Jyoti Prakash Sarkar

Professor (Ex-Prof. and Dean Academic and Planning & Development, NIT Durgapur)

Key Research Areas:

- Fluidization
- Non-conventional energy
- Waste management

Contact:

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Location: Room No. – **CH 303** (Chemical Engineering Building)

Education:

Doctor of Philosophy (Chemical Engineering), Indian Institute of Technology, Kharagpur, India, 1995
M.Tech. (Chemical Engineering), University of Burdwan, R.E. College, Durgapur, India, 1978
B.E. (Chemical Engineering), University of Burdwan, R.E. College, Durgapur, India, 1975

Major Research Interest (s):

- Non-conventional energy resources
- Waste management technique

Publication (s):

Peer-reviewed Journals:

- B. Choudhury, P. K. Chatterjee, J. P. Sarkar, Review paper on solar-powered air-conditioning through adsorption route, Renewable and Sustainable Energy Reviews, 14, 2010, 2189-2195.
- B. Choudhury, P. K. Chatterjee, J. P. Sarkar, Cooling India, 2010
- R. Anandhakrishnan, J. P. Sarkar, A critical review on Vertical Pneumatic Conveying- Some Perspective, Canadian Journal on Chemical Engineering & Technology, 2, 2011, 48-59.
- B. Choudhury, P. K. Chatterjee, J. P. Sarkar, Development of a solar adsorption cooling system at CMERI, Durgapur, CSIR News (ISSN:0409-7467), 61 (1&2), 2011.
- S. Parua, S. Maity, A. Karmakar, P. Gupta, J. P. Sarkar, Lumped parameterization of boiling channel - Bifurcation during density wave oscillations, Chemical Engineering Science, 74, 2012, 310-326.

- D. Mukhopadhyay, J. P. Sarkar, S. Dutta, Optimization of process parameters for the economical generation of biogas from raw vegetable wastes under positive influence of plastic materials response surface methodology, Journal of Biochemical Technology, 4(1), 2012, 549-553.
- B. Choudhury, B. B. Saha, P.K. Chatterjee, J. P. Sarkar, An overview of developments in adsorption refrigeration systems towards a sustainable way of cooling, Applied Energy, 104, 2013, 554-567.
- D. Mukhopadhyay, J. P. Sarkar, S. Dutta, Optimization of process factors for efficient generation of biogas from raw vegetable wastes under the direct influence of plastic materials using Taguchi methodology, Desalination and Water Treatment, 51, 2013, 2781-2790.
- A. J. Cheryan, F. Shaik, M. S. Ali Bawaain, **J. P. Sarkar**, Photo Catalytic Removal of Contaminants from Secondary Treated Municipal Wastewater in a Continuous Recirculation Reactor, International Journal of Applied Environmental Science, 8(2), 2013, 113-128.
- D. Mukhopadhyay, J. P. Sarkar, S. Dutta, Macroscopic temporal studies on the effect of waste plastic materials on anaerobic digestion of raw vegetable market wastes: experiment and modelling, International Journal of Environment and Waste Municipal Management, 13 (4), 2014, 429-440.
- A. Singh, D. Mukhopadhyay, J. P. Sarkar, S. Dutta, Studies on effect of plastic on biodegradation on vegetable solid market waste through detailed analysis of leachate, Journal Of Solid Waste Technology And Management, 40 (3), 2014, 266-284.
- D. Pandit, B. Choudhury, J. P. Sarkar, Modelling Analysis of Silica Gel / Water Adsorption Chiller Systems: A Review, International Journal of Research and Scientific Innovation, III(VI) June 2016, 18-26.
- R. Anandhakrishnan, J. P. Sarkar, A simplified computational model for hydrodynamic studies on dilute phase pneumatic transport in vertical riser, Indian Journal of Chemical Technology, 2018, 81-87.
- R. Dhurandhar, J. P. Sarkar, B. Das, The recent progress in momentum, heat and mass transfer studies on pneumatic conveying system, Heat and Mass Transfer, 2018.

Awards & Recognitions:

Awarded Gandhi Centenary Scholarships from Steel Authority of India Limited.

Present and Positions Held:

- **Professor (Regular Visiting Faculty):** Durgapur Institute of Advanced Technology and Management, February 2018-present
- **Professor:** National Institute of Technology Durgapur (March 2005 - May 2017)
- **Assistant Professor:** R.E. College Durgapur (January 1996 - March 2005)
- **Selection Grade Lecturer:** R.E. College Durgapur (June 1995 - December 1995)
- **Senior Scale Lecturer:** R.E. College Durgapur (July 1987 - June 1995)
- **Lecturer:** R.E. College Durgapur (July 1981 - June 1986)

Professional Affiliation (s):

- Life member, Institute of Engineers (IE), Hon. Secretary of Durgapur Regional Centre
- Life Member of Indian Institute of Chemical Engineers (IIChE), India

Other Activity:

- Head of the Department of Chemical Engineering during the period from January, 2003 to December, 2007
- Project Officer (PT) of National Technical Manpower Information System (NTMIS), from 2001-2013
- Dean (Planning & Development) of NIT Durgapur from November, 2014 to December, 2015
- Dean (Administration) from November 22, 2011 to September 15, 2014
- He has served the NIT, Durgapur as Coordinator of the Mentoring Committee to mentor the establishment process of NIT, Arunachal Pradesh (NIT AP) during the period from October, 2009 to October 2011. He independently served on behalf of Director "NIT, Durgapur who was also Mentor Director of NIT Arunachal Pradesh. He has developed the institute infrastructure of NITAP at Yupia, near Itanagar, The Mentor Director gave independent charges to him for execution of all sorts of administrative jobs to run the institute successfully till handing over the institute to the permanent Director appointed by MHRD in November 02, 2011.
- Chairman of Venue Management Committee of the Annual Convocation program since 2012
- Chairman of Staff Cultural Club, NIT Durgapur
- He was frequently assigned the charge of Director during absence of Director on outstation official tour / leave since September, 2013

Students Guided:

- No. of B.Tech students guided: 120 (completed)
- No. of M.Tech students guided: 60 (completed)
- No. of PhD students guided: 05 (completed) & 05 (ongoing)

Courses Taught:

UG Course (s)

Fluid Mechanics
Industrial Stoichiometry
Mass Transfer
Chemical Technology
Petroleum Engineering
Transport Phenomena
Reactor Design & Analysis

UG Laboratory

Heat transfer
Mass Transfer
Fluid Dynamics
Mechanical Operation

PG Course (s)

Advanced Fluid mechanics
Advanced Mass Transfer
Fertilizer Technology