खम्मा घणी...!!

भारतीय प्रौद्योगिकी संस्थान जोधपुर

॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

VOLUME 2 ISSUE 2

JULY-DECEMBER 2016

Khamma Ghani...!!

Indian Institute of Technology Jodhpur

शिक्षा दीक्षा!!

2016 के दूसरे पहर में संस्थान ने तीसरा दीक्षांत समारोह मनाया। संकाय सदस्यों द्वारा प्रस्तावित 5 नये प्रायोजित अनुसंधान परियोजनाओं को स्वीकृति मिली। संकाय सदस्यों द्वारा लिखे गये 65 शोध पत्र प्रकाशित हुये। संस्थान ने 7 नये संकाय सदस्य एवं एक तकनीकी कर्मचारी सदस्य को अपने परिवार में जोड़ा। राष्ट्र प्रेम की भावना को सराहते हुये हमने स्वतंत्रता दिवस के दौरान स्वतंत्रता पखवाड़ा भी मनाया।

भारतीय प्रौद्योगिकी संस्थान जोधपुर, अपने स्थाई परिसर में स्थानांतरित करने की तैयारियाँ आरंभ कर चुका था। परंतु किन्हीं अप्रत्याशित परिस्थितियों के चलते हमें इस सफ़र को विलंबित करना पड़ा। आशा है कि आने वाले नव वर्ष में हम अवश्य यह महत्वपूर्ण कार्य पूरा करेंगे।

क्षेमा प्रकाश (संपादक)

ACADEMICS

3rd Convocation

The 3rd Convocation of IIT Jodhpur was held on 08 December 2016. The Chief Guest for the momentous occasion was Dr. Arvind Panagariya, Vice Chairman, NITI Aayog, Government of India. Though Dr. Panagariya could not be present in person for the occasion due to an important and urgent assignment at the last moment, he sent his video recorded speech, which was played during the event. Total 157 students received their degrees, out of which 136 were B.Tech. students, 15 were M.Tech. students, and 6 were Ph.D. students. With this the total number of students graduating from this young Institute stands at 720. The Convocation ceremony was held at the Auditorium of All India Institute of Medical Sciences, Jodhpur.

Director, IIT Jodhpur, reading the Institute Report

Parents of Sachin Grover receiving President's Gold Medal on his behalf

R&D

New Research Projects

Kaushalkumar A. Desai, Assistant Professor, Department of Mechanical Engineering, has been sanctioned the sponsored research project "Minimizing deflection induced surface errors in end milling of thin walled components" by Science and Engineering Research Board, DST, Government of India. The duration of the project is 3 years (2016 -19).

Anand Krishnan Plappally, Assistant Professor, Department of Mechanical Engineering, has been sanctioned the sponsored research project "Local composite geotextile mats for soil and water conservation in western Rajasthan" by Science and Engineering Research Board, DST, Government of India. The duration of the project is 3 years (2016-19).

Subhashish Banerjee, Assistant Professor, Department of Physics, has been sanctioned the sponsored research project "A study of quantum correlations: Squeezing and its various facets" by the Council of Scientific and Industrial Research, Government of India. The duration of the project is 1 year (2016-17).

Amit Mishra, Assistant Professor, Department of Bioscience & Bioengineering, has been sanctioned the sponsored research project "How LRASM1 gene regulates cellular protein quality control functions? Implications in neurodegeneration and ageing" by Science and Engineering Research Board, DST, Government of India. The duration of the project is 3 year (2016-19).

Aritra Banik, Assistant Professor, Department of Computer Science & Engineering, has been sanctioned the sponsored research project "Design of efficient algorithms for multiple choice resource allocation problem" by Science and Engineering Research Board, DST, Government of India. The duration of the project is 3 years (2016-19).

Research Publications

Department of Bioscience and Bioengineering

Journal Articles

1. Amanullah,A., Upadhyay,A., Chhangani,D., Joshi,V., Mishra,R., Yamanaka,K., & **Mishra,A.** (2016). Proteasomal Dysfunction Induced by Diclofenac Engenders Apoptosis through Mitochondrial Pathway. *Journal of Cellular Biochemistry*. ISSN: 1097-4644. http://doi.org/10.1002/jcb.25666
2. Arora,N., Tripathi,S., Sao,R., Mondal,P., **Mishra,A.K.**, & Prasad,A. (2017). Molecular Neuro-Pathomechanism of Neurocysticercosis: How Host Genetic Factors Influence Disease Susceptibility. *Molecular Neurobiology*, 1–7. ISSN: 1559-1182. https://doi.org/10.1007/s12035-016-0373-6
3. Hoop,C.L., Lin,H.-K., **Kar,K.**, Magyarfalvi,G., Lamley,J.M., Boatz,J.C., Mandal,A., Lewandowski,J.R., Wetzel,R. & Van der Wel,P.C.A. (2016). Huntingtin exon 1 fibrils feature an interdigitated β-hairpin–based polyglutamine core. *Proceedings of the National Academy of Sciences*, *113*(6), 1546–1551. ISSN: 1091-6490. https://doi.org/10.1073/pnas.1521933113
4. Joshi,V., Amanullah,A., Upadhyay,A., Mishra,R., Kumar,A., & **Mishra,A.** (2016). A Decade of Boon or Burden: What Has the CHIP Ever Done for Cellular Protein Quality Control Mechanism Implicated in Neurodegeneration and Aging? *Frontiers in Molecular Neuroscience*, 93. ISSN: 1662-5099. https://doi.org/10.3389/fnmol.2016.00093
5. Upadhyay,A., Amanullah,A., Mishra,R., Kumar,A., & **Mishra,A.K.** (2017). Lanosterol Suppresses the Aggregation and Cytotoxicity of Misfolded Proteins Linked with Neurodegenerative Diseases. *Molecular Neurobiology*, 1–14. ISSN: 1559-1182. https://doi.org/10.1007/s12035-016-0377-2
6. Vyas,S., & **Chhabra,M.** (2017). Isolation, identification and characterization of Cystobasidium oligophagum JRC1: A cellulase and lipase producing oleaginous yeast. Bioresource Technology, 223, 250–258. ISSN: 0960-8524. https://doi.org/10.1016/j.biortech.2016.10.039

Book Chapters

1. Upadhyay,A., Amanullah,A., Joshi,V., Mishra,R., & **Mishra,A.K.** (2016). Molecular and Cellular Insights: Neuroinflammation and Amyotrophic Lateral Sclerosis. In N. Jana,A. Basu, & P.N. Tandon (Eds.), *Inflammation: the Common Link in Brain Pathologies* (pp. 209–230). Springer Singapore. ISBN: 978-981-10-1711-7. http://link.springer.com/chapter/10.1007/978-981-10-1711-7_8

Department of Chemistry

Journal Articles

1. **Gupta,R.,** & Fisher,T.S. (2016). Scalable Coating of Single Source Ni Hexadecanethiolate Precursor on 3D-Graphitic Petals for Asymmetric Supercapacitor. Energy Technology. ISSN: 2194-4296. http://doi.org/10.1002/ente.201600475
2. Laishram,D., Shejale,K.P., **Sharma,R.K., & Gupta,R.** (2016). HfO_2 nanodots incorporated in TiO_2 and its hydrogenation for high performance dye sensitized solar cells. RSC Advances, 6(82), 78768–78773. ISSN: 2046-2069. http://doi.org/10.1039/C6RA13776H
3. Lunkad,R., Srivastava,A., & **Debnath,A.** (2017). Influence of water concentrations on the phase transformation of a model surfactant/co-surfactant/water system. *Chemical Physics*, *483–484*, 103–111. ISSN: 0301-0104. https://doi.org/10.1016/j.chemphys.2016.11.014
4. Pandey,S., Soni,V.K., Choudhary,G., Sharma,P.R., & **Sharma,R.K.** (2016). Understanding Behaviour of Vitamin-C Guest Binding with the Cucurbit [6] uril host. *Supramolecular Chemistry*, *0*(0), 1–8. ISSN: 1061-0278. https://doi.org/10.1080/10610278.2016.1243791
5. Ram,P., Gören,A., Ferdov,S., Silva,M.M., Choudhary,G., Singhal,R., Costa,C.M., **Sharma,R.K.** & Lanceros-Méndez,S. (2017). Synthesis and improved electrochemical performance of $LiMn_2 - xGdxO_4$ based cathodes. *Solid State Ionics*, *300*, 18–25. ISSN: 0167-2738. https://doi.org/10.1016/j.ssi.2016.11.026
6. Sharma,P., & **Sharma,R.K.** (2016). Asymmetric Hydrogenation of α-ketoesters on Pt (111) Surface. *New Journal of Chemistry*. ISSN: 1369-9261. https://doi.org/10.1039/C6NJ02405Jb

7. Sharma,P., & **Sharma,R.K.** (2017). Platinum functionalized Chiral Polyamides: Efficient Heterogeneous Catalyst for Solvent Free Asymmetric Hydrogenation of Ethyl 2-oxo-4-phenylbutanoate. *ChemistrySelect*, 2(1), 513–520. ISSN: 2365-6549. https://doi.org/10.1002/slct.201601538
8. Shejale,K.P., Laishram,D., **Gupta,R., & Sharma,R.K.** (2016). Zinc Oxide–Titania Heterojunction-based Solid Nanospheres as Photoanodes for Electron-Trapping in Dye-Sensitized Solar Cells. Energy Technology. ISSN: 2194-4296. http://doi.org/10.1002/ente.201600357
9. Singh,P., Adhikari,S., & **Kumar,A.** (2016.). Usefulness of Multiqubit w-type States in Quantum Information Processing. Journal of Experimental and Theoretical Physics, 150 (4), 666-676. ISSN: 0044-4510. http://www.jetp.ac.ru/cgi-bin/e/index/forthcoming/60557?a=list
10. Walia,S., **Gupta,R.,** Rao, K.D.M., & Kulkarni,G.U. (2016). Transparent Pd Wire Network-Based Areal Hydrogen Sensor with Inherent Joule Heater. ACS Applied Materials & Interfaces, 8(35), 23419–23424. ISSN: 1944-8252. http://doi.org/10.1021/acsami.6b08275

Department of Computer Science and Engineering

Journal Articles

1. Amayri,M., Arora,A., Ploix,S., Bandhyopadyay,S., Ngo, Q.-D., & **Badarla,V.R.** (2016). Estimating Occupancy In Heterogeneous Sensor Environment. Energy and Buildings. ISSN: 1872-6178. http://doi.org/10.1016/j.enbuild.2016.07.026
2. Amayri,M., Arora,A., Ploix,S., Bandhyopadyay,S., Ngo,Q.-D., & **Badarla,V.R.** (2016). Estimating Occupancy in Heterogeneous Sensor Environment. *Energy and Buildings*, *129*, 46–58. ISSN: 0378-7788. https://doi.org/10.1016/j.enbuild.2016.07.026
3. Bansal,A., Roy,S.D., & **Harit,G.** (2016). Extraction of Layout Entities and Sub-layout Query-based Retrieval of Document Images. arXiv:1609.02687 [Cs]. http://arxiv.org/abs/1609.02687
4. Rathore,H., **Badarla,V.R.,** & Shit,S. (2016). Consensus-Aware Sociopsychological Trust Model for Wireless Sensor Networks. ACM Transactions on Sensor Networks, 12(3), 21:1–21:27. ISSN: 1550-4867. http://doi.org/10.1145/2903721

Conference Papers

1. **Banik,A.,** Panolan,F., **Badarla,V.R.,** & Sahlot,V. (2016). Fréchet Distance Between a Line and Avatar Point Set. In A. Lal, S. Akshay, S. Saurabh, & S. Sen (Eds.), *36th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2016)* (Vol. 65, p. 32:1–32:14). Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik. ISBN: 978-3-95977-027-9. http://dx.doi.org/10.4230/LIPIcs.FSTTCS.2016.32
2. Dey,A.U., & **Harit,G.** (2016). Generating Synthetic Handwriting Using N-gram Letter Glyphs. In Ahuja, Narendra & Bora, Prabin K. (Eds.), *Proceedings of the Tenth Indian Conference on Computer Vision, Graphics and Image Processing* (p. 49:1–49:8). New York, USA: Association for Computing Machinery. ISBN: 978-1-4503-4753-2. https://doi.org/10.1145/3009977.3010042
3. Jain,H., & **Harit,G.** (2016). A Framework to Assess Sun Salutation Videos. In In Ahuja, Narendra & Bora, Prabin K. (Eds.), *Proceedings of the Tenth Indian Conference on Computer Vision, Graphics and Image Processing* (p. 29:1–29:8). New York, USA: Association for Computing Machinery. ISBN: 978-1-4503-4753-2. https://doi.org/10.1145/3009977.3010045

Department of Electrical Engineering

Journal Articles

1. Barala,S.S., Banerjee,N., & **Kumar,M.** (2016). Effect of Gamma Ray Irradiation on Epitaxial Pb(Zr,Ti)O3 /SrRuO3 Tunable Varactor Devices. Journal of Electronic Materials, 45(8), 4122–4128. ISSN: 0361-5235. http://doi.org/10.1007/s11664-016-4655-6
2. Barala,S.S., Roul,B., Banerjee,N., & **Kumar,M.** (2016). Modulation of Pb Chemical state of epitaxial lead zirconate titanate thin films under high energy irradiation. *Journal of Applied Physics*, *120*(11), 115305. ISSN: 1089-7550. https://doi.org/10.1063/1.4962860
3. Bharti,D., & **Tiwari,S.P.** (2016, In Press). Phase separation induced high mobility and electrical stability in organic field-effect transistors. Synthetic Metals. ISSN: 0379-6779. http://doi.org/10.1016/j.synthmet.2016.09.002
4. Bharti,D., Raghuwanshi,V., Varun,I., Mahato,A.K., & **Tiwari,S.P.** (2016). High Performance and Electro-Mechanical Stability in Small Molecule: Polymer Blend Flexible Organic Field-Effect Transistors. IEEE Electron Device Letters, (99), 1–1. ISSN: 0741-3106. http://doi.org/10.1109/LED.2016.2592943
5. Dokania,V., Islam,A., Dixit,V., & **Tiwari,S.P.** (2016). Analytical Modeling of Wrap-Gate Carbon Nanotube FET With Parasitic Capacitances and Density of States. IEEE Transactions on Electron Devices, (99), 1–6. ISSN: 0018-9383. http://doi.org/10.1109/TED.2016.2581119

6. Joshi,V., Soni,A., **Tiwari,S.P.,** & Shrivastava,M. (2016). A Comprehensive Computational Modeling Approach and Device Design Guidelines for AlGaN/GaN HEMTs: Part I. IEEE Transactions on Nanotechnology, 1–1. ISSN: 1941-0085. https://doi.org/10.1109/TNANO.2016.2615645
7. Mahela,O.P., & **Shaik,A.G.** (2017). Comprehensive overview of grid interfaced solar photovoltaic systems. *Renewable and Sustainable Energy Reviews*, *68*, *Part 1*, 316–332. ISSN: 1364-0321. https://doi.org/10.1016/j.rser.2016.09.096
8. Mahela,O.P., & **Shaik,A.G.** (2017; In press). Power quality recognition in distribution system with solar energy penetration using S-transform and Fuzzy C-means clustering. *Renewable Energy, 106, 37-51*. ISSN: 1879-0682. https://doi.org/10.1016/j.renene.2016.12.098
9. Ranwa,S., Barala,S.S., Fanetti,M., & **Kumar,M.** (2016). Effect of gamma irradiation on Schottky-contacted vertically aligned ZnO nanorod-based hydrogen sensor. Nanotechnology, 27(34), 345502. ISSN: 1361-6528. http://doi.org/10.1088/0957-4484/27/34/345502
10. Singh,S., Gautam,A.R., & **Fulwani,D.M.** (2017). Constant power loads and their effects in DC distributed power systems: A review. *Renewable and Sustainable Energy Reviews*, *72*, 407–421. ISSN: 1364-0321. https://doi.org/10.1016/j.rser.2017.01.027
11. Tripathi,S., Mohan,A., & **Yadav,S.K.** (2016). A Compact UWB Koch Fractal Antenna for UWB Antenna Array Applications. Wireless Personal Communications, 1–20. ISSN: 0929-6212. http://doi.org/10.1007/s11277-016-3613-1

Conference Papers

1. Gautam,A.R., **Fulwani,D.M.** & Guerrero,J. (2016). A comprehensive study and analysis of second order harmonic ripple in DC microgrid feeding single phase PWM inverter loads. In IECON 2016 - 42nd Annual Conference of the IEEE Industrial Electronics Society (pp. 3648–3653). ISBN: 978-1-5090-3474-1. https://doi.org/10.1109/IECON.2016.7793830
2. Mahela,O.P., & **Shaik,A.G.** (2016). Recognition of power quality disturbances using S-transform and Fuzzy C-means clustering. In 2016 International Conference on Cogeneration, Small Power Plants and District Energy (ICUE) (pp. 1–6). ISBN: 978-9-7482-5792-1. https://doi.org/10.1109/COGEN.2016.7728955
3. Rathore,N., & **Fulwani,D.M.** (2016). Event triggered control scheme for power converters. In *IECON 2016 - 42nd Annual Conference of the IEEE Industrial Electronics Society* (pp. 1342–1347). ISBN: 978-1-5090-3474-1. https://doi.org/10.1109/IECON.2016.7794129
4. Sree,Y.M., Kumar,G.R., & **Shaik,A.G.** (2016). Multi-terminal transmission line protection using wavelet based digital relay in the presence of wind energy source. In *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)* (pp. 4124–4128). ISBN: 978-1-4673-9939-5. https://doi.org/10.1109/ICEEOT.2016.7755492

Brief Books (Authored)

1. **Fulwani,D.M.,** & Singh, S. (2017). *Mitigation of Negative Impedance Instabilities in DC Distribution Systems: A Sliding Mode Control Approach*. Singapore: Springer Singapore. ISBN: 978-981-10-2071-1. http://link.springer.com/10.1007/978-981-10-2071-1

Department of Humanities and Social Sciences

Journal Articles

1. Owusu,D., Mamudu,H.M., **John,R.M.,** Ibrahim,A., Ouma,A.E.O., & Veeranki,S.P. (2016). Never-Smoking Adolescents' Exposure to Secondhand Smoke in Africa. *American Journal of Preventive Medicine*, *51*(6), 983–998. ISSN: 0749-3797. https://doi.org/10.1016/j.amepre.2016.08.040
2. Veeranki,S.P., **John,R.M.,** Ibrahim,A., Pillendla,D., Thrasher,J.F., Owusu,D., & Mamudu,H.M. (2016). Age of smoking initiation among adolescents in Africa. International Journal of Public Health, 1–10. ISSN: 1661-8564. http://doi.org/10.1007/s00038-016-0888-7

Department of Mathematics

Journal Articles

1. **Bhatnagar,G.** (2016). Robust covert communication using high capacity watermarking. *Multimedia Tools and Applications*, 1–25. ISSN: 1573-7721. https://doi.org/10.1007/s11042-016-3978-x
2. Chakrawarty,P., & **Bhatnagar,G.** (2016). Image thresholding based on local activity feature matrix. Optik - International Journal for Light and Electron Optics, 127(20), 9037–9045. ISSN: 0030-4026. http://doi.org/10.1016/j.ijleo.2016.06.114
3. Li,H., **Hiremath,K.R.**, Rieder,A., & Freude,W. (2017). Adaptive wavelet collocation method for simulation of a 2D micro-ring resonator. *Optik - International Journal for Light and Electron Optics*, *131*, 655–670. ISSN: 0030-4026. https://doi.org/10.1016/j.ijleo.2016.11.154

Department of Mechanical Engineering

Journal Articles

1. Aggarwal,H.K., **Chhibber,R.**, Arora,N., & Mehta,R. (2017). Experimental Analysis of Thermal Fatigue in Bimetallic Welds. *Materials Science Forum*, *880*, 124–127. ISSN: 1662-9752. https://doi.org/10.4028/www.scientific.net/MSF.880.124
2. Bhole,A., Turlapati,S.H., Rajasekhar,V.S., Dixit,J., **Shah,S.V.**, & Krishna, M.K. (2016). Design of a Robust Stair Climbing Compliant Modular Robot to Tackle Overhang on Stairs. arXiv:1607.03077 [Cs]. http://arxiv.org/abs/1607.03077
3. **Chakraborty,P.R.** (2017). Enthalpy porosity model for melting and solidification of pure-substances with large difference in phase specific heats. *International Communications in Heat and Mass Transfer, 81,183-189.* ISSN: 0735-1933. https://doi.org/10.1016/j.icheatmasstransfer.2016.12.023
4. **Chakraborty,P.R.**, **Hiremath,K.R.,** & Sharma,M. (2016, in press). Evaluation of evaporation coefficient for micro-droplets exposed to low pressure: A semi-analytical approach. *Physics Letters A*. ISSN: 0375-9601. https://doi.org/10.1016/j.physleta.2016.11.036
5. Hafez,A.H.A., Mithun,P., Anurag,V.V., **Shah,S.V.**, & Krishna,K.M. (2017). Reactionless visual servoing of a multi-arm space robot combined with other manipulation tasks. *Robotics and Autonomous Systems, 91, 1-10.* ISSN: 0921-8890. https://doi.org/10.1016/j.robot.2016.12.010
6. James,F., **Shah,S.V.**, Singh,A.K., Krishna,K.M., & Misra,A.K. (2016). Reactionless Maneuvering of a Space Robot in Precapture Phase. Journal of Guidance, Control, and Dynamics, 0(0), 1–7. ISSN: 1533-3884. http://doi.org/10.2514/1.G001828
7. Moges,T.M., **Desai, K.A.,** & Rao,P.V.M. (2016). Improved Process Geometry Model with Cutter Runout and Elastic Recovery in Micro-end Milling. *Procedia Manufacturing*, 5, 478–494. ISSN: 2351-9789. https://doi.org/10.1016/j.promfg.2016.08.040
8. Rajpurohit,D.S. & **Chhibber,R.** (2016). Design Optimization of Two Input Multimode Applicator for Efficient Microwave Heating. *International Journal of Advances in Microwave Technology*, *1 (3)*. ISSN: 2456-4346. http://ijamt.com/abstract.php?article_id=1676
9. Saha,A.K., Kumar,R., Usmani,B., **Chandra,L.**, & **Dixit,A.** (2016). Development Of Nickel Modified Fe 3 O 4 Solar Selective Coatings for Solar Absorber Applications. *Advanced Materials Proceedings*, *1*(2), 140–145. ISSN: 2002-4428. https://doi.org/10.5185/amp.2016/205
10. Sharma,B., **Chhibber,R.**, & Mehta,R. (2017). Curing studies and mechanical properties of glass fiber reinforced composites based on silanized clay minerals. *Applied Clay Science*, *138*, 89–99. ISSN: 0169-1317. https://doi.org/10.1016/j.clay.2016.12.038

Conference Papers

1. Agarwal,A., & **Prakash,A.** (2016). Validation of LBM based on BGK on Poiseuille's Flow and Vortex Street in a Channel Flow. In *Fourth International Conference On Advances in Civil, Structural and Mechanical Engineering* (pp. 14–18). USA: Institute of Research
2. Teja,H., & **Shah,S.V.** (2016). Learning inverse kinematic solutions of redundant manipulators using multiple internal models. In 2016 6th IEEE International Conference on Biomedical Robotics and Biomechatronics (BioRob) (pp. 1371–1371). ISBN: 978-1-5090-3287-7. http://doi.org/10.1109/BIOROB.2016.7523824

Department of Physics

Journal Articles

1. Dutta,S., Adhikari,B., & **Banerjee,S.** (2016). Seidel switching for weighted multi-digraphs and its quantum perspective. arXiv:1608.07830 [Math-Ph, Physics:quant-Ph]. http://arxiv.org/abs/1608.07830
2. Ghosh,S., **Sahu,S.**, Agrawal,L., Shiga,T., & Bandyopadhyay,A. (2017). Inventing a co-axial atomic resolution patch clamp to study a single resonating protein complex and ultra-low power communication deep inside a living neuron cell. Journal of Integrative Neuroscience, 1–31. ISSN: 0219-6352. https://doi.org/10.1142/S0219635216500321
3. Gupta,G.K., & **Dixit,A.** (2017). Effect of precursor and composition on the physical properties of the low-cost solution processed Cu2ZnSnS4 thin film for solar photovoltaic application. *Journal of Renewable and Sustainable Energy*, *9*(1), 013502-1- 013502-10. ISSN: 1941-7012. https://doi.org/10.1063/1.4974341
4. Laha,A., & **Ghosh,S**. (2017). Connected hidden singularities and toward successive state flipping in degenerate optical microcavities. *Journal of the Optical Society of America B*, *34*(2), 238–244. ISSN: 1520-8540. https://doi.org/10.1364/JOSAB.34.000238

5. Sedrakian,A., Huang,X.-G., **Sinha,M.,** & Clark,J.W. (2017). From microphysics to dynamics of magnetars. *arXiv:1701.00895 [Astro-Ph, Physics:nucl-Th]*. http://arxiv.org/abs/1701.00895

6. Thapliyal,K., Pathak,A., & **Banerjee,S.** (2016). Quantum cryptography over non-Markovian channels. arXiv:1608.06071 [Quant-Ph]. http://arxiv.org/abs/1608.06071

7. Usmani,B., & **Dixit,A.** (2016). Impact of corrosion on microstructure and mechanical properties of ZrOx/ZrC-ZrN/Zr absorber–reflector tandem solar selective structures. Solar Energy Materials and Solar Cells, 157, 733–741. ISSN: 0927-0248. http://doi.org/10.1016/j.solmat.2016.07.019

8. Usmani,B., **Vijay,V., Chhibber,R., & Dixit,A.** (2016). Investigation of ZrOx/ZrC–ZrN/Zr thin-film structural evolution and their degradation using X-ray diffraction and Raman spectrometry. Applied Physics A, 122(11), 992. ISSN: 1432-0630. https://doi.org/10.1007/s00339-016-0523-8

Awards & Recognitions

Natural Rajasthani Clay (Jodhpur) for Production of Fuel & Value-added Products from Biomass Feedstocks

In a quest of developing cost effective and green catalytic systems for biomass upgradation, recently, Rakesh K. Sharma, Assistant Professor and Head, Department of Chemistry, and Vineet Kumar Soni, Post-Doctoral Fellow, utilized natural clay as a heterogeneous catalyst by nanometal intercalation for converting squalene into squalane under solvent free conditions. Squalane is an important ingredient in the cosmetic, nutraceutical, and pharmaceutical industries. Also, it has been used as a model compound for the hydrocracking of crude and microalgae oil. The presence of Pd-nanoparticles with dominating Pd(111) plane showed highest reactivity and selectivity. The catalysts are stable and reusable under the proposed reaction conditions. The group is now focusing on exploring new clay-based catalysts for the production of fuel grade hydrocarbons from vegetable oil, algae oil and related compounds.

IIT-J discovers multiple uses for local sand

Ajay Parmar | TNN

Jodhpur: Sand from Rajasthan has been used as a catalyst to produce 100% pure saturated hydrocarbon — Squalane, which is an important ingredient in cosmetic, nutraceutical, pharmaceutical industries and also as biofuel.

A team from IIT-Jodhpur has succeeded in using sand from the state as a catalyst to convert squalene, which is produced by microalgae, to Squalane, which is used as

NEW FEAT

model fuel and value-added products with application in cosmetic and pharmaceutical industries.

Rakesh K Sharma from chemistry department and a post-doctoral fellow Vineet K Soni, both from IIT-Jodhpur, have succeeded in producing this important ingredient. Squalane was produced under the project 'Catalytic upgrading of algae oil into transport fuel', which is otherwise available from sharks and that too a meagre 3% leading to incessant hunting of this aqua-animal.

Sharma, who has an expertise in catalytic agents and reactions, said, "The sand always attracted me and I wanted to add some value to it as a catalyst. During our research with the sand, we first used it as water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of the sand here". He said that this sand has a property which keeps it stable even at 1000 degrees centigrade temperature. "So, we first took normal sand, homogenised it followed by its purification using water and acid, and then crushed it into fine powder", Sharma explained.

The process usually includes rare minerals, which are highly expensive, but here a metal salt like Palladium Nitrate was mixed in this crushed sand along with the squalene, which is obtained from refinery waste, plants and also to certain extent from sharks.

"Heating this mixture at 500 degrees centigrade without any use of solvent produced 100% Squalane, which earlier despite using rare metals, made the process highly expensive", said Sharma.

7/4/2016 www.business-standard.com/article/pti/printer-friendly-version?article_id=150073300480_1

Business Standard

IIT Jodhpur researchers produce Squalene using Rajasthani sand

Press Trust of India | Jodhpur July 03, 2016 Last Updated at 17:48 IST

A research team at IIT Jodhpur has claimed success in using Rajasthani sand to produce 100 per cent pure Squalene, a naturally occurring compound used by cosmetics, nutraceutical and pharmaceutical industries.

The discovery will also help curb the killing of sharks, the primary source for Squalene, and reduce the Indian industries' dependency on foreign companies for the essential hydrocarbon, the researchers said.

The researchers -- Rakesh K Sharma, a Chemistry faculty, and postdoctoral fellow Vineet K Soni-- succeeded in producing Squalene, using Rajasthani sand as a catalyst under a project titled 'Catalytic upgrading of algal oil into transport fuel'.

Squalene, a naturally occurring compound helpful in treating heart disease, diabetes, arthritis and hepatitis besides use in skin care, is found in the liver of sharks but in very meagre concentration of three per cent.

In low quantities, Squalene is also found in olive and palm oils.

The team, for the first time, used Rajasthani sand as a catalyst to produce 100 per cent pure saturated hydrocarbon, Squalene.

"During our research with Rajasthani sand, we first used the sand as water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of this sand and its stability at high temperature up to as high as 1,000 degree centigrade," said Sharma, an expert in catalytic agents and reactions.

"So, we first took normal sand, homogenised it followed by its purification using water and acid and crushed it into fine powder form.

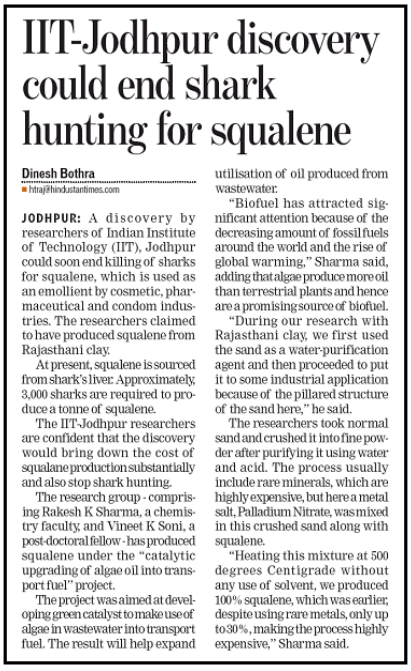
"It was then mixed with an inexpensive metal salt and the algal oil obtained from the refinery waste and heated up to 500 degree centigrade, which provided 100 per cent saturated hydrocarbon called 'Squalene'," Sharma explained.

Assistant Registrar of IIT Jodhpur Amardeep Sharma said, "We have already filed for the patent of this discovery and are pleased to announce that a provisional patent has been granted."

Sharma claimed this was for the first time that a research on such an important ingredient in cosmetics has taken place in the country. He said industrial queries have started pouring in due to both the compound being 100 per cent saturated and being many times cheaper than the product available now.

The research has also found a place in a reputed European scientific journal 'Chemcatchem', Sharma said, adding, "We are receiving inquiries from different industries."

The team has now proposed to crack 'Squalene' into pieces to convert it into a high grade Jet fuel.



IIT-Jodhpur discovery could end shark hunting for squalene

Dinesh Bothra

■ htraj@hindustantimes.com

JODHPUR: A discovery by researchers of Indian Institute of Technology (IIT), Jodhpur could soon end killing of sharks for squalene, which is used as an emollient by cosmetic, pharmaceutical and condom industries. The researchers claimed to have produced squalene from Rajasthani clay.

At present, squalene is sourced from shark's liver. Approximately, 3,000 sharks are required to produce a tonne of squalene.

The IIT-Jodhpur researchers are confident that the discovery would bring down the cost of squalane production substantially and also stop shark hunting.

The research group - comprising Rakesh K Sharma, a chemistry faculty, and Vineet K Soni, a post-doctoral fellow - has produced squalene under the "catalytic upgrading of algae oil into transport fuel" project.

The project was aimed at developing green catalyst to make use of algae in wastewater into transport fuel. The result will help expand utilisation of oil produced from wastewater.

"Biofuel has attracted significant attention because of the decreasing amount of fossil fuels around the world and the rise of global warming," Sharma said, adding that algae produce more oil than terrestrial plants and hence are a promising source of biofuel.

"During our research with Rajasthani clay, we first used the sand as a water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of the sand here," he said.

The researchers took normal sand and crushed it into fine powder after purifying it using water and acid. The process usually include rare minerals, which are highly expensive, but here a metal salt, Palladium Nitrate, was mixed in this crushed sand along with squalene.

"Heating this mixture at 500 degrees Centigrade without any use of solvent, we produced 100% squalene, which was earlier, despite using rare metals, only up to 30%, making the process highly expensive," Sharma said.

7/4/2016 IIT -Jodhpur researchers produce Squalene using Rajasthani sand - The Hindu

THE HINDU

NATIONAL » OTHER STATES

Published: July 4, 2016 00:00 IST | Updated: July 4, 2016 05:46 IST Jodhpur, July 4, 2016

IIT -Jodhpur researchers produce Squalene using Rajasthani sand

• PTI

A research team at IIT-Jodhpur has claimed success in using Rajasthani sand to produce 100 per cent pure Squalene, a naturally occurring compound used by cosmetics, nutraceutical and pharmaceutical industries.

The discovery will also help curb the killing of sharks, the primary source for Squalene, and reduce the Indian industries' dependency on foreign companies for the essential hydrocarbon, the researchers said.

The researchers -- Rakesh K. Sharma, a chemistry faculty, and postdoctoral fellow Vineet K Soni -- succeeded in producing Squalene, using Rajasthani sand as a catalyst under a project titled 'Catalytic upgrading of algal oil into transport fuel'.

Squalene, a naturally-occurring compound helpful in treating heart disease, diabetes, arthritis and hepatitis besides use in skin care, is found in the liver of sharks but in very meagre concentration of three per cent. In low quantities, Squalene is also found in olive and palm oils.

The team, for the first time, used Rajasthani sand as a catalyst to produce 100 per cent pure saturated hydrocarbon, Squalene.

"During our research with Rajasthani sand, we first used the sand as water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of this sand and its stability at high temperature up to as high as 1,000 degree centigrade," said Sharma, an expert in catalytic agents and reactions.

"So, we first took normal sand, homogenised it followed by its purification using water and acid and crushed it into fine powder form. It was then mixed with an inexpensive metal salt and the algal oil obtained from the refinery waste and heated up to 500 degree centigrade, which provided 100 per cent saturated hydrocarbon called 'Squalene'," Sharma explained.

IIT-Jodhpur Assistant Registrar Amardeep Sharma said, "We have already filed for the patent and are pleased to announce that a provisional patent has been granted."

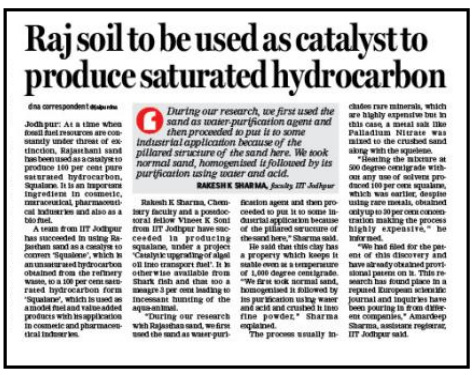
Mr Sharma claimed this was for the first time that a research on such an important ingredient in cosmetics has taken place in the country. He said industrial queries have started pouring in due to both the compound being 100 per cent saturated and being many times cheaper than the product available now. The research has also found a place in a reputed European scientific journal *Chemcatchem* , Sharma said, adding, "We are receiving inquiries from different industries."

The team has now proposed to crack 'Squalene' into pieces to convert it into a high grade jet fuel. - PTI

Squalene is a natural compound used in many industries

Printable version | Jul 4, 2016 2:30:54 PM | http://www.thehindu.com/news/national/other-states/iit-jodhpur-researchers-produce-squalene-using-rajasthani-sand/article8805986.ece

© The Hindu



Raj soil to be used as catalyst to produce saturated hydrocarbon

dna correspondent

Jodhpur: At a time when fossil fuel resources are constantly under threat of extinction, Rajasthani sand has been used as a catalyst to produce 100 per cent pure saturated hydrocarbon, Squalene. It is an important ingredient in cosmetic, nutraceutical, pharmaceutical industries and also as a bio fuel.

A team from IIT Jodhpur has succeeded in using Rajasthan sand as a catalyst to convert 'Squalene', which is an unsaturated hydrocarbon obtained from the refinery waste, to a 100 per cent saturated hydrocarbon form 'Squalane', which is used as a model fuel and value-added products with its application in cosmetic and pharmaceutical industries.

During our research, we first used the sand as water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of the sand here. We took normal sand, homogenised it followed by its purification using water and acid.

RAKESH K SHARMA, faculty, IIT Jodhpur

Rakesh K Sharma, Chemistry faculty and a postdoctoral fellow Vineet K Soni from IIT Jodhpur have succeeded in producing squalane, under a project 'Catalytic upgrading of algal oil into transport fuel'. It is otherwise available from Shark fish and that too a meagre 3 per cent leading to incessant hunting of the aqua-animal.

"During our research with Rajasthan sand, we first used the sand as water-purification agent and then proceeded to put it to some industrial application because of the pillared structure of the sand here," Sharma said.

He said that this clay has a property which keeps it stable even at a temperature of 1,000 degree centigrade. "We first took normal sand, homogenised it followed by its purification using water and acid and crushed it into fine powder," Sharma explained.

The process usually includes rare minerals, which are highly expensive but in this case, a metal salt like Palladium Nitrate was mixed to the crushed sand along with the squalene.

"Heating the mixture at 500 degree centigrade without any use of solvent produced 100 per cent squalane, which was earlier, despite using rare metals, obtained only up to 30 per cent conversion making the process highly expensive," he informed.

"We had filed for the patent of this discovery and have already obtained provisional patent on it. This research has found place in a reputed European scientific journal and inquiries have been pouring in from different companies," Amardeep Sharma, assistant registrar, IIT Jodhpur said.

Best Oral Presentation Award to Rahul Chibber

Presentation made by Rahul Chhibber, Assistant Professor, Department of Mechanical Engineering, was chosen as one of the best oral presentations and was presented with an Excellent Oral Presentation Certificate at 2016 4th Asia Conference on Mechanical and Materials Engineering (ACMME 2016) held at Kuala Lumpur during 14-18 July 2016.

IEEE Senior Member Grade Elevation to Mahesh Kumar

Mahesh Kumar, Assistant Professor, Department of Electrical Engineering, has been elevated as Senior Member of the Institute of Electrical and Electronics Engineers (SMIEEE) in recognition of his contribution to the profession..

Mahesh Kumar receives Young Achiever Award from BRNS

Mahesh Kumar, Assistant Professor, Department of Electrical Engineering, IIT Jodhpur, has been decorated with the Young Achiever Award by the Board of Research in Nuclear Sciences, Department of Atomic Energy, Government of India, for his meritorious contribution in the field of Science, during the 61st Solid State Physics Symposium at KIIT University, Bhubaneshwar on 30 December 2016.

STUDENTS

Activities & Achievements

Travel Grant

Amrita Kaurwar, Ph. D. Student, Department of Mechanical Engineering, India Institute of Technology Jodhpur, received travel grant from India Network Foundation to present her research paper titled "Functional Demarcation of Traditional Off-White Colored Water Pots Manufactured from Rajasthan Clayey Soils and Red Colored Water Pots from Gujarat Clayey Soils Using Spectrographic, Cooling and Strength Studies—A Case Study from Jodhpur, Rajasthan, India", at the Materials Research Society Conference held in Boston, USA during 27 November - 2 December, 2016. The paper has been co-authored with other colleagues from the department.

National Sports Day

National Sports Day was celebrated at IIT Jodhpur on 29 August 2016 at the GPRA Residential Campus. Following are some pictures of the celebration.

Students immersed in the game of Kho Kho

Happy National Sports Day!!

NEW JOININGS

IIT Jodhpur welcomes the following new Faculty Members and Staff Members into the family:

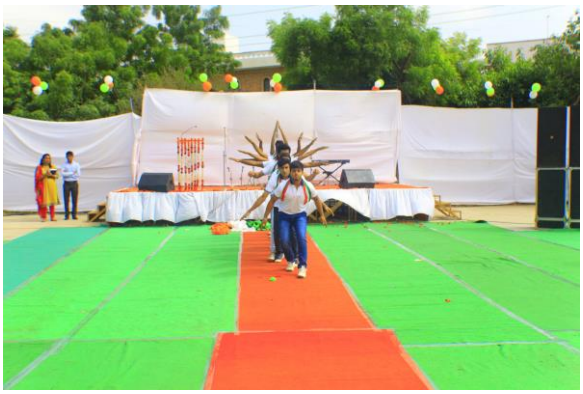
Name	Designation	Department / Area of Work	Date of Joining
Ramesh K. Metre	Assistant Professor	Chemistry	11 July 2016
Mahima Arrawatia	Assistant Professor	Electrical Engineering	18 July 2016
Somnath Ghosh	Assistant Professor	Physics	28 November 2016
Ashish Garg	Professor *(on Deputation)*	Materials Engineering	13 December 2016
Sudipto Mukhopadhyay	Assistant Professor	Mechanical Engineering	16 December 2016
Soumava Mukherjee	Assistant Professor	Electrical Engineering	26 December 2016
Manas Khatua	Assistant Professor	Computer Science & Engineering	28 December 2016
Bhanprakash Goswami	Junior Technical Superintendent	Electrical Engineering	30 December 2016

PERMANENT CAMPUS

69th Independence Day Celebration

The 69th Independence Day of the nation was celebrated by the members of IIT Jodhpur Community, on 15 August 2016 in the Temporary Academic Campus. Subsequent upon the flag hoisting and rendering of the National Anthem by the members present, students presented a cultural show with a musical performance by Sangam (the music band of students) and a street play by Nukkad (the drama group of students).

Musical performance by "Sangam" the music band of IIT Jodhpur Students Gymkhana on 15 August 2016



Cultural Program by IIT Jodhpur Students on 15 August 2016

Cultural Program by IIT Jodhpur Students on 15 August 2016

Audience enjoying the cultural programs on 15 August 2016

Tree Plantation in Permanent Campus of IIT Jodhpur

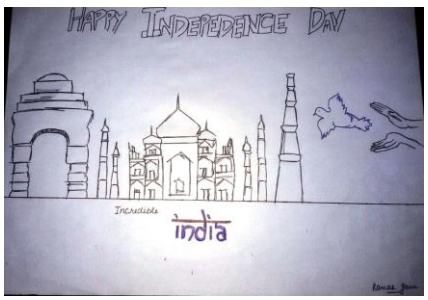
Tree plantation activity was undertaken at the Permanent Campus of IIT Jodhpur in Karwad on the occasion of 69th Independence Day on 15 August 2016. Several neem saplings were planted jointly by the members of the IIT Jodhpur community and the Jodhpur Tree Plantation and Environment Protection Committee (JTPEPC), led by Sri M. S. Singhvi, Senior Advocate, (High Court of Rajasthan, Jodhpur) in the presence of Honourable Justice Sandeep Mehta, (Sitting Judge, High Court of Rajasthan, Jodhpur) and distinguished members of JTPEPC.

Tree plantation at the Permanent Campus of IIT Jodhpur on 15 August 2016

"मरु धरा में हरियाली लाने की ओर आई.आई.टी. जोधपुर के शिशु कदम", आज़ादी के ७०वे शुभ पर्व पर आई.आई.टी. जोधपुर के स्थाई परिसर में सघन वृक्षारोपण, १५ अगस्त २०१६

Freedom Fortnight Celebrations @ IIT Jodhpur

On the occasion of Independence Day, the Government of India declared a 14 day celebration. IIT Jodhpur has taken this initiative positively and organised various events on this occasion. One of the activities organised by the Students Gymkhana during this celebration was "Sketching Competition". The Institute showed great interest in the competition and actively participated in it. To encourage students think about the positive aspects and the great achievements of the country, "The Incredible India" theme was chosen for the competition. This inculcates feeling of patriotism and proud among the "Future of India". Some of the sketches contributed by the Students are illustrated as under.



Another event that was organised by the Technical Society of the Students Gymkhana during 14-18 August 2016 was a task to use the Rube Goldberg machine to commemorate the 70th Independence Day. The projects were evaluated by Rajlaxmi Chouhan and Mhima Arrawatia, Assistant Professors, Department of Electrical Engineering. The following pictures depict application of Rube Goldberg machine:

OUTREACH

Vanguard Lectures

The following Vanguard Lectures were organised by the Department of Mechanical Engineering, which were attended by the Faculty Members, Students, and Technical Staff Members.

S. Devarajan, Senior Vice President, Production Engineering, TVS Motor Company Limited, Hosur, addressed the members of the department on "Future of Manufacturing Technologies" on 28 July 2016.


S. Devarajan

Arun T. Ramchandani, Vice President, Product & Technology Development, Heavy Engineering, Larsen & Toubro Limited, Mumbai, delivered a lecture on "Defence Technologies and Products" on 29 July 2016.


Arun T. Ramchandani

A. K. Jindal, Head, Engineering Commercial Vehicles, Tata Motors India, addressed the members of the department on "Automotive Technologies" on 01 August 2016.


A. K. Jindal

Prakash Rao Malathkar, Associate Chief Engineer – Gasoline Powertrain Projects, and V. Vikraman, Head – Diesel Engine Design, from Power Train Division, Mahindra Research Valley, Mahindra & Mahindra Limited, Chennai delivered a lecture on "Global Technological Advancement Trends of Automotive Passenger Car Powertrains" on 05 August 2016.


Prakash Rao Malathkar


V. Vikraman

Lipika Dey, Principal Scientist, Real Time Contextually Aware Enterprise, Research and Innovation Tata Consultancy Services, India spoke about "Real Time Contextual Intelligence for Enterprises" on 08 August 2016.


Lipika Dey

Ashok Kumar Panda, Head, Core Technology, Core Technology & Diagnostics (CTDS) Department Tata Power Company Limited, Noida, delivered a lecture on "Overview of Challenges in Thermal Power & The Role of C&I in Power Industry" on 09 August 2016.


Ashok Kumar Panda

Visitors to the Institute

A talk on Indo-US Relations

Mark Azua, Director, Programs, North India Office, Embassy of the United States of America, gave a talk on "India-U.S. Relations: The Way Forward" on Wednesday, 16 November 2016. Mr. Azua talked about the relationship between the countries and its progress after the recent Presidential Elections. Faculty Members, Staff Members, and Students attended the talk.

Mark Azua addressing the audience

Sh. P. P. Chaudhary, Union Minister for State for Electronics & IT and Law & Justice, visits IIT Jodhpur

Sh. P. P. Chaudhary, Union Minister for State for Electronics & IT and Law & Justice, visited IIT Jodhpur on 10 December 2016. A meeting was held at IIT Jodhpur on 10 December 2016 from 4:30 pm to discuss the possibility of establishing an Information Technology Investment Region (ITIR) in the greater Jodhpur-Pali region. The meeting was chaired by the Hon'ble Union Minister of State for Electronics & IT and Law & Justice, Sh. P. P. Chaudhary. The meeting was attended by C. V. R. Murty (Director, IIT Jodhpur), Dr. S. R. Vadera (Director, DRDO Defence Laboratory Jodhpur), Sh. M. L. Bapna (Advisor – Industry-Academia Interface, IIT Jodhpur), three Faculty Members of IIT Jodhpur (Arun K. Singh (EE), S. P. Tiwari (EE), and B. V. Ramana (CSE)), Sh. Dipak Singh (Scientist F, Ministry of Electronics & Information Technology, Government of India), Sh. N. K. Gupta (Scientist B, Ministry of Electronics & Information Technology, Government of India) and Sh. Mukesh Chaudhary (Additional Private Secretary to Minister of State, Government of India).

Professor C. V. R. Murty presenting a memento to Sh. P. P. Chaudhary

DEPARTMENT IN FOCUS – Bioscience & Bioengineering

The new *Department of Bioscience & Bioengineering* (formerly Department of Biology) is planned to be the hub at IIT Jodhpur of biological sciences, medical sciences, and technology. It aims at providing quality education, and undertaking research towards addressing the national needs (especially those leading to development of technologies for diagnostics and treatment by medical professionals). The Department of Bioscience & Bioengineering is looking for Faculty Members, whose competence spans over a wide range of domains needed to meet the national needs.

The Department is planning to offer B.Tech. (Biotechnology), M.Tech. (Bioscience & Bioengineering) and Ph.D. Program with specialisation in biological sciences, medical science and technology, and their interfaces. The department will offer a wide range of courses from foundational level to advanced level in the said domains from the various degree programs. Hands-on learning will be emphasized using state-of-the-art centralized research facilities.

The Department of Bioscience & Bioengineering will focus on collaboration, both within and outside the Institute, to enhance research potential and productivity. In particular, special effort is being made to interact with Faculty Members of the All India Institute of Medical Sciences (AIIMS), Jodhpur, towards developing technologies that are needed by the medical profession.

Programs

The Department of Bioscience & Bioengineering will host three degree Programs, namely:

(a) B.Tech. (Biotechnology) Program,

(b) M.Tech. (Bioscience & Bioengineering) Program, and

(c) Ph.D. Program with specialisation in biological sciences, medical sciences, technology, and their interfaces.

B.Tech. and Ph.D. programs are slated to start from July 2018, and M.Tech. Program from July 2017. In addition, currently, the Institute is hosting the 4-year B.Tech. (Biologically Inspired System Science) Program, the intake for which has been discontinued from July 2016.

People

The Department has four regular Faculty Members working in different areas.

Name	Designation	Research Area
Sushmita Jha	Assistant Professor & Head	Cellular and Molecular Neuroscience, Cell and Molecular Physiology
Amit Kumar Mishra	Assistant Professor	Cellular and Molecular Neuroscience, Cell Cycle Regulation and Cancer
Meenu Chhabra	Assistant Professor	Biological Science & Bio-Engineering: Renewable Bioenergy Bioremediation
Sushmita Paul	Assistant Professor	Computational Biology and Bioinformatics

The department has two Technical Staff Members assisting the Faculty Members, and 12 Ph.D. Students. Prospective candidates for Faculty Member positions are encouraged to visit our recruitment page to know more about the procedure: http://iitj.ac.in/faculty/facultypositions. Also, the Department invites applications from young Doctoral Degree holders (below the age of 35 years) to Post-Doctoral Positions in the Department, particularly, in the area of Healthcare technologies, towards developing devices for diagnosis and treatment of illnesses.

Infrastructure

The Department of Bioscience & Bioengineering has started developing laboratories for teaching and research purposes. The early laboratories available are as below:

(1) Advanced Bioscience & Neuroscience Laboratory,
(2) Chemical Biology Laboratory,
(3) Protein Engineering Laboratory, and
(4) Environmental Biotechnology Laboratory.

R&D Projects

Currently, the Faculty Members of the Department are running six sponsored research projects being funded by Government of India research funding agencies like the Board of Research in Nuclear Sciences (Department of Atomic Energy), Science & Engineering Research Board (Department of Science & Technology), Department of Biotechnology. Also, technical support is required to effectively meet the technical objectives of the projects. Towards this end, temporary positions when available are announced from time to time on the Institute's website, for young scientists and technicians to seek training and engagement with advanced subjects of the ongoing research projects.

Collaboration

Faculty Members of the Department of Bioscience & Bioengineering are keen to collaborate with individuals from academia, R&D laboratories and industry in India and abroad, in areas of mutual interest. The domains of these collaborations could include:

1. Teaching of courses,
2. Organising Short Courses,
3. Co-authoring of books,
4. Undertaking Joint Research, and
5. Developing technologies for diagnostics and treatment by medical professionals.

The ongoing collaborations include those with colleagues from:

1. All India Institute of Medical Sciences, Jodhpur,
2. Advanced Centre for Treatment, Research & Education in Cancer (ACTREC), Tata Memorial Centre, Mumbai,
3. University of North Carolina at Chapel Hill, USA,
4. Indian Institute of Technology Bombay,
5. Riken Brain Science Institute, Japan,
6. Nagoya University, Japan,
7. National Brain Research Centre, Gurgaon, and
8. International Centre for Genetic Engineering and Biotechnology, New Delhi.

Outreach

Department of Bioscience & Bioengineering hosts weekly seminars for Ph.D. Students.

...

Editorial Board
Deepakkumar M. Fulwani, Coordinator (Faculty)
Atul Kumar, Coordinator (Academics)
V. Narayanan, Coordinator (R&D)
V. Hari Narayanan, Coordinator (Students)
Amardeep Sharma, Deputy Registrar
Kshema Prakash, Deputy Librarian

IIT Jodhpur Newsletter
Vol. 02 (2)
JULY-DECEMBER 2016

Editor
Kshema Prakash, Deputy Librarian
Indian Institute of Technology Jodhpur
Old Residency Road, Ratanada
Jodhpur 342011
eMail: publications@iitj.ac.in
www.iitj.ac.in