

Projjwal Sarkar

Assistant Professor & HOD



Key Research Areas:

- Bio-separation Processes
- Wastewater Treatment
- Membrane Separation Techniques

Contact:

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Location: Room No. – 201 (Main Building)

Education:

Doctor of Philosophy (Chemical Engineering), Jadavpur University, Kolkata, India, 2009

M. Tech. (Chemical Engineering), Indian Institute of Technology, Kharagpur, India, 2001

B. E. (Chemical Engineering), Jadavpur University, Kolkata, India, 1999

Major Research Interest (s):

- Polymeric membrane and its application
- Treatment and recovery of valuable products from industrial effluent

Publication (s):

Peer Reviewed Journals:

- S. Dutta, **P. Sarkar**, C. Bhattacharjee, S. Datta, “Performance comparison of rotating disk ultrafiltration membrane module, a high shear device with cross-flow module”, Int. J. Environment and Pollution, 49 (3/4) (2012) 197-209.
- **P. Sarkar**, S. Ghosh, S. Dutta, D. Sen, C. Bhattacharjee, S. Datta, “Effect of different operating parameters on the recovery of proteins from casein whey using a rotating disc membrane ultrafiltration cell”, Desalination 249 (2009) 5–11.
- C. Bhattacharjee, D. Sen, **P. Sarkar**, S. Datta, P. K. Bhattacharya, “Studies on the application of different ANNs to predict permeate flux in rotating disk membrane modules: A case study with MATLAB™”, Desalination and Water Treatment, 2 (2009) 170–184.
- C. Bhattacharjee, **P. Sarkar**, D. Sen, “Treatment of Casein Whey Using Polyether Sulphone Ultrafiltration Membrane in Cross-Flow Membrane Module”, IE (I) Journal-CH, 88 (2008) 3-7.
- A. Hore, **P. Sarkar**, M. Sarkar, C. Bhattacharjee, S. Datta, “Membrane technology in recovery of protein from whey stream: A safe and economic route to whey disposal”, IJEP, 27(10) (2007) 883-889.

- **P. Sarkar**, S. Datta, C. Bhattacharjee, P. K. Bhattacharya, B. B. Gupta, “Performance study on ultrafiltration of Kraft black liquor and membrane characterization using Spiegler-Kedem model”, *Korean J. Chem. Eng.*, 23(4) (2006) 617-624.
- C. Bhattacharjee, **P. Sarkar**, S. Datta, B. B. Gupta, P. K. Bhattacharya, “Parameter estimation and performance study during ultrafiltration of Kraft black liquor”, *Separation and Purification Technology*, 3(51) (2006) 247-257.

National Conferences:

- Shubhom Moulick, **Projjwal Sarkar**, Chiranjib Bhattacharjee, Hydrodynamic Studies on Permeate Flux and Solute Rejection using a Rotating Disc Membrane Ultrafiltration Cell, **All India Student’s Conference on “Innovative Technical Education”**, 20-21 April, 2018, DIATM, Durgapur, West Bengal, India.
- Arkobrata Chatterjee, Pranta Mustafi, Prasanta Kumar Biswas, **Projjwal Sarkar**, Future of Plasma Sterilizer: a review, **All India Student’s Conference on “Innovative Technical Education”**, 20-21 April, 2018, DIATM, Durgapur, West Bengal, India.
- Utsab Ghosh, **Projjwal Sarkar**, Studies on Metal Organic Frameworks (Mofs) for Hydrogen Storage, **All India Student’s Conference on “Innovative Technical Education”**, 20-21 April, 2018, DIATM, Durgapur, West Bengal, India.
- Ahana.Banerjee, **Projjwal Sarkar**, Chiranjib Bhattacharjee, Development of Mathematical Models for the Prediction of Flux and Rejection Based on Dimensional Analysis Approach, **SCHEMCON-2014**, Haldia Institute of Technology, August 2014, Haldia, India.
- **Projjwal Sarkar**, Suman Datta, Chiranjib Bhattacharjee, Studies on the Effect of Concentration Polarization during Ultrafiltration of Casein Whey”, **Seminar on Chemical Engineering in Today’s Perspective**, Heritage Institute of Technology, March 2005, Kolkata, India.

International Conferences:

- **Projjwal Sarkar**, Ayan Hore, Suman Dutta, Chiranjib Bhattacharjee, Siddharta Datta, Application of Membrane Technology for Dairy Industry: Effluent Treatment and Protein Recovery, **CHEMCON-2007**, December 2007, Kolkata, India.
- **Projjwal Sarkar**, Suman Dutta, Chiranjib Bhattacharjee, Siddharta Datta, Comparison of Crossflow and Rotating Disc Ultrafiltration Membrane Module, **CHEMCON-2006**, December 2006, Bharuch, India.
- **Projjwal Sarkar**, Suman Dutta, Chiranjib Bhattacharjee, Siddharta Datta, Study on the effect of different operating parameters to recover of whey proteins by using a rotating disc membrane ultrafiltration cell, **CHEMCON-2006**, December 2006, Bharuch, India.
- Ankita Mazumder, Dwaipayan Sen, **Projjwal Sarkar**, Chiranjib Bhattacharjee, Removal of Polycyclic Aromatic Hydrocarbons from Wastewater using o/w ME Technology, **SATEM-2017**, IEST, Shibpur, June 2017, West Bengal, India.

Project (s):

- DST sponsored: “Development of Novel Electroflotation / Electrocoagulation Enhanced Membrane Module for Oily Waste Water Treatment” (Co-PI)

Awards & Recognition:

- “Best Teacher 2017” Award

Present and Positions Held:

- **Assistant Professor & HOD:** Durgapur Institute of Advanced Technology and Management, December 2015-present
- **Assistant Professor:** Durgapur Institute of Advanced Technology and Management, January 2010 - December 2015
- **Senior Lecturer:** Durgapur Institute of Advanced Technology and Management, August 2009 - December 2009
- **Lecturer:** Durgapur Institute of Advanced Technology and Management, July 2007 - July 2009

Professional Affiliation (s):

- Life Associate Member of Indian Institute of Chemical Engineers (IChE), (LAM – 20259), India

Other Activity:

- Vice-President, DIATM Mountaineering Club
- Hostel warden, DIATM Boys’ Hostel, (01.07.2014 - 30.06.2015)

Programmes organized/attended

- Attended 21 Days Special Summer school, 2014 on “Science & Technology: Biomedical, Engineering & Environmental Issues” organized by UGC Academic Staff College, University of Calcutta.
- Attended 5 Days Petrotech Summer school, 2015 on “Petroleum Rerefining and Petrochemicals” organized by Indian Oil-R&D, IIPM and Petrotech.
- Organized two days Workshop at D.I.A.T.M. from 08.082017 to 09.082017 on “Simulation & Analysis of Chemical Processes” as a convener.

Students Guided:

- No. of B.Tech students guided: 82 (completed)

Courses:

UG Course (s)

Industrial Stoichiometry
Mechanical Operation
Separation Process I
Separation Process II
Operation Research

UG Laboratory

Engineering Drawing Laboratory
Mass Transfer Laboratory
Process Equipment Design & Drawing Laboratory