

Dr.Dipa Das

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Career Objective

To excel in teaching, research and industrial consultancy in the field of Chemical Engineering.

Research Interests

1. Pollution Control
2. CO₂ capture
3. Fluidization
4. Waste Water Treatment
5. Adsorption

Teaching Interests

1. Heat Transfer
2. Fluid Flow and Flow Measurement
3. Fuel Technology
4. Air Pollution Control
5. Solid and Hazardous waste management

Education

Ph.D., IIT Kharagpur <i>Supervisor:</i> Prof. B.C. Meikap <i>Broad area of research:</i> Pollution Control <i>Thesis Topic:</i> Removal of CO ₂ in a Multistage Fluidized Bed Reactor by Amine Impregnated Activated Carbon	2013 - 2016
M-Tech, National Institute of Technology (NIT), Rourkela, <i>Specialization:</i> Coal Chemicals and Fertilizer, First Division	2001 – 2003
BE, Regional Engineering College, Rourkela, Odisha (Presently NIT, Rourkela) <i>Specialization:</i> Chemical Engineering, First Division	1997 - 2002
+ 2 Science, Government Engineering College, Rourkela, Odisha <i>Specialization:</i> PCMB, First Division	1993 - 1995
Matriculation, Board of Secondary Education, Odisha First Division	1991 - 1993

Publications

Journal papers out of research work:

1. **Das, D.,** Meikap, B. C., 2015. Preparation of Activated Carbon from Green Coconut Shell and its Characterization. **Journal of Chemical Engineering & Process Technology**, 6(5), 1-7.
2. **Das, D.,** Meikap, B. C., 2016. Removal of CO₂ in a multistage fluidized bed reactor by diethanol amine impregnated activated carbon. **Journal of Environmental Science and Health, Part A**, 51(9), 769-775
3. **Das D.,** Samal D.P., Mohammada, N., Meikap, B.C., 2017 Hydrodynamics of a multi-stage counter-current fluidized bed reactor with down-comer for amine impregnated activated carbon particle system, **Advanced PowderTechnology**,28(3),854-864.
4. **Das, D.,** Meikap, B.C., 2017. Optimization of process condition for preparation of amine impregnated activated carbon developed for CO₂ capture and applied to Methylene blue

adsorption by response surface methodology. **Journal of Environmental Science and Health, Part A**,52(12),1164-1172

5. **Das, D.**, Meikap, B.C., 2018. Comparison of adsorption capacity of Mono-ethanolamine and Di-ethanolamine impregnated activated carbon in a Multi-staged Fluidized bed reactor for Carbon-dioxide capture. **Fuel**, 224, 47-56.
6. **Das, D.**, Meikap, B. C., 2019. Removal of CO₂ in a multistage fluidized bed reactor by monoethanol amine impregnated activated carbon. **Mineral Processing and Extractive Metallurgy**,1-7
7. **Das, D.**, Meikap, B.C., 2019. Removal of CO₂ in a multistage fluidized bed reactor by amine impregnated activated carbon: optimization using response surface methodology. **International Journal of Coal Science & Technology**, 6(3), 445-458.
8. **Das, D.**, Meikap, B.C., 2020. Role of Amine impregnated in Activated carbon in CO₂ Capture. **Indian Chemical Engineer** 1-13.

International and National Conferences

1. **Das, D.**, Samal, D. P., Meikap, B. C., 2016.Amine impregnated activated carbon is a novel material for CO₂ capture. **The Eighth International Conference on Environmental Science and Technology**. Hilton Hotel, Houston, Texas, USA, June 6 -10.
2. Das, D., Samal, D. P., Meikap, B. C., 2015. Hydrodynamics of a Multistage Countercurrent Fluidized Bed Reactor with down comer for Amine-Impregnated Activated Carbon. National Conference on CHEMCON, IIT Guwahati, Dec. 27-30.
3. **Das, D.**, Samal, D. P., Meikap, B. C., 2015. Removal of CO₂ in a multistage fluidized bed reactor by activated carbon. **International Conference on Recent Advances in Chemical Engineering** NITK, Mangalore, Dec, 20-22.
4. Pradhan, K., **Das, D.**, 2018. Preparation and characterization of activated carbon by Elephant Apple for removal of methylene blue. National Conference on CHEMCON, NIT Jalandhar, Dec. 27-30.

Book Chapter

1. **Das, D.**, Samal, D. P., Meikap, B. C., 2016. Removal of CO₂ in a multistage fluidized bed reactor by activated carbon. **Recent Advances in Chemical Engineering**, Page:133-142, Year:2016.
2. **Das, D.**, Samal, D. P., Meikap, B. C., 2017. CO₂ capture from industrial flue gas: A Review **.Air, gas and water pollution control using industrial and agricultural solid wastes adsorbents**". Page: 35-55.
3. **Das, D.**, Samal, D. P., Meikap, B. C., 2016. Amine impregnated activated carbon is a novel material for CO₂ capture. **Environmental Science and Technology**. Page:320-326.

Poster Presentation

1. **Das, D.**, Mishra, G., 2020.Preparation and characterization of activated carbon by using Elephant Apple for removal of Methylene Blue. 2nd International conference on **Bioprocess for sustainable Environment and Energy (ICBSEE)**, NIT Rourkela, March-5-7.

Certifications Course (NPTEL)

- Heat Transfer

Valid: Nov 2019 –Present

FDP/Short Term Courses/GIAN Course/ Workshop, Attended.

- Application of fluidization technique to waste management and energy production organized by NIT, Rourkela, from 17th to 21st March 2008 sponsored by AICTE.
- Energy sources: Its Conservation and management (ESCM) organized by IGIT, Sarang from

17th to 21st March 2008 sponsored by AICTE.

- Pinch Analysis: A Tool for Efficient use of Energy organized by NIT, Rourkela ,from 5th to 9th January 2009 sponsored by AICTE.
- Statistical Modelling for data analysis (SMDA) organized by IIT Kharagpur from 30th November to 11th December 2009 sponsored by AICTE.
- Advanced Power System, Power electronics, Industrial motor drives and Control, (APPIDC) organized by IGIT Sarang from 28th June to 10th July 2010 sponsored by AICTE.
- Separation of fine and ultrafine particulate in fluid medium: Fundamental and application in mineral and coal processing organized by IIT Kharagpur from 7th Dec to 18th Dec 2015 sponsored by MHRD.
- Advanced course in mineral processing organized by IIT Kharagpur from 12th Dec to 17th Dec 2016 sponsored by MHRD
- Principle and application of fluidization organized by IIT Kharagpur from 11th Dec to 16th Dec 2017 sponsored by MHRD
- Pollution prevention in Process Industries organized by IIT Kharagpur from 7th May to 12 May, 2018 sponsored by MHRD
- Training session on web of science organized by IIT Kharagpur on 30th oct 2014 sponsored by THOMSON REUTERS
- Work shop on Scholarly publishing organized by IIT Kharagpur on 23 March 2015 sponsored by WILEY
- Awareness Generation on Intellectual property Rights organized by IGIT Sarang on 21st March 2018, sponsored by DST,INDIA
- National workshop on Application of Chemical Engineering in Natural Resources organized by IGIT Sarang from 17th to 21st July 2018 sponsored by TEQIPIII.

Administrative Experience (Extra-Curricular/ Co-curricular/ Examination/ Hostel/ Sports/ NSS/ NCC/ any other)

- Member of Furniture Committee at IGIT Sarang from 01/07/2005 to 01/07/2013.
- Member of Library Committee at IGIT Sarang from 01/07/2005 to 01/07/2013.
- CO-VP of Cultural Programme at IGIT Sarang from 01/07/2007 to 01/07/2009.
- CO-VP of AUDIO-VISUAL programme at IGIT Sarang from 01/07/2005 to 01/07/2007.
- CO-VP of SPER. at IGIT Sarang from 01/07/2009 to 01/07/2011.
- Assistant Superintendent of examination at IGIT Sarang from 01/07/2011 to 01/07/2013.
- Superintendent of Ladies Hostel at IGIT Sarang from 11/07/2017 to 07/01/2019.
- Syllabus and Framing rules of UG &PG courses from 12/07/2018 to continuing till date.
- NAAC Co-ordinator of Chemical Engg.Dept from 22/12/2016 to 11/10/2019.
- TEQIP III Co-ordinator of Chemical Engineering Department from 01/09/2017 to 01/10/2019
- BOS member of Chemical Engineering Department from 01/09/2017 to continuing till date
- HOD of Chemical Engineering Department from 02/12/2019 to continuing till date

Sponsored Research Projects

- Preparation and characterization of biomass derived modified adsorbent for capture of CO₂ in a fluidized bed reactor sponsored by TEQIP-III of 3 Lakhs for 1 Year.
- Capture of CO₂ from flue gas and its utilization sponsored by TEQIP-III of 1.4 Lakhs for 1 Year.

- Pollution load carrying capacity and source apportionment study in the industrial region of Chhattisgarh State

Teaching Experience

- Lecturer in Chemical Engineering Department at U.G.I.E, Rourkela. Feb 2003- June 2003
- Lecturer in Chemical Engineering Department at IGIT, Sarang. July 2003-Nov 2004
- Lecturer in Chemical Engineering Department at IGIT, Sarang Nov 2004-Nov 2009
- Senior Lecturer in Chemical Engineering Department at IGIT, Sarang Nov 2009-Nov-2014
- Asst.Professor in Chemical Engineering Department at IGIT, Sarang Nov 2014- Nov-2019
- Associate Professor in Chemical Engineering Department at IGIT, Sarang Nov 2019 to continuing till date

Research Experience

Research Scholar at Chemical Engineering Department, IIT Kharagpur July 2013 – Sep 2016

PG Project Guided

- Removal of chromium(VI) from waste water by adsorbent prepared from Elephant Apple
- Removal of chromium(VI) from waste water by adsorbent prepared from Green Coconut Shell
- Preparation of solid Bio Adsorbents for capture of CO₂
- Recovery of Chemicals from CO₂

UG Project Guided

- Preparation and Characterization of Activated carbon from elephant apple for removal of Methylene blue
- Capture of Carbon dioxide from flue gas by activated carbon by adsorption
- Removal of Carbon dioxide from flue gas by modified bio adsorbent
- Removal of Carbon dioxide from flue gas and its utilization
- Removal of Methane from flue gas in a fluidized bed reactor

Laboratory Development:

- I had developed a new CRE Lab

Teaching Innovation Adopted

- Use of Google class room for teaching and learning process
- Use of Digital Podium and interactive board for teaching process

Course material developed

- Lecture Notes on Heat Transfer for B-Tech students
- Lecture Notes on Fluid flow and Flow Measurement for B-Tech students
- Lecture Notes on Solid and Hazardous Waste Management for M-Tech Students
- Lecture Notes on Fuel and Energy Technology for B-Tech Students

Training Undergone

- Summer Internship at SAIL, Rourkela May 1999- June1999
- Summer Internship at IDCOL CEMENT LIMITED, Bargarh May 2000-June2000

Membership of professional societies

I am currently an active member of the following societies:

- Life Member of IICHE (LM-35677)
- Life Member of IE (India) (M-1558956)

Proficiency or Expertise

- On hand expertise of various software tools like MATLAB, C, C++, JAVA, DOS, Windows 98, and Windows XP.

Achievement

- Awarded National Scholarship for 6 years(+ 2 and B-Tech Course)
- Awarded 3rd prize by municipality Rourkela.
- Awarded first prize from AkhilaBharatiya Gandharba Mahavidyalaya mandal, Mumbai for classical music for the year 1991
- Awarded first prize from AkhilaBharatiya Gandharba Mahavidyalaya mandal, Mumbai for classical music for the year 1992
- Recipient of institute travel grant from IIT Kharagpur for presenting papers at The Eighth International Conference on Environmental Science and Technology. Hilton Hotel, Houston, Texas, USA, June 6 -10
- Recipient of fellowship from MHRD during PhD

Honors and Recognitions

I have successfully completed the *ad hoc referee assignments* for the following *international journals* till date

- South African journal of Chemical Engineering
- Advanced powder Technology

Extracurricular Activity

- Singing, Essay Writing etc.

Key strengths

- Cooperative, Friendly, Positive attitude, Working under stress and Sincere.

Hobbies

- Traveling, Reading & Cooking

Personal details

- Father's Name – Mr. Kishore Chandra Das
- Date of Birth –12th July, 1978
- Sex – Female
- Marital Status – Married
- Languages known – Odia, English, Hindi

References

Prof. B.C. Meikap Ph.D., Professor, Department of Chemical Engineering, Indian Institute of Technology Kharagpur, West Bengal. 721302 Mobile: +919474624980 E-mail: bcmeikap@che.iitkgp.ernet. in	Prof. (Dr) Abanti Sahoo. Ph.D., Professor, Department of Chemical Engineering NIT Rourkela; Dist- Sundargarh Pin-769008; Phone: +91-9437049991 Email:asahoo@nitrkl.ac.in	Prof. G.K Roy.PhD.,Professor Department of Chemical Engineering NIT Rourkela ; Dist- Sundargarh Pin-769008;Phone:9437196680
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Declaration

I hereby declare that the entries in my resume are true to the best of my knowledge and belief.

Place: Sarang

Date: 25-11-2020

Dipa Das

(DIPA DAS)
