.org/10.1002/slct.201904430>

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Author(s) WARGHUDE, PRAKASH K.; SABALE, ABHIJEET S.; BHAT, RAMAKRISHNA G.

Title Access to highly enantioselective and diastereoselective spirooxindole dihydrofuran fused pyrazolones

Citation Organic & Biomolecular Chemistry, 18(9), 1794-1799.

Publisher Royal Society of Chemistry

URI <https://doi.org/10.1039/D0OB00007H>

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Date of Publication 2020-03

Author(s) YADAV, ASHOK; SARKAR, MEGHAMALA; SUBRAHMANYAM, SAPPATI; CHAUDHARY, ATUL; Hey-Hawkins, Evamarie; BOOMISHANKAR, RAMAMOORTHY

Title Anilate Tethered Neutral Tetrahedral Pd(II) Cages Exhibiting Selective Encapsulation of Xylenes and Mesitylene

Citation Chemistry-A European Journal.

Publisher Wiley

URI <https://doi.org/10.1002/chem.201905852>

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Mathematics

Author(s)	BANERJEE, DEBARGHA; BORAH, DIGANTA; CHAUDHURI, CHITRABHANU
Title	Arakelov self-intersection numbers of minimal regular models of modular curves $X_0(p^2)$
Citation	Mathematische Zeitschrift.
Publisher	Springer
URI	https://doi.org/10.1007/s00209-020-02480-1
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4449
Date of Publication	2020-03
Author(s)	BISWAS, ANUP
Title	Principal eigenvalues of a class of nonlinear integro-differential operators
Citation	Journal of Differential Equations, 268(9), 5257-5282.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.jde.2019.11.011
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4512
Date of Publication	2020-04
Author(s)	Biswas, Indranil; Dey, Arijit; PODDAR, MAINAK
Title	Tannakian Classification of Equivariant Principal Bundles on Toric Varieties
Citation	Transformation Groups.
Publisher	Springer
URI	https://doi.org/10.1007/s00031-020-09557-5
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4508
Date of Publication	2020-03
Author(s)	SHARMA, UDAY BHASKAR; SINGH, ANUPAM
Title	Branching rules for unitary and symplectic matrices
Citation	Communications in Algebra.
Publisher	Taylor & Francis
URI	https://doi.org/10.1080/00927872.2020.1726366
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4501
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Author(s)	Zhang, Jun; Wan, Daqing; KAIPA, KRISHNA
Title	Deep Holes of Projective Reed-Solomon Codes
Citation	IEEE Transactions on Information Theory, 66(4), 2392-2401.
Publisher	IEEE
URI	https://doi.org/10.1109/TIT.2019.2940962
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4507
Date of Publication	2020-04

Physics

Author(s)	Chowdhury, Subham Dutta; Gadde, Abhijit; GOPALKA, TUSHAR; Halder, Indranil; Janagal, Lavneet; Minwalla, Shiraz
Title	Classifying and constraining local four photon and four graviton S-matrices
Citation	Journal of High Energy Physics, 2020(2).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP02(2020)114
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4499
Date of Publication	2020-02

Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at $\sqrt{s}=13$ TeV
Citation	European Physical Journal C, 80(2).
Publisher	Springer
URL	https://doi.org/10.1140/epjc/s10052-019-7593-7
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4477
Date of Publication	2020-02

Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for a heavy pseudoscalar Higgs boson decaying into a 125 GeV Higgs boson and a Z boson in final states with two tau and two light leptons at $\sqrt{s}=13$ TeV
Citation	Journal of High Energy Physics, 2020(3).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP03(2020)065
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4521
Date of Publication	2020-03

Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for new neutral Higgs bosons through the $H \rightarrow ZA \rightarrow \ell^+\ell^-bb^-$ process in pp collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(3).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP03(2020)055
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4522
Date of Publication	2020-03
Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for top squark pair production in a final state with two tau leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(2).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP02(2020)015
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4478
Date of Publication	2020-02
Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(3).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP03(2020)056
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4523
Date of Publication	2020-03
Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for a charged Higgs boson decaying into top and bottom quarks in events with electrons or muons in proton-proton collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(1).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP01(2020)096
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Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KANSAL, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for electroweak production of a vector-like T quark using fully hadronic final states
Citation	Journal of High Energy Physics, 2020(1).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP01(2020)036
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4492
Date of Publication	2020-01
Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Extraction and validation of a new set of CMS PYTHIA8 tunes from underlying-event measurements
Citation	European Physical Journal C, 80(1).
Publisher	Springer
URL	https://doi.org/10.1140/epjc/s10052-019-7499-4
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4476
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Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; HEGDE, V.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Searches for physics beyond the standard model with the M_{T2} variable in hadronic final states with and without disappearing tracks in proton-proton collisions at $\sqrt{s}=13\text{TeV}$
Citation	European Physical Journal C, 80(1).
Publisher	Springer
URL	https://doi.org/10.1140/epjc/s10052-019-7493-x
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4479
Date of Publication	2020-01
Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$
Citation	Journal of High Energy Physics, 2020(3).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP03(2020)034
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4519
Date of Publication	2020-03

Author(s)	CMS Collaboration; Sirunyan, A. M.; CHAUHAN, S.; DUBE, S.; HEGDE, V.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(3).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP03(2020)025
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4513
Date of Publication	2020-03
Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for Supersymmetry with a Compressed Mass Spectrum in Events with a Soft τ Lepton, a Highly Energetic Jet, and Large Missing Transverse Momentum in Proton-Proton Collisions at $\sqrt{s}=13$ TeV
Citation	Physical Review Letters, 124(4).
Publisher	American Physical Society
URL	https://doi.org/10.1103/PhysRevLett.124.041803
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4514
Date of Publication	2020-01
Author(s)	Dabhade, P.; Rottgering, H. J. A.; Bagchi, J.; Shimwell, T. W.; Hardcastle, M. J.; SANKHYAYAN, S.; Morganti, R.; Jamrozy, M.; Shulevski, A.; Duncan, K. J.
Title	Giant radio galaxies in the LOFAR Two-metre Sky Survey I. Radio and environmental properties
Citation	Astronomy & Astrophysics, 635.
Publisher	EDP Sciences
URL	https://doi.org/10.1051/0004-6361/201935589
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4510
Date of Publication	2020-03
Author(s)	KUMAR, AANJANEYA; DHAR, DEEPAK
Title	Improved Upper Bounds on the Asymptotic Growth Velocity of Eden Clusters
Citation	Journal of Statistical Physics.
Publisher	Springer
URL	https://doi.org/10.1007/s10955-020-02498-z
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4488
Date of Publication	2020-02

Author(s) MISHRA, CHINMAYEE; Santos, Luis; NATH, REJISH
Title Self-Bound Doubly Dipolar Bose-Einstein Condensates
Citation Physical Review Letters, 124(7).
Publisher American Physical Society
URL <https://doi.org/10.1103/PhysRevLett.124.073402>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4489>
Date of Publication 2020-02

Author(s) MANDAL, R.; Chandra, M.; Roddatis, V.; Ksoll, P.; Tripathi, M.; Rawat, R.; Choudhary, R. J.; Moshnyaga, V.
Title Magneto-dielectric effect in relaxor superparaelectric Tb₂CoMnO₆ film
Citation Physical Review B, 101(9).
Publisher American Physical Society
URL <https://doi.org/10.1103/PhysRevB.101.094426>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4516>
Date of Publication 2020-03

Author(s) RAJEEV, HARITHA S.; TELANG, PRACHI; SINGH, SURJEET
Title One-shot wet chemical synthesis and physical properties of pyrochlore iridates A₂Ir₂O₇, (A = Sm, Gd, Dy and Er)
Citation Solid State Communications, 312.
Publisher Elsevier, B.V.
URL <https://doi.org/10.1016/j.ssc.2020.113863>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4504>
Date of Publication 2020-05

Author(s) Shejeelammal, J.; Goswami, Aruna; Goswami, Partha Pratim; RATHOUR, RAJEEV SINGH; Masseron, Thomas
Title Characterizing the companion AGBs using surface chemical composition of barium stars
Citation Monthly Notices of the Royal Astronomical Society, 492(3), 3708-3727.
Publisher The Royal Astronomical Society
URL <https://doi.org/10.1093/mnras/stz3518>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4506>
Date of Publication 2020-03

Author(s)	Thauer, Elisa; KAPOOR, AAKANKSHA; BAJPAI, ASHNA et al.
Title	Filled Carbon Nanotubes as Anode Materials for Lithium-Ion Batteries
Citation	Molecules, 25(5).
Publisher	MDPI
URL	https://doi.org/10.3390/molecules25051064
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4472
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