

CV of Prof. P. MONDAL



- Name and full correspondence address : **Prof. Prasenjit Mondal**
: Department of Chemical Engineering,
IIT Roorkee, Roorkee- 247667
- Email(s) and contact number(s) : pmondch@iitr.ac.in /mondal2001@gmail.com
: +91-11332-285181/+91-9897369605
- Institution : Indian Institute of Technology Roorkee
- Date of Birth : 2nd January 1974
- Gender (M/F/T) : M
- Category Gen/SC/ST/OBC : Gen
- Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

| | Degree | Year | Subject | University/Institution | % of marks |
|----|--------|------|-------------|------------------------|---------------------|
| 1. | B.Sc. | 1994 | Chemistry | Visva Bharati Univ. | 1 st DIV |
| 2. | B.Tech | 1997 | Chemical | Calcutta Univ. | 1 st DIV |
| 3. | M.Tech | 2000 | F. Chemical | Calcutta Univ. | 1 st DIV |
| 4. | Ph.D | 2008 | Chemical | IIT Roorkee | A Grade |

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

| Title | Guide's name | Institute/University | Year of award |
|--|---|----------------------|---------------|
| Removal of arsenic from water by surface modified adsorbents and immobilized whole cells | Prof. C.B.Majumder and Prof. Bikash Mohanty | IIT Roorkee | 2008 |

10. Work experience (in chronological order).

| S.No. | Positions | Name of the | From | To |
|-------|-----------------|--------------------------|------------|------------|
| 1. | Shift in charge | Jayshree Chemicals Ltd. | June 1997 | June, 1998 |
| 2. | Plant Officer | Hind Lever Chemicals Ltd | June, 1999 | June, 2000 |
| 3. | Lecturer | B.P.T.U | June, 2000 | June, 2003 |
| 4. | Sr. Lecturer | B.P.T.U | July, 2003 | Dec, 2003 |
| 5. | SRF | IIT Roorkee | Jan., 2004 | Dec., 2006 |
| 6. | Scientist B | IIP Dehradun | Aug., 2006 | June, 2009 |

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|----|---------------------|-----------------|-------------|--------------|
| 7. | Assistant Professor | MNNIT Allahabad | July, 2009 | Sep., 2009 |
| 8. | Assistant Professor | IIT Roorkee | Sep., 2009 | April, 2014 |
| 9. | Associate Professor | IIT Roorkee | April, 2014 | Dec., 2019 |
| 10 | Professor | IIT Roorkee | Dec., 2019 | Till to date |

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

| S.No | Name of Award | Awarding Agency |
|------|--|---|
| 1. | 3 Years Membership award | American Chemical Society |
| 2. | NTSE Scholarship | Govt. of India |
| 3. | Financial assistance to attend SEAWE 9,10 and 16 | University of Tokyo |
| 4. | Visiting Professor, 2018 | Department of Chemical and Biological Engineering, University of Saskatchewan, Canada |
| 5. | Visiting Professor, 2020-25 | Department of Chemical and Biological Engineering, University of Saskatchewan, Canada |
| 6. | Joint Professor, 2021 | Department of Biosciences and Bioengineering, IIT Roorkee |
| 7. | Visiting Professor, 2023 (Virtual mode) | Institute of Energy, St. Petersburg Polytechnic University, Russia |

12. Area of interest

Energy and environmental engineering (Water and waste water treatment, energy from biomass & wastes, separation processes, LCA, waste plastics management)

13. Publications

Patents: 02; Books: 02; Book Chapters: 18, Journal papers: 80; Conference papers: 75; Online course: 02

(Detail provided in separate list)

14. Research supervision:

Ph.D. awarded: 10

M. Tech. awarded: 40

Ph.D. in progress: 09

M. Tech. in progress: 02

Ph.D. Thesis Supervision

| Sl. No. | Title of dissertation/ thesis | Year Awarded | Name of student | Co-supervisor if any |
|---------|---|--------------|----------------------|--------------------------------|
| 1 | Removal of toxic organics from wastewater and energy production using EC and MFC | 2013 | Ravi Shankar | Prof Shri Chand |
| 2 | Treatment of arsenic and fluoride bearing water and wastewater | 2017 | Lokendra Thakur | - |
| 3 | Biological remediation of cyanide in a packed bed SAB reactor | 2017 | Naveen Dwivedi | Prof. C.B. Majumder |
| 4 | Biological removal of fluoride from industrial waste water | 2017 | Shubha Dwivedi | Prof. C.B. Majumder |
| 5 | Pyrolysis kinetics of biomass feedstocks and bio-oil production | 2017 | Anil Varma | - |
| 6 | Studies on removal of fluoride and arsenic from contaminated water | 2018 | Vineet Rathore | - |
| 7 | Syngas production from methane via dry reforming using porous nanocatalysts | 2020 | Mumtaj Shah | Dr. A Nayak Dr. A. Bordoloi |
| 8 | Energy production using biotechnology: Bio hydrogen production | 2021 | Amit Kumar Chaurasis | - |
| 9 | Studies on green house gas components utilization to value added fuels via syngas route | On going | KDP Lakshmee Kumar | Dr. K. Ghosh Dr. R. Prasad |
| 10 | Gray water treatment | Ongoing | Pushparaj Patel | - |
| 11 | Pyrolysis of waste biomass and upgradation of bio-oil | Ongoing | Shubhi Gupta | - |
| 12 | Waste treatment | Ongoing | Sanjibani Hooda | - |
| 13 | Pyrolysis of waste plastics | Ongoing | Navneeta Lal | - |
| 14 | Waste treatment/ management | On going | Susmit Chitransh | |

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|----|---|----------|-----------------|--|
| 15 | Waste water treatment | On going | Hemant Goyal | |
| 16 | Biochemical Eng. | On going | Nitesh Kumar | |
| 17 | Waste treatment | On going | Prince Kumar | |
| 18 | Hydrogen production/CO2 capture through electrochemical process | On going | Yash Srivastava | |
| 19 | Biohydrogen production | On going | Deepak Kumar | |

M. Tech. Thesis Supervision

| Sl No. | Title of thesis | Year Awarded | Name of Student | Co-supervision if any |
|--------|---|--------------|--------------------|-----------------------|
| 1 | Treatment of acid mine drainage through physico-chemical route | Ongoing | Imtiyaz Hussan | |
| 2 | Treatment of acid mine drainage through biological route | Ongoing | Yojesh Kumar | |
| 3 | Hydrogen production through dark fermentation | 2022 | Adarsh Kumar | |
| 4 | Biohydrogen production | 2022 | Harshbardhan | |
| 5 | Bio-energy production and biological wastewater treatment using microbial fuel cells (MFCs) | 2021 | Himanshu Kachroo | |
| 6 | Comparative study of removal of arsenic and fluoride from groundwater: LCA approach | 2021 | Vipin Gupta | |
| 7 | Degradation of microplastics through microorganisms | 2020 | Anu | Dr. B. Choudhury |
| 8 | Catalytic upgradation of bio oil | 2019 | Nand Kishore Saini | Dr. C. Thota |
| 9 | Gray water treatment | 2018 | Abdul Muteen | - |
| 10 | Pyrolysis of waste milk packets | 2018 | Sadia Almas | - |

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|----|---|------|----------------|--------------|
| 11 | Waste water treatment & production of biodiesel from scenedesmus obliquus & native isolated | 2018 | Samridhi Rana | Dr. S. Dutta |
| 12 | Pyrolysis of waste plastics, 2017 | 2017 | Gajendra Singh | - |
| 13 | Modelling and simulation of methanol synthesis in a small scale compact reactor, 2017 | 2017 | Rishabh Didel | - |
| 14 | Development of novel catalyst for upgradation of bio-oil, 2017 | 2017 | R Jibril Goli | - |
| 15 | Wastewater treatment by electrochemical methods, 2017 | 2017 | Hemant Goyal | - |
| 16 | Photocatalytic oxidation of organic compounds, 2017 | 2017 | Shubham Saroha | - |
| 17 | Oil from waste plastics, 2016 | 2016 | Lekhank Patil | - |
| 18 | Wastewater treatment using algae and biogas production from algal biomass, 2016 | 2016 | Preety Kumari | - |
| 19 | Biogas production of organic wastes, 2016 | 2016 | Punit Siwatch | - |
| 20 | M.Tech.; Energy production and treatment of wastewater through microbial fuel cell, 2016 | 2016 | Usha Kumari | - |
| 21 | M.Tech.; Bio hydrogen production from waste water sludge, 2015 | 2015 | Bhuwan Bhaskar | - |
| 22 | M.Tech.; Modelling and simulation of methane bi-reforming for syngas, 2015 production in a micro-structured reactor, 2015 | 2015 | Bhavana Sahu | - |
| 23 | M.Tech.; Simultaneous removal of arsenic and fluoride from synthetic ground water by treated laterite soil, 2015 | 2015 | Dileep Dohare | - |
| 24 | M.Tech.; Integrating phycoremediation of wastewater with production of biofuel, 2015 | 2015 | M.V.S. Prasad | - |

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|----|--|------|-------------------|---|
| 25 | M.Tech.; Modeling and simulation of production of hydrogen rich syngas by gasification using carbonaceous feed, 2015 | 2015 | Sachin Meena | - |
| 26 | M.Tech.; Simultaneous generation of electricity and removal of organic load from synthetic waste water using a microbial fuel cell, 2015 | 2015 | Sandeep D. Behera | - |
| 27 | Modelling and simulation of methane tri - reforming for production of hydrogen in a micro - channel reactor, 2014 | 2014 | Vijay Kumar | - |
| 28 | Harvesting of algae and production of upgraded oil from algal biomass, 2014 | 2014 | Promila Yadav | - |
| 29 | Simultaneous production of electricity and treatment of wastewater through microbial fuel cell, 2014 | 2014 | Deepa | - |
| 30 | Adsorptive removal of fluoride and nitrate from synthetic water using surface modified laterite soil, 2014 | 2014 | Faizal Akram | - |
| 31 | Development of low cost adsorbents for the removal of heavy metals from synthetic waste water, 2014 | 2014 | Sayan Mitra | - |
| 32 | Removal of heavy metals from wastewater using plants and laterite soil, 2013 | 2013 | Veralika Singh | - |
| 33 | Adsorptive removal of fluoride from water by surface modified laterite soil, 2013 | 2013 | Pragya Mishra | - |
| 34 | Production of oil from algae and its upgradation using heterogeneous catalyst, 2013 | 2013 | Mayur Malpani | - |

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|----|--|------|------------------------|--------------------|
| 35 | Numerical analysis of pool fire and sprinkler interaction through FDS, 2013 | 2013 | Aditya Kumar | - |
| 36 | Production of oil from algae, 2012 | 2012 | Nitesh Soni | - |
| 37 | Treatment of pulp and paper industry wastewater by electro-coagulation, 2012 | 2012 | Lovjit Singh | - |
| 38 | Characterization of alternate solvent and evaluation of its energetic properties during reprocessing of spent nuclear fuel, 2011 | 2011 | Biplab Das | - |
| 39 | Process integration of pulp mill based on pinch analysis, 2011 | 2011 | Sujeet Kumar Choudhary | - |
| 40 | Modeling and simulation of arsenic removal from water in packed bed column using laterite soil, 2011 | 2011 | Prashant Kumar Singh | - |
| 41 | Bio-removal of cadmium from water using lemon peel and green coconut shell powder , 2011 | 2011 | Rohit Baranwal | - |
| 42 | Biological removal of zinc from industrial wastewater, 2010 | 2010 | Jitendra Kumar | Prof. C.B.Majumder |

15. Subject taught:

| Course | Level (e.g. second year, Masters) | Self developed (Yes or No) |
|--|--|-----------------------------------|
| Waste to Energy Conversion | M. Tech. | Yes |
| System Approach to Environmental Engineering | M. Tech. | Yes |
| Mechanical Operations | B.Tech., 2 nd Year | Yes |
| Energy Resources and Conservations | B.Tech , 2nd Year | Yes |
| Hydrocarbon Processing Engineering | B. Tech. 4 th Year | No |
| Environmental Studies | B. Tech. 1 st Year | No |
| Industrial Pollution Abatement | B. Tech. 4 th Year | Yes |

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| Biological wastes treatment | M. Tech. in Bioprocess Engineering, Department of Biotechnology, IIT Roorkee | Yes |
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16. Short term course organized

| S. No. | Name of the course | Sponsor | Date |
|--------|--|-----------------------|---------------------|
| 1 | 5R's for sustainable waste plastics management: fundamentals and technological advances | QIP | Feb 22-26, 2021 |
| 2 | System thinking and environmental engineering for sustainable decision making | TEQIP | June 03-07, 2019 |
| 3 | Membrane separations for the desalination of water: Materials, processes, applications and transport theory | MHRD (GIAN Course) | Oct 29-Nov 2 , 2018 |
| 4 | Water treatment technologies for water challenged sites in India: opportunity for research based solutions | DST (IFNW) | 25 Feb. 2017 |
| 5 | Technologies for clean and renewable energy production | AICTE | 03-07 Jun. 2013 |
| 6 | Advances in chemical and biotechnological processes for the utilization of natural resources towards sustainable development | CSIR | 19-21 Oct. 2011 |
| 7 | Green Technologies for energy security, public health and clean environment | MoES & CSIR | 25-28 Aug. 2010 |
| 8 | Petroleum Refining Technology | Fluor Danial, Gurgoan | 08-13 Sept. 2008 |

17. Invited lectures:

- Keynote speaker in 25th Canadian Symposium on Catalysis held at Saskatoon during May 8-11, 2018.
- Presented 20 more invited lectures in reputed industry, research lab and academic institutions in India and abroad including University of Saskatchewan, Canada and UTS, Sydney, Australia, Dwarikesh Sugar Mill, Ujjain Engineering College, Guru Ghasidas University, Rohil khand University. Two invitations have been received from IIT Bombay and Mahatma Gandhi University, Kerala.

18. International Collaboration:

Collaboration with the following International organizations

- University of Saskatchewan, Canada
- CSIRO, Melbourne, Australia
- University of Melbourne, Australia
- RMIT University, Australia
- Université de Poitiers, France
- Ecole Nationale Supérieure d'Ingénieurs de Poitiers (ENSIP)
- Université de Rennes 1, France
- UPES, India
- NEERI, India

- IIP, Dehradun
- BPCI, India
- Venza Water Management Solutions, India

19. Reviewer:

Reviewer of more than 30 SCI journals.

20. Membership:

Fellow member of IEI

Life member of IChE,

Founder member Biological Engineering Society,

Awarded member American Chemical Society (2015-18)

21. Editorial Board member:

Recent innovation in Chemical Engineering", Published by Bentham Science

22. Consultancy and R&D Projects

Ongoing Research Projects:

| Sl No. | Title of Project | Funding Agency | Amount (Rs. in lakhs) | Role | Start date & end date | Co-PI if any |
|--------|--|-----------------------------|-----------------------|-------|-----------------------|--------------|
| 01 | Prototype development to treat pesticide residue in surface water bodies in rural areas | Ministry of Jal Shakti, GoI | 36.72 | Co-PI | 2022-2024 | Dr. S. Ghosh |
| 02 | Development of sustainable As and F containing groundwater treatment technology for rural people | DST | 63.65 | PI | 2020-23 | |
| 03 | Recycling of waste polythelene packets to manufacture plastics paver blocks and tiles | DST Nidhi Prayas | 10 | PI | 2022-24 | |

Completed Research Projects

| Title of project | Sponsoring Agency | Amount | Role | Start date & end date | Co-PI if any |
|--|---|------------------|-------------|----------------------------------|-------------------------------------|
| Development and application of low cost filter for treating arsenic and fluoride containing groundwater in rural area of Chhatisgarh | MHRD (SAP) | 35.75 | PI | 2018-2022 | |
| Sustainable grey water (GW) treatment technology for community buildings | DST | 125 laks | PI | 2017-20 | -* |
| Study of biodiesel production in mini channel reactor-experimentation and numerical analysis | CSIR | 22 lakhs | Co-PI | 2017-20 | Dr. S. Ghosh |
| Indo-French water Network Project | DST | 36 | PI | 2016-2018 | - International project |
| Studies on effectiveness of iodine and heat removal from PHWR primary containment during LOCA by spray system | NPCIL | Rs. 111.89 lakhs | Co-PI | 2012-2017 | Prof. B. Mohanty and Prof. R. Kumar |
| Development of low cost system for the treatment of arsenic and fluoride contaminated groundwater for rural communities | Ministry of drinking water and sanitation, Govt. of India | Rs. 8.5 lakhs | PI | 2012-2016 | Prof. C.B. Majumder |
| Production of hydrogen rich gas from Indian coal through catalytic steam gasification | MHRD, Govt. of India | Rs. 4.25 lakhs | PI | 2012-2016 | - |

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|---|---|---|---|-----------|-----------------------------------|
| Mini DME: A custom designed solution to bring stranded gas to the energy markets | India Australia strategic research fund , DST | \$2,944,300 excluding GST IITR share Rs. 12 lakhs | PI | 2013-2017 | Dr. A Nayak International project |
| GRBMP project | MoEF | 74.2 lakhs | Co-PI | 2012-2015 | Inter IIT project |
| Development of gasification technology for the production of synthesis of synthesis gas from carbonaceous feedstocks for downstream utilization | CSIR, New Delhi | Rs. 165 lakhs | Worked for around two years as PI (2007-09) | 2007-2012 | Dr. R Tendon, Er. G.S Dang |

* Organizations involved: IIT Roorkee, UPES Dehradun and NEERI Nagpur

Ongoing consultancy project

| Title of project | Sponsoring agency | Amount of grant | Role | Start date & end date |
|--|---------------------------------|-----------------|------|-----------------------|
| Validation of Distillery unit of Dwarikesh Sugar Industries Ltd. | Dwarikesh Sugar Industries Ltd. | Rs. 3 lakhs | PI | 2021-22 |

Completed consultancy project

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| Title of project | Sponsoring agency | Amount of grant | Role | Start date & end date |
|---|---|-----------------|-------|-----------------------|
| Adequacy assessment and validation of ETP of here sugar and one distillery units of Dwarikesh Sugar Industries Ltd. | Dwarikesh Sugar Industries, Dwarikesh Nagar, Bijnor, UP | Rs. 5.0 lakhs | PI | 2020-2021 |
| Adequacy assessment and validation of ETP of Dewan Sugar Ltd. | Dewan Sugar Ltd., Moradabad, UP | Rs. 2.25 lakhs | PI | 2020-2021 |
| Adequacy assessment of the design of ETP of Green Force Engineers Pvt. Ltd. | Green Force Engineers Pvt. Ltd. | Rs. 2.25 lakhs | PI | 2020-2021 |
| Inspection/Monitoring of grossly polluting industries (GPIs) | National ganga river basin authority (NGRBA) & Central pollution control board (CPCB) | Rs. lakhs | Co-PI | 2020-21 |
| Adequacy assessment and validation of ETP of here sugar and one distillery | Dwarikesh Sugar Industries, Dwarikesh Nagar, Bijnor, UP | Rs. 4.5 lakhs | PI | 2019-2020 |

| | | | | |
|---|---|----------------|-------|-----------|
| units of Dwarikesh Sugar Industries Ltd. | | | | |
| Inspection/Monitoring of grossly polluting industries (GPIs) | National ganga river basin authority (NGRBA) & Central pollution control board (CPCB) | Rs. 7.91 lakhs | Co-PI | 2019-2020 |
| Adequacy assessment and validation of ETP of H J Tannery P. Ltd. | H J Tanneriy. Muzaffar Nagar, UP | Rs. 1.50 lakhs | PI | 2018-2019 |
| Adequacy assessment and validation of ETP of here sugar and one distillery units of Dwarikesh Sugar Industries Ltd. | Dwarikesh Sugar Industries, Dwarikesh Nagar, Bijnor, UP | Rs. 4.0 lakhs | PI | 2018-2019 |
| Adequacy assessment and validation of ETP of Dewan Sugar Ltd. | Dewan Sugar Ltd., Moradabad, UP | Rs. 2.0 lakhs | PI | 2019-2020 |
| Inspection/Monitoring of grossly polluting industries (GPIs) | National ganga river basin authority (NGRBA) & Central pollution control board (CPCB) | Rs. 35 lakhs | Co-PI | 2018-19 |
| Inspection/Monitoring of grossly polluting industries (GPIs) | National ganga river basin authority (NGRBA) & Central pollution control board (CPCB) | Rs. 25 lakhs | Co-PI | 2017-19 |
| Delayed coking studies on RIL feedstock for the production of anode/needle grade coke | RIL | Rs 23 lakhs | Co-PI | 2009 |
| Delayed coking studies for HPCL (M) refinery | HPCL | Rs. 20 lakhs | Co-PI | 2008 |
| Delayed coking studies on RIL blended feedstock for the production of anode/needle grade coke | RIL | Rs. 10 lakhs | Co-PI | 2008 |
| Improvement in quality and quantity of single superphosphate (SSP) | Pragati Fertilizer | 0.20 lakhs | PI | 2001 |

23. Visit abroad:

| S. No. | Country Visited | Duration | | Purpose of visit |
|--------|-----------------|-------------|-----------|---|
| | | From (Date) | To (Date) | |
| 1. | Thailand | 11.12.19 | 14.12.19 | To attend international conference on sustainable energy and green technology |
| 2. | Canada | 08.05.18 | 30.05.18 | To attend Canadian catalysis symposium and work as Visiting Professor at UoS, Saskatoon |
| 3. | France | 11.02.18 | 12.02.18 | To attend a project meeting at the University of Poitiers |
| 4. | Vietnam | 27.11.16 | 01.12.16 | To attend SEAW2016 |
| 5. | Canada | 17.10.14 | 22.10.14 | To attend CSCHE2014 and deliver invited lecture at the Univ. of Saskatchewan, Canada |
| 6. | Australia | 31.08.14 | 06.09.14 | To attend project meeting at UoM, CSIRO and RMIT |
| 7. | Japan | 02.10.12 | 06.10.12 | To attend 4 th IWA-ASPIRE |
| 8. | Thailand | 24.10.10 | 26.10.10 | To attend SEAW2010 |

24. Organized conferences/workshops/ schools

- Thematic school on “Water treatment technologies for water challenged sites in India: opportunity for research based solutions” Feb 2017, IITR (DST-IFWN)
- Co convener of International conference on “Nano for energy and water (NEW 2017)” held at UPES Dehradun
- Joint Secretary of International conference on “International conference on molecular signaling: recent trends in biomedical and translational research (ICMS: RTBTR-2014)” Department of Biotechnology, IIT Roorkee
- Building Sustainable Society in 21st Century: Some Important Aspects, The Institution of Engineers (India), Roorkee Local Centre, April 18, 2015

25. Administrative responsibility

- Chairperson DAPC, Chemical Eng. Dept., IIT Roorkee
- Chairman, Community Dairy
- Dean SRIC nominated Chairman of Selection Committee for the recruitment of project staff(s)
- Officer –In Charge of Building and Office
- Coordinator, Departmental Write off Committee
- Member, Departmental Purchase Committee
- O.C, New PG Research lab II
- Coordinator – Instrumentation Lab

26. Others:

- IIT Roorkee nominated member of the Technical Advisory Committee of UEPPCB,
- Member of Research Council, UPES Dehradun
- Member, Board of Studies, Rohailkhand University, Bareilly, UP
- Expert member, Rajasthan Public Service Commission
- Expert member, MP Public Service Commission
- Associated faculty, CTRANS , IIT Roorkee
- Associated faculty, Biotechnology Department, IIT Roorkee
- Mentored a group of B. Tech students who won the Smart India Hackathon 2019, sponsored by MHRD
- Some papers secured the position in the list of top 25 most down loaded articles of the journals
- Some papers have been recognized by Current Science Journal and the findings have been published as news items.
- Scholarship from S.J. Jindal Trust, New Delhi and Rotary Club Kolkata
- Secure 111 position in Madhyakim Pariksha 1989 in West Bengal
- One poster “ Phani Kumar, B.V.S. Prasad, K. Ghosh, P. Mondal, The effect of acidity on Cu-Zn hybrid catalyst for the direct synthesis of Dimethyl ether(DME) from Syngas” was awarded as best poster award in 23rd National Symposium on Catalysis (CATSYMP-23), Jan 17-19, 2018, Bangalore, by Chemical Society of India.
- Mentoring an Agribusiness start up at the incubation center of IIM Kashipur, **FIED** (Foundation for innovation and entrepreneurship development) on bio-fertilizer production from microalgae
- Mentored two closed industries for their reopening by CPCB through modification of ETP
- Fellow member of Institution of Engineers (India)

Details of Publications

Patent(s):

| S.No. | Filed no./Grant no. | Date | Title of patent |
|-------|---------------------|------------|---|
| 1. | IN 367902 | 28/05/2021 | A System and Method for Simultaneous Removal of Arsenic and Fluoride from Contaminated Water Using Novel Hybrid Adsorbent |
| 2. | IN 201911044808 | 05/11/2019 | Miniature reactor to produce biodiesel from nonedible oil in reduced |
| 3. | IN 202011049926 | 22/01/2021 | A water treatment system for gray water |
| 4. | IN 202111030753 | 08/07/2021 | Ni-Fe bimodal catalyst for syngas production from carbon dioxide reforming of methane and process for the preparation thereof |
| 5. | IN 202211005946 | 03/02/2022 | A low-cost eco-friendly process for the recycling of waste polyethylene packets to prepare paver blocks and wall tiles |

Book(s):

1. P. Mondal, R.K. Baranwal, Cadmium removal from water using agrobased adsorbents, Lambert Academic Publishing GmbH& Co. KG, Germany, 2012.
2. P Mondal and A.K. Dalai, Sustainable utilization of natural resources, CRC Press, USA 2017.

Online course materials:

1. Waste to Energy Conversion, E-Course, NPTEL, MHRD, Govt. of India, Since 2017
2. Technologies for the production of cleaner and renewable energy, E-Course, NPTEL, MHRD, Govt. of India, Since 2019



Chapters in Books:

1. P. Mondal, Improvement of quality of Single Super Phosphate (SSP) and conversion of its Total P_2O_5 by optimizing process parameters. Application of Chemical Engineering for utilization of Natural Resources. New Age International Pvt. Ltd. 223 – 229, 2001
2. P. Mondal, Utilization of Indian coal through gasification: Prospects and limitations, In Renewable energy and sustainable development, Ed. R. Katak and A.C. Borah, EBH Publishers India, 198 – 206, 2012
3. P. Mondal, J. Parikh, D.V. Naik. Sustainable Development: Pyrolysis and Gasification of Biomass and Wastes. In Encyclopedia of Environmental Management; S.E. Jorgensen, ed. Taylor & Francis: New York, 2509 – 2525, Vol. IV, 2013
4. R. Shankar, P Mondal, Shri Chand, Physical chemical and biological treatment processes for water and wastewater, Nova Science publishers, INC, USA, 2015.
5. A.K.Varma and P. Mondal, Thermochemical Characterization of Pine Needles as a Potential Source of Energy, Proceedings of the First International Conference on Recent Advances in Bioenergy Research, Springer India, 257-265, 2016.
6. Amiya K. Ray, Prasenjit Mondal and Anupam Kumar, Sustainability Issues in 21st Century and Introduction to Sustainable Ways for Utilization of Natural Resources, Sustainable utilization of natural resources, CRC Press, 1 – 18, 2017
7. Shubham Saroha, Prasenjit Mondal and Deepak Tandon, Downstream Processing of Heavier Petroleum Fractions, Sustainable utilization of natural resources, CRC Press, 55 – 80, 2017
8. Mumtaj Shah, Prasenjit Mondal, Aameya K. Nayak, and Ankur Bordoloi, Hydrogen from natural gas, Sustainable utilization of natural resources, CRC Press, 81-120, 2017.
9. Prasenjit Mondal, Preety, Jyoti Singh, Shobhit Verma, Amit K. Chaurasia, and Rajesh P. Singh, Oil from algae, Sustainable utilization of natural resources, CRC Press, 81 – 120, 2017
10. Prasenjit Mondal, Preetya, Jyoti Singh, Shobhit Verma, Amit Kumar Chaurasia and R. P. Singh, Oil from Algae, Sustainable utilization of natural resources, CRC Press, 213 – 254, 2017
11. Ravi Shankar, Niren Pathak, Amit K. Chaurasia, Prasenjit Mondal and Shri Chand, Energy Production through Microbial Fuel Cells, Sustainable utilization of natural resources, CRC Press, 353 – 380, 2017
12. Vineet K. Rathore, Lokendra S. Thakur and Prasenjit Mondal, Life Cycle Analysis as the Sustainability Assessment Multi Criteria Decision Tool for Road Transport Biofuels, Sustainable utilization of natural resources, CRC Press, 567 – 580, 2017

13. Shubha Dwivedi, Prasenjit Mondal, and Chandrajit Balomajumder, Role of Microorganisms in the Removal of Fluoride, *Advances in Microbial Biotechnology Current Trends and Future Prospects*, Apple Academic Press USA, 271-300, 2018
14. Naveen Dwivedi, Chandrajit Balomajumder, and Prasenjit Mondal, Application of Microorganisms in Biodegradation of Cyanide from Waste Water, *Advances in Microbial Biotechnology Current Trends and Future Prospects*, Apple Academic Press USA, 301-328, 2018
15. Anil Kumar Varma, Ravi Shankar Prasenjit Mondal, A Review on Pyrolysis of Biomass and the Impacts of Operating Conditions on Product Yield, Quality and Upgradation, in *Recent advances in biofuels and bioenergy utilization*, *Springer Nature*, 227-259, 2018
16. Usha Kumari, Ravi Shankar and Prasenjit Mondal, Electrodes for MFCs in Microbial fuel cell, in *Progress and Recent Trends in Microbial Fuel Cells*, Elsevier, 125-138, 2018
17. Ravi Shankar, Lovjeet Singh, Prasenjit Mondal and Shri Chand., Removal of Lignin from Wastewater through Electro-Coagulation., *Ecological Technologies for Industrial Wastewater Management Petrochemicals, Metals, Semi-Conductors, and Paper Industries*, Apple Academic Press, 217–231, 2015
18. Swati Mohapatra, Nitish Pandey, Saikat Dey, Diptarka Dasgupta, Prasenjit Mondal, Debashish Ghosh, Saugata Hazra, Production of biodegradable polymers (PHAS) by soil microbes utilizing waste materials as carbon source, *Frontiers in Soil and Environmental Microbiology*, CRC Press 2019 (Accepted)

Journal papers:

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