

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 :

Biological Hydrogen production, Bioprocess optimization, Environmental Biotechnology, Enzyme and Protein Engineering, Drug design, Bio Separation Engineering

Other Profile Links :

Google Scholar Link :

Dr. NITAI BASAK [Click Here](#)

Journal Publications :

Year	Journal	Publication
2020	Biotechnology and Applied Biochemistry (ISSN: 0885-4513), Wiley, Vol 67, Issue 3, pp 1-24	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,
2020	International Journal of Hydrogen Energy (ISSN: 0360-3199), Elsevier, Vol 45, pp , 1-24	Raman Rao and Nitai Basak, Optimization and modelling of dark fermentative hydrogen production from cheese whey by Enterobacter aerogenes 2822,
2020	Bioprocess Biosystem Engineering (ISSN: 1615-7605), 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 Rhodospseudomonas 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
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
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 Aspergillus fumigates 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 Aspergillus fumigatus 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 Pseudomonas aeruginosa 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.	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 Mycobacterium tuberculosis
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 Rhodobacter sphaeroides
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)
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
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
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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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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
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
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

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 , since July 2017	Institute of Engineers, India (IEI)

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Shilpa	Biodegradation of Plastics	Continuing	2018	Dr S S Meena
Satya Ranjan Das	? Studies on biohydrogen production from starch as suitable substrate by dark and photo fermentation	Continuing since January 2017	2017	Nil
Raman Rao	? Biohydrogen production from dairy effluent by dark and light fermentation	Continuing since August 2015	2015	Nil

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	Till Date
Faculty Coordinator, Institute National Depository	Dr B R Ambedkar NIT Jalandhar	24-01-2019	Till Date

Award and Honours :

Title	Activity	Given by	Year
National Scholarship for Ranked 90 in board Class X Examination	Madhyamik Pariksha 1990	MHRD, Govt. of India	1990-1997