

Profile Page



Name : Dr Nitai Basak
Designation : Associate Professor
Department : Bio-Technology
Qualification : Ph.D Biotechnology (NIT Jalandhar)
M.Tech Biotechnology (IIT Kharagpur)
B.Tech (University of Calcutta)
Email : basakn@nitj.ac.in

Research Interests :

Bioprocess Engineering, Bioprocess optimization, Bioreactor Design, Biological Hydrogen production, Bioremediation, Biofuels, Biomaterials, Bioplastics and Biopolymers, Bio Separation Engineering, Computational Fluid Dynamics Simulation in Bioprocess and Bioreactor, Environmental Biotechnology, Enzyme and Protein Engineering, Microbial production of enzymes/proteins and their purification, Metabolites and Biorefinery, Molecular docking and Drug design

Other Profile Links :

Google Scholar Link :

Dr. NITAI BASAK [Click Here](#)

Journal Publications :

| Year | Journal | Publication |
|------|--|---|
| 2022 | Frontiers of Environmental Science & Engineering 16 (12), pp 1-22 | Shilpa, Nitai Basak and Sumer Singh Meena, Microbial biodegradation of plastics: Challenges, opportunities, and a critical perspective |
| 2022 | Bioprocess and Biosystem Engineering (ISSN: 1615-7605), Springer Nature, 2022, pp 1-30 | Varsha Jayachandran, Nitai Basak, Roberto De Philippis, Alessandra Adessi, Novel strategies towards efficient molecular biohydrogen production by dark fermentative mechanism: present progress and future perspective, published online 17th June 2022 |
| 2022 | Applied Biochemistry and Biotechnology (ISSN: 0273-2289), Springer Nature, 1-31 | Raman Rao and Nitai Basak, Sequential dark-photo batch fermentation and kinetic modelling for biohydrogen production using cheese whey as a feedstock, published online 14th May 2022 |
| 2022 | Bioprocess and Biosystem Engineering (ISSN: 1615-7605) Springer Nature, 2022, published online 23rd December | Varsha Jayachandran, Nitai Basak, Optimization of dark fermentative biohydrogen production from rice starch by Enterobacter aerogenes MTCC 2822 and Clostridium acetobutylicum MTCC 11274, 2022, Impact factor:3.434 |
| 2022 | Materials Today Proceedings (ISSN: 2214-7853), Elsevier, 2022, pp. 1-9, | Shilpa, Nitai Basak and Sumer Singh Meena, Exploring the plastic degrading ability of microbial communities through metagenomic approach |

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| 2022 | Biomass Conversion and Biorefinery (ISSN: 2190-6823), Springer Nature, pp. 1-20 | Satya Ranjan Das and Nitai Basak, Optimization of process parameters for enhanced biohydrogen production using potato waste as substrate by combined dark and photo fermentation |
| 2021 | Biotechnology and Applied Biochemistry (ISSN: 0885-4513), Wiley, Vol 68, Issue 3, pp 421-444 | Raman Rao and Nitai Basak, Development of novel strategies for higher fermentative biohydrogen recovery along with novel metabolites from organic wastes: The present state of the art, |
| 2021 | Applied Biochemistry and Biotechnology (ISSN: 0273-2289) 193, Springer Nature, pp 2297-2330 | Raman Rao and Nitai Basak, Fermentative molecular biohydrogen production from cheese Whey: present prospects and future strategy |
| 2021 | Biomass Conversion and Biorefinery (ISSN: 2190-6823), Springer Nature, pp 1-24 | Raman Rao and Nitai Basak, Process optimization and mathematical modelling of photo-fermentative hydrogen production from dark fermentative cheese whey effluent by Rhodobacter sphaeroides O.U.001 in 2-L cylindrical bioreactor |
| 2021 | Biotechnology and Applied Biochemistry (ISSN: 0885-4513), Wiley, pp 1-15 | Nitai Basak, Asim Kumar Jana and Debabrata Das, Photofermentative biohydrogen generation from organic acids by Rhodobacter sphaeroides O.U.001: CFD modelling of hydrodynamics and temperature |
| 2021 | International Journal of Hydrogen Energy (ISSN: 0360-3199), Elsevier, Vol 46, pp , 1777-1800 | Raman Rao and Nitai Basak, Optimization and modelling of dark fermentative hydrogen production from cheese whey by Enterobacter aerogenes 2822, |
| 2021 | Bioprocess Biosystem Engineering (ISSN: 1615-7605), Volume 44, pp 1-25 | Satya Ranjan Das and Nitai Basak, Molecular biohydrogen production by dark and photo Fermentation from wastes containing starch: recent advancement and future perspective. |
| 2016 | International Journal of Hydrogen Energy, Elsevier | CFD modeling of hydrodynamics and optimization of photofermentative hydrogen production by Rhodopseudomonas palustris DSM123 in annular photobioreactor |
| 2016 | Intellectual Property Issues in Biotechnology (ISBN: 13:978 1 78064 653 4) | Leishmaniasis: Drug Development and Intellectual Property Issues |
| 2014 | International Journal of Hydrogen Energy,(ISSN: 0360-3199), Elsevier | Optimization of molecular hydrogen production by Rhodobacter sphaeroides O.U.001 in the annular photobioreactor using response surface methodology |
| 2014 | International Journal of Hydrogen Energy (ISSN: 0360- 3199), Elsevier | Photofermentative molecular biohydrogen production by purple-non-sulfur (PNS) bacteria in various modes: the present progress and future perspective |
| 2009 | Biomass and Bioenergy (ISSN: 0961-9534), Elsevier | Photofermentative hydrogen production using Purple non sulfur bacteria Rhodobacter sphaeroides O.U.001 in an annular photobioreactor: A case study |
| 2007 | Proceeding of The World Congress on Engineering & Computer Science (ISBN: 978988-9867164) | Microbial biohydrogen production by Rhodobacter sphaeroides O.U.001 in photobioreactor |
| 2007 | World Journal of Microbiology and Biotechnology, (ISSN: 0959-3993) Springer link | The prospect of purple non-sulfur photosynthetic bacteria for hydrogen production: the Present state of the art |
| 2004 | LEATHER International,(ISSN: 1473-6314) U.K | New approach for processing eco friendly Garment Leather |
| 1999 | World Leather,(ISSN: 0894-3087) U.K | Replacing Chrome by Aluminium Retannages in Suede and Nubuck Leather |

Conference Publications :

| Year | Conference | Publication |
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| 2023 | International UKIERI Concrete Congress Sustainable Concrete Infrastructure, held on 14 - 17 March 2023, NIT Jalandhar | Nitish Kr Prajapati, Arvind K Agnihotri, Nitai Basak, "Microbial induced calcite precipitation (MICP) a sustainable technique for stabilization of soil: a review" |
| 2022 | 3rd International Conference on Recent Advances in Bioenergy Research, ICRABR-2022, March 09-11, 2022, SSS-National Institute of Bio Energy, Kapurthala, ISBN 978-93-84935-73-4, pp 81. | Gaganpreet Kaur, Nisha Yadav, Nitai Basak and Sachin Kumar, "Comparative Study of Mesophilic and Thermophilic Consortium for Biogas Production" |
| 2022 | International Conference of Recent Advances in Biotechnology", ICRA-2022, December 02-04, 2022, NIT Jalandhar | Gaganpreet Kaur, Nisha Yadav, Nitai Basak and Sachin Kumar, "Enrichment of thermophilic consortium" |
| 2022 | International Conference of Recent Advances in Biotechnology", ICRA-2022, December 02-04, 2022, NIT Jalandhar | Atmaja Shindhe and Nitai Basak, "Kinetic modeling for biohydrogen production from fruit wastes: recent advances" |
| 2022 | International Conference of Recent Advances in Biotechnology", ICRA-2022, December 02-04, 2022, NIT Jalandhar | Devu P and Nitai Basak, "Vegetable waste as a substrate for biohydrogen production: recent advancements and future perspective" |
| 2021 | International conference on Advance in sustainable research for energy and environment management held on 6th-8th August, 2021, National Institute of Technology, Surat (SVNIT) | Shilpa, Nitai Basak and Sumer Singh Meena, "Role of Microbial Enzymes in Plastic Biodegradation: Insights and Opportunities" |
| 2021 | 2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021), August 20-22, 2021, NIT Jalandhar | Shilpa, Nitai Basak and Sumer Singh Meena," Microbial degradation of conventional polyethylene waste: current status and future prospective" |
| 2021 | 2nd International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021), August 20-22, 2021, NIT Jalandhar | Varsha J and Nitai Basak, "Fuel of the future-Biohydrogen Production: Current Strategies & Future Prospects" |
| 2019 | 2nd International Conference on "Application of Biotechnology in Industry and Society (ABIS 2019), NIT Jalandhar | Prabhjeet Kaur and Nitai Basak, "Preservation of cosmetic products against microbial growth: current perspectives, ISBN: 978-93-88237-93-2, pp 71 |
| 2019 | 2nd International Conference on "Application of Biotechnology in Industry and Society (ABIS 2019), NIT Jalandhar | Shilpa, Nitai Basak and Sumer Singh Meena, "Deterioration of polyethylene by microbial Consortia isolated from a dumpsite waste", ISBN: 978-93-88237-93-2, pp 49 |
| 2019 | 2nd International Conference on "Application of Biotechnology in Industry and Society (ABIS 2019), NIT Jalandhar | Bharti Arora and Nitai Basak, "Media optimization for the production of lovastatin, a therapeutic drug, by Aspergillus terreus MTCC 18031 using Response Surface methodology", ISBN: 978-93-88237-93-2, pp 39 |
| 2019 | 2nd International Conference on "Application of Biotechnology in Industry and Society (ABIS 2019), NIT Jalandhar | Satya Ranjan Das and Nitai Basak, "Fermentative biohydrogen production in various operational modes using starch-containing substrate", ISBN: 978-93-88237-93-2, pp 38. |
| 2019 | 2nd International Conference on "Application of Biotechnology in Industry and Society (ABIS 2019), NIT Jalandhar | Raman Rao and Nitai Basak, "Significance of statistical design in optimizing the critical Process parameters of fermentative hydrogen production: feasibility and present state of the art ", ISBN: 978-93-88237-93-2, pp 37. |
| 2018 | 71st Chemical Engineering Congress, CHEMCON 2018 | Raman Rao and Nitai Basak, "Potential recovery and utilization of fermentative liquid waste produced during fermentative biohydrogen production: Biorefinery approach", paper ID: CHO 760, pp 773 |

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| 2018 | 71st Chemical Engineering Congress, CHEMCON 2018 | Satya Ranjan Das and Nitai Basak, "Biohydrogen production from starchy waste by microbial Fermentation", paper ID: CHO 761, pp 775 |
| 2018 | 71st Chemical Engineering Congress, CHEMCON 2018 | Shilpa, Nitai Basak, Sumer Singh Meena, "Microbial degradation of plastic waste materials: a step towards plastic free environment", paper ID: CHP 628, pp 630 |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 58. | "Maximizing thermophilic hydrogen production from different non conventional biomass: current status and future aspect" |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 33 | Study on optimization of extracellular alkaline lipase from <i>Aspergillus fumigates</i> MTCC 9657 |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 32 | Study on lipase production in fed batch submerged system using <i>Aspergillus fumigatus</i> MTCC 9657 by olive oil induction |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 25 | Computer-aided drug design of some novel inhibitors against beta-lactamase of <i>Pseudomonas aeruginosa</i> enzyme (GES-2) via molecular docking and virtual screening approach |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 21 | Study on development of effective inhibitor for heat shock protein 90 (HSP 90) as potential anti-cancer drug against breast cancer |
| 2016 | Application of Biotechnology in Industry and Society (ABIS 2016), NIT Jalandhar, ISBN 978-93-85777-58-5, pp 16 | Computational fluid dynamic study of flow behavior in cylindrical and conical flask geometry |
| 2016 | 2nd International Conference on Recent Advances on Bioenergy Research (ICRABR 2016), SSS-National Institute of Bio Energy, Kapurthala, February 25-27, 2016, ISBN 978-93-84935-73-3, pp 42. | Nitai Basak, "Biological Hydrogen Production: Recent Technology for Renewable Bioenergy" |
| 2016 | 2nd International Conference on Recent Advances on Bioenergy Research (ICRABR 2016), SSS-National Institute of Bio Energy, Kapurthala, February 25-27, 2016, ISBN 978-93-84935-73-3, pp 141. | Raman Rao and Nitai Basak, "Development of Improved Strategies for Fermentative Hydrogen Production" |
| 2013 | International Conference on Algal Biorefinery (ICAB 2013), IIT Kharagpur, India, January 10-12, 2013 | Photo-Biological hydrogen production by Algae vis-à-vis purple non sulfur bacteria: the present perspective |
| 2012 | 65th Chemical Engineering Congress, CHEMCON 2012", N.I.T. Jalandhar, India, December 27-30, 2012 | Characterization of anti-cancer agents Protein Kinase B/AKT inhibitors using structural based drug design |
| 2012 | 65th Chemical Engineering Congress, CHEMCON 2012", N.I.T. Jalandhar, India, December 27-30, 2012 | Study of various ligands as a potential drug for Erp Protein in <i>Mycobacterium tuberculosis</i> |
| 2012 | 65th Chemical Engineering Congress, CHEMCON 2012", N.I.T. Jalandhar, India, December 27-30, 2012 | Response Surface Methodology: effective tools for Optimization of biohydrogen production using purple non sulfur bacteria <i>Rhodobacter sphaeroides</i> |
| 2012 | 19th World Hydrogen Energy Congress (WHEC 2012)", Toronto, Canada, June 03-08, 2012 | Optimization of photofermentative Parameters for biohydrogen production by purple non sulfur bacteria using Response Surface Methodology |
| 2011 | Fuel Cell & Hydrogen Energy (FCHE-2011)", Washington D.C., USA, February 11-18, 2011 | Optimization of initial substrate concentration and dry biomass concentration for higher yield of fermentative hydrogen production by Response Surface Methodology |
| 2010 | International conference on Biomedical Engineering and Assistive Technologies, BEATs-2010, NIT Jalandhar, December 17-19, 2010 | Molecular Docking Study of Anticancer Drugs with Histone Deacetylase (HDAC) |

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| 2010 | International conference on VIII AICLST, Kolkata, November 12-14, 2010 | Removal of Cr (VI) by using pea nut shell as low Cost Bioadsorbent |
| 2007 | 60th Annual Chemical Engineering Congress, CHEMCON, Kolkata, December 27-30, 2007, pp. 200 | Microbial photofermentative hydrogen production by Rhodopseudomonas palustris DSM 123 in annular photobioreactor |
| 2006 | 59th Annual Chemical Engineering Congress, CHEMCON, Bharuch, December 27-30, 2006, pp.04 | Continuous biohydrogen production by immobilized PNS bacteria Rhodobacter sphaeroides O.U.001 in tubular photobioreactor |
| 2006 | 59th Annual Chemical Engineering Congress, CHEMCON, Bharuch, December 27-30, 2006, pp.227 | Liposomes in Drug Delivery |
| 2006 | International conference on Biofuel Vision 2015, Bikaner, October 13-15, 2006, pp. 110-111 | Anaerobic reactors for biological treatment of organic wastes for production of biogas and biohydrogen |
| 2005 | 58th Annual Chemical Engineering Congress, CHEMCON, IIT Delhi, December 14-17, 2005 | Role of microorganisms in the production of Biogas and Biohydrogen- the Present Perspective |
| 2005 | 2nd European H2 Energy Conference, Zaragoza, Spain, Nov 22-25, 2005, pp. 350 | Photoproduction of H2 using Rhodobacter sphaeroides O.U.001, Rhodobacter capsulatus DSM 152 and Rhodospirillum rubrum NRRL B280 |

Book/Chapter Publications :

| Type | Title | Publisher | Authors | ISBN/ISS N No. | Year |
|-----------------------------|---|----------------------------|--|------------------------------|------------|
| Edited the Book of Abstract | Application of Biotechnology in Industry and Society (ABIS-2016) | Excel India Publishers | Joint Editors: Dr. NITAI BASAK and Dr. ASIM KUMAR JANA | 978-93-85 777-58-5 | April 2016 |
| Edited the Book of Abstract | 2nd International Conference, in joint collaboration with University of Florence, Italy on “Application of Biotechnology in Industry and Society (ABIS-2019)” | Excel India Publishers | Joint Editors: Dr. NITAI BASAK and Dr. ASIM KUMAR JANA | ISBN No.: 978-93-88 237-93-2 | 2019 |
| Chapter in Edited Book | Anaerobic reactors for biological treatment of organic wastes for production of biogas and biohydrogen, Book: Biodiesel Production Technologies, Chapter 19 | Pointer Publishers, Jaipur | Editor: S.K.Mehla, Authors: Dr Nitai Basak and Dr Apurba Dey | 817132517 7 | 2007 |

Research Projects :

| Role | Project Type | Title | Funding Agency | From | To | Amount | Status | Co-Investigator |
|---------------------------|--------------|---|---------------------|------------|----------|----------|-----------|-----------------|
| Co-Principal Investigator | R & D | Biological Degradation of chrome tanned shaving from tanning industry | MHRD, Govt of India | 02-07-2000 | 15-12-03 | 8.0 lakh | Completed | Dr S B S Mishra |

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| Principal Investigator | R&D, “Teachers Associateship for Research Excellence (TARE)” | “Bioprospection of Lignocellulose-rich agricultural waste using oleaginous fungi for its potential in Bioenergy sector”, DST SERB Sponsored R&D Project, File number TAR/2022/00 0652, | DST, SERB | 06-10-2022 | 06-10-2025 | 15.0 lakh | Ongoing | --- |
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Events Organized :

| Category | Type | Title | Venue | From | To | Designation |
|---|---------------|---|--|------------|------------|-------------------------------------|
| MHRD sponsored Global Initiative on Academic Networks (GIAN) course | International | Biotechnology and Process Engineering for Biofuels Production | Host Foreign Faculty from Italy, Prof. (Dr.) Roberto De Philippis, University of Florence and Prof. (Dr.) Debabrata Das, IIT Kharagpur, in Department of Biotechnology, NIT Jalandhar. 32 participants took part in this International Training course | 16-05-2016 | 25-05-2016 | Host Faculty and Course Coordinator |
| Conference | National | Application of Biotechnology for Industry and Society (ABIS 2016) | TEQIP-II Sponsored, Department of Biotechnology, NIT Jalandhar, April 12-14, 2016. Around 90 participants, total 65 Papers were presented | 12-04-2016 | 14-04-2016 | Convener |

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| Short Term Course | National | Advances on Industrial Biotechnology | TEQIP-II Sponsored, Department of Biotechnology, NIT Jalandhar, November 30-December 04, 2015. More than 50 participants took part in this Short Term course | 30-11-2015 | 04-12-2015 | Course Coordinator |
| Conference | International | 65th Chemical Engineering Congress, CHEMCON 2012 | 65th CHEMCON, Dec. 2012, NITJ | 27-12-2012 | 30-12-2012 | Coordinator of Technical Sessions and Organizer |
| Conference | National | SCHEMCON 2008: Present and Future Trends in Process Industries | SCHEMCON, Sept. 2008, NIT Jalandhar | 26-09-2008 | 27-09-2008 | Coordinator of Technical Sessions and Organizer |
| Workshop | National | National Technology Day: 2007 | NIT Jalandhar | 11-05-2007 | 11-05-2007 | Coordinator |
| Workshop | National | Workshop on 'Water Management' | NIT Jalandhar | 19-09-2007 | 19-09-2007 | Coordinator |
| Students Cultural Events | National | Literary & Debating Society, LADS, UTKANSH | NIT Jalandhar, 2009-2013 | 2009 | 2013 | Faculty-advvisor |
| Students Technological Events | National | Society of Biotech Engineer and Researchers (SOBER): TECHNITi Events | NIT Jalandhar | 2007 | 2016 | Faculty Coordinator |
| MOU signed with University of Florence, Italy | International | The Institute signed academic MoU for joint research collaboration and faculty/students exchange in "Biotechnology and Process Engineering for Biofuel Production" with University of Florence, Italy | The M.O.U. was signed on 11th May 2018, by Prof. Luigi Dei, Rector of the University of Florence, Italy and Prof. Lalit Kumar Awasthi, Director, NIT Jalandhar and two coordinators: Prof. (Dr.) Roberto De Philippis (from University of Florence, Italy) and Associate Prof. (Dr.) Nitai Basak (from Dr. B.R.Ambedkar N.I.T.Jalandhar) signed as Witness of the M.O.U. | 09-05-18 | 16-05-18 | Faculty Coordinator, responsible for MOU signed |

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| STC | National | “Advances in Enzyme and Bioprocess Engineering”, TEQIP-III Sponsored, More than 50 participants | Department of Biotechnology, NIT Jalandhar | 07-02-2019 | 11-02-2019 | Coordinator |
| Induction Training Programme | National | “Induction Training Programme for 1st year Students”, TEQIP-III Sponsored, All the admitted B.Tech. 1st year students participated. | NIT Jalandhar | 02-08-2018 | 07-08-2018 | Coordinator |
| 14th Convocation of the Institute | National | 14th Convocation of the Institute | Dr B R Ambedkar NIT Jalandhar | 07-04-2019 | 07-04-2019 | Coordinator |
| B.Tech. Admission | National | 2019 B.Tech New Admission, under JOSAA/CSAB 2019 | Dr B R Ambedkar NIT Jalandhar | 28-06-2019 | 05-08-2019 | Reporting Center In-Charge |
| M.Tech. Admission | National | 2019 M.Tech. New Admission under CCMT 2019 | Dr B R Ambedkar NIT Jalandhar | 07-05-2019 | 26-07-2019 | Reporting Center Deputy In-Charge and Help Center In-Charge |
| Conference in Joint Collaboration with University of Florence, Italy | International | “Application of Biotechnology for Industry and Society (ABIS 2019)” | Dr B R Ambedkar NIT Jalandhar | 14-11-19 | 16-11-19 | Convener |
| 15th Convocation of the Institute | National | 15th Convocation of the Institute | Dr B R Ambedkar NIT Jalandhar | 25-11-19 | 25-11-19 | Coordinator |
| B.Tech admission 2020 | National | 2020 B.Tech New Admission, under JOSAA/CSAB 2020 | Dr B R Ambedkar NIT Jalandhar | 17-10-20 | 14-11-20 | Reporting Center-in-charge |
| 16th Convocation of the Institute | National | 16th Convocation of the Institute | Dr B R Ambedkar NIT Jalandhar | 27-12-20 | 27-12-20 | Coordinator |

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| Ministry of Education sponsored Global Initiative on Academic Networks (GIAN) course | International | “Biotechnology and Biovalorisation of Extremophiles”, February 20- March 01, 2023 | Department of Biotechnology, NIT Jalandhar. Prof. Rajesh Sani, South Dakota School of Mine and Technology, USA was the Foreign Faculty. Prof. Subir Kundu, IIT BHU and Dr. Nitai Basak were the Indian Speakers for this GIAN Speakers. A total of 61 candidates participated in this GIAN programme. | 20-02-2023 | 01-03-2023 | Host Faculty and Course Coordinator |
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Professional Affiliations :

| Designation | Organization |
|---|---|
| Member | International Association of Hydrogen Energy” (IAHE), USA, since June 2012 |
| Member | American Chemical Society” (ACS), USA, since January 2011 |
| Member | Asian Forum of Biotechnology” (AFOB), Japan, since January 2013 |
| Life Member | International Association of Engineers” (IAENG), LM 63588 Hong Kong, since July 2007 |
| Life Member | Indian Chemical Engineering Association” (IChE), LM 27333, Kolkata, since June 2005 |
| Life Member | Indian Association for Cultivation of Science” (IACS), Kolkata, since July 2000 |
| Life Member | Indian Society of Technical Education (ISTE), LM 28761, New Delhi, since January 2001 |
| Life Member | Indian Leather Technologists Association” (ILTA), LM 399, since January 1998 |
| Reviewer | Bioprocess and Biosystem Engineering, SpringerLink, February 2016 |
| Reviewer | Energy and Management, Elsevier, May 2015 |
| Reviewer | Fuel, American Chemical Society, April 2015 |
| ?Reviewer | Biomass and Bioenergy, Elsevier, ISSN: 0961-9534, since June 2011 |
| ?Reviewer | Process Biochemistry, Elsevier, ISSN: 1359-5113, since June 2011 |
| Reviewer | Bioresource Technology, Elsevier, ISSN: 0960-8524, since September 2008 |
| Reviewer | International J of Hydrogen Energy, Elsevier, ISSN:0360-3199, since Sept. 2008 |
| Reviewer | Environmental Science and Technology, American Chemical Society, Sept. 2009 |
| Reviewer | International J. of Environment and Waste Management, Interscience, Oct. 2009 |
| Associate Editor | J.of Indian Leather Technologists Association, ISBN: 0019-5738, 2002-2008 |
| Life Fellow, F-1229755 | Institute of Engineers, India (IEI), F-1229755 |
| Member of Editorial Board | American Journal of Chemical and Biochemical Engineering, June 2022 onwards |
| Member of Editorial Board and Review Editor | Frontiers in Microbiology, June 2022 onwards |

PhD Supervised :

| Scholar Name | Research Topic | Status | Year | Co-Supervisor |
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| Deepika Umrao | Bioprocess Engineering and Environmental Biotechnology | Continuing since January 2023 | 2023 | Nil |
| Gaganpreet Kaur | Thermophilic anaerobic consortium enrichment for enhanced Biogas /biomethane production | Continuing since September 2021 | 2021 | Dr Sachin Kumar |
| Shilpa | Studies on isolation and characterization of microbes for efficient plastic degradation | Continuing since August 2018 | 2018 | Dr S S Meena |
| Satya Ranjan Das | Studies on biohydrogen production from starch as suitable substrate by dark and photo fermentation | PhD Thesis Awarded 24th March 2023 | 2017 | Nil |
| Raman Rao | Biohydrogen production from cheese whey wastewater by dark and photo fermentation | PhD Thesis Awarded 24th September 2021 | 2015 | Nil |

PG Dissertation Guided :

| Student Name | Dissertation Title | Status | Year | Co-Supervisor |
|------------------------|--|-----------------------------|-----------|------------------------|
| Rakshita Mehta | Bioprocess Engineering and Environmental Biotechnology | Continuing from August 2022 | 2022-2024 | Nil |
| Nitish Kumar Prajapati | Study of MICP (Microbial Induced Calcite Precipitation) Technique in the aspect of Geotechnical Engineering, | Continuing from August 2021 | 2021-23 | Prof. Arvind Agnihotri |
| Devu P | Fermentative biohydrogen production from vegetable wastes | Continuing from August 2021 | 2021-2023 | Nil |
| Atmaja T Shinde | Fermentative biohydrogen production from fruit wastes | Continuing from August 2021 | 2021-2023 | Nil |
| Varsha J | Dark fermentative biohydrogen production from rice starch by utilization of pure and co-cultures of Enterobacter aerogenes MTCC 2822 and Clostridium acetobutylicum MTCC 11274 | Completed September 2022 | 2020-2022 | Nil |
| Nistha Thakur | Studies of inhibitors against uptake hydrogenase present in Rhodobacter sphaeroides O.U.001 for enhanced biohydrogen production | Completed September 2021 | 2019-2021 | Nil |
| Nidhi Arya | Studies on production of Bioplastics composites from various waste materials | Completed September 2021 | 2019-2021 | Nil |

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| Shweta Kalia | Studies on enhancement of production and catalytic properties of extracellular alkaline lipase Using <i>Aspergillus fumigatus</i> | Completed August 2016 | 2014-2016 | Dr N K Srivastava |
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Admin. Responsibilities :

| Position Held | Organization | From | To |
|---|-------------------------------|------------|------------|
| Head, Department of Biotechnology | Dr B R Ambedkar NIT Jalandhar | 11-12-2014 | 31-01-2015 |
| Head, Department of Biotechnology | Dr B R Ambedkar NIT Jalandhar | 06-09-2016 | 19-04-2017 |
| Assistant Proctor, Proctorial Cell of Institute | Dr B R Ambedkar NIT Jalandhar | March 2006 | March 2008 |
| Asst. Proctor, Proctorial Cell | NIT Jalandhar | Jan 2011 | Aug 2014 |
| Member Secretary, Board of Studies, Deptt. of Biotechnology | Dr B R Ambedkar NIT Jalandhar | July 2008 | Till date |
| Faculty-advisor, Literary & Debating Society, LADS, UTKANSH 2009-2013 | Dr B R Ambedkar NIT Jalandhar | July 2009 | July 2013 |
| Associate Dean, Faculty Welfare | Dr B R AMbedkar NIT Jalandhar | 09-02-2018 | 23-01-2019 |
| Faculty Coordinator, Music and Dramatic Club | Dr B R Ambedkar NIT Jalandhar | 06-09-2016 | 08-03-2017 |
| Coordinator, "Induction Programme for the 1st year students" | Dr B R Ambedkar NIT Jalandhar | 06-09-2017 | Till date |
| Member: Institute Library Committee | Dr B R Ambedkar NIT Jalandhar | 06-09-2012 | 23-01-2019 |
| Assistant Public Information Officer | Dr B R Ambedkar NIT Jalandhar | 06-12-2006 | 30-11-2010 |
| Associate Dean Academic, UG | Dr B R Ambedkar NIT Jalandhar | 24-01-2019 | 05-02-2021 |
| Faculty Coordinator, Institute National Depository | Dr B R Ambedkar NIT Jalandhar | 24-01-2019 | 05-02-2021 |
| Head of the Department, Biotechnology | Dr B R Ambedkar NIT Jalandhar | 05-02-2021 | Till date |

Award and Honours :

| Title | Activity | Given by | Year |
|--|---|---|------|
| Sponsored Foreign Visit to Florence, Italy and Ecole Central De Lily, France | For signing the MOU with University of Florence, Italy for joint research Collaboration | Professional Development Allowance, MHRD, NIT Jalandhar | 2018 |
| Sponsored Foreign Visit to Toronto, Canada | For presenting research paper in the International Conference | Professional Development Allowance, MHRD, NIT Jalandhar | 2012 |
| Sponsored Foreign Visit to Washington DC, USA | For presenting research paper in the International Conference | Professional Development Allowance, MHRD, NIT Jalandhar | 2011 |
| Sponsored Foreign Visit to San Francisco, USA | For presenting research paper in the International Conference | Under TEQIP-I World Bank Project | 2007 |

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| Sponsored Foreign Visit to Zaragoza, Spain | For presenting research paper in the International Conference | Under TEQIP-I World Bank Project | 2005 |
| National Scholarship for Ranked 90 in board Class X Examination | Madhyamik Pariksha 1990 | MHRD, Govt. of India | 1990-1997 |