

Pronoy Kumar Sinha

Assistant Professor



Key Research Areas:

- Simulation and optimization of chemical and biological processes
- Multivariate Data Analysis (MVDA), Nonlinear dynamics, bifurcation and chaos and Process intensification
- Clean technology and Clean fuels (hydrogen, biodiesel and ethanol)
- Electrochemical capacitor, Sustainable engineering and utilization of renewable materials
- Fermentative bio-hydrogen production from organic wastes and sugars, Algal biohydrogen

Contact:

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Location: Room No. – 104 (Chemical Engineering Building)

Education:

Doctor of Philosophy (Chemical Engineering), University of Calcutta, Kolkata, India, 2015

M. Tech. (Chemical Engineering), University of Calcutta, India, 2006

B. Tech. (Chemical Engineering), University of Calcutta, India, 2004

Major Research Interest (s):

- Fixed and fluidized bed catalytic reactor and treatment of wastewater using an Inverse fluidized bed bioreactor
- Development, scale-up, technology transfer, validation, and monitoring of biotech processes

Awards and Recognition (s):

- **GATE-MHRD Scholarship** in M.Tech
- Awarded “**Senior Research Fellow**” scholarship from **TEQIP**
- Awarded “**Senior Research Fellow**” scholarship from **CSIR**
- Membership in Technical Societies:

Publication (s):

Peer Reviewed Journals:

A) Paper published in international/national journals:

- **Pronoy kumar Sinha**, Arpita Sinha, Manas Das, “Microbial Removal of Phenol and p-Chlorophenol from Industrial Waste Water Using *Rhodococcus sp.*RSP8 and Its Growth Kinetic

Modeling”, Journal of Water Resource and Protection, 2011, 3, 634-642.

- **Pronoy kumar Sinha**, Arpita Sinha, Manas Das, Microbial Removal of Phenol and p-Chlorophenol from Industrial Waste Water Using *Rhodococcus* sp.RSP8 and Its Growth Kinetic Modelling, Journal of Water Resource and Protection, 3, 2011, 634-642.
- **Pronoy Sinha**, Bhaskar Das, Kollol Mukherjee and Manas Das, Studies on removal of Phenol from contaminated water source by microbial route using *Bacillus cereus*, International journal of current research and academic review, ISSN: 2347-3215, 2 (1), 2014, 179-184.
- Bhaskar Das, Manas Das and **Pronoy Sinha**, Production of Cellulase enzyme by submerged fermentation process from *Penicillium variable*, Indian Journal of Applied Research, 4 (1), 2014, 42-44.
- Edwin Gomes, Rahul Kumar Gupta, **Pronoy Kumar Sinha**, Adsorption Studies on Removal of Chromium from Synthetic Waste Water using Activated Carbon prepared from Rice Husk and Sugarcane Bagasse, International Journal of Engineering Development and Research (ISSN: 2321-9939), 5 (2), 2017, 1856-1870.

B) Paper Presentation/participation at International/National Seminar/Conference etc:

- **Pronoy kumar Sinha**, participated in the Nanotechnology: An awareness programme (nano aware) organized by University College of Technology, University of Calcutta, under TEQIP in collaboration with Govt. college of Engg. & Ceramic Technology, Kolkata and Haldia Institute of Tech., Haldia held on 24-25th March 2006 at Meghnad Saha Auditorium, C.U.
- **Pronoy Kumar Sinha**, participated in “Application of emerging technologies to build new generation chemical plants”, at Chemcon-2006 (Indian Chemical Engineering Congress - 2008) held during 27 - 30 December, 2006 organised by the Ankleshwar Regional Centre at GNFC Ltd, Bharuch.
- **Pronoy kumar Sinha**, participated in the International Seminar on Science, Culture And Social Change (ISSCSC) held on 18-20th January 2007 at the Centenary Auditorium, University of Calcutta.
- Siddhartha Acharya, **Pronoy Kumar Sinha**, Manas Das, presented a paper entitled “Recent advances in Phenol biodegradation” in Indian Chemical Engineering Congress (CHEMCON 2007) held in Kolkata in December 2007.
- **Pronoy Kumar Sinha**, Siddhartha Acharya, Manas Das, “Studies on biological removal of phenol from waste water”, poster presentation, held during 22-23 August, at “National conference on application of identified chemical and biological technologies in agriculture -’08”, Department of chemistry, Jadavpur University, Kolkata 700 032
- **Pronoy Kumar Sinha**, Manas Das, “Bioprocess kinetic study on phenol Degradation”, Oral presentation at Chemcon-2008 (Indian Chemical Engineering Congress - 2008) held during 27 - 30 December, 2008 at Department of Chemical Engineering and Technology, Panjab University, Chandigarh.
- Manas Das, Bhaskar Chandra Das, **Pronoy Kumar Sinha**, “Studies on production of cellulose from *penicillium variable* by submerged fermentation”, oral presentation at conference on "Advances in Chemical Engineering" (AChemE 2009) (February 27-28, 2009) Department of Chemical Engineering, Thapar University, Patiala-147004, Punjab (India)
- **Pronoy Kumar Sinha**, Arpita Sinha, Manas Das, Bhaskar Chandra Das, “Simultaneous biodegradation of phenol and 4-chlorophenol by a newly isolated *Rhodococcus* species”, oral presentation at conference on "Advances in Chemical Engineering" (AChemE 2011) (February-27-28, 2011) Department of Chemical Engineering, Thapar University, Patiala-147004, Punjab (India)

- Arpita Sinha, **Pronoy Kumar Sinha**, Manas Das, “Microbial removal of arsenic from industrial effluents” oral presentation at conference on "Advances in Chemical Engineering" (ACHEM 2011) (February 27-28, 2011) Department of Chemical Engineering, Thapar University, Patiala-147004, Punjab (India)
- **Pronoy Kumar Sinha**, Arpita Sinha, Manas Das, “Bioremediation of phenol and 4-chlorophenol by a newly isolated *Rhodococcus* species”, oral presentation at seminar on 8th All India People Technology Congress, 11th and 12th February 2011, Kolkata, FOSET
- Arpita Sinha, **Pronoy Kumar Sinha**, Manas Das, “Microbial removal of arsenic from industrial wastewater”, oral presentation at seminar on 8th All India People Technology Congress, 11th and 12th February 2011, Kolkata, FOSET
- **Pronoy Kumar Sinha**, Pradip De, Manas Das, presented a paper entitled, “Isolation and growth parameter determination of two native phenol and 4-chlorophenol degrading bacteria” at 48th annual convention of Chemists 2011, Indian Chemical Society held 06/12/2011 .
- **Pronoy Kumar Sinha**, Kallol Mukherjee, Manas Das, participated and presented a paper entitled “Isolation and growth parameter determination of 4-chlorophenol degrading bacteria by statistical methods” in Indian Chemical Engineering Congress (CHEMCON 2011) held during 27 - 29 December, 2011 at Bangalore 560054.
- Participated at “ National Conference on CO₂ capture & storage Technology” held on November 23, 2012 at Kolkata, organized by Dept. of Chemical Engineering, Rashbehari Sikhsa Prangan, Calcutta University, Kolkata 700009.

C) Workshop/Training attended

- Workshop on “*Safety Management & loss Prevention in Chemical and Allied Industry*” held on December 04-05, 2009 at Kolkata, organized jointly by the Calcutta Regional Center, IChE & Petroleum and Explosive Safety Organization, Ministry of Commerce & Industry, Govt. of India.
- Workshop on “*Sustainable green technology towards positive action for environment*” held on June 04-05, 2010 at Kolkata, organized jointly by the National Institute of Technical Teachers’ Training and Research (NITTTR), Ministry of HRD, Govt. of India, & VIEM, Kolkata.
- Workshop on “*E-Waste Management and handling Rules, 2011*” held on August 29, 2012 at Kolkata, organized by Dept. of Chemical Engineering, University College of Science and Technology, Calcutta University, Kolkata 700009.

Present and Positions Held:

- **Assistant Professor:** Durgapur Institute of Advanced Technology and Management, February 2017-present
- **Assistant Professor:** Ghani Khan Choudhury Institute of Engineering & Technology, Malda-732144, August 2014 - January 2017

Professional Affiliation (s):

- Member of Indian Institute of Chemical Engineers
- Member of Forum of Scientist, Engineers and Technologists

Students Guided:

- No. of B.Tech students guided: 11 (completed)

Courses:

UG Course (s)

Heat transfer

Energy Technology

Mechanical Operation

Environmental Engineering

Separation Process

Chemical Process Technology

Petrochemical technology

UG Laboratory

Heat transfer

Mass Transfer

Process Equipment Design & Drawing Laboratory

Energy Technology

Numerical Analysis