Dr. Debasis Mohanty

Assistant Professor (S-III) / Reader in Chemistry

Head, P.G. Department of Chemistry

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Educational Qualifications

- **Ph.D.** in Applied Polymer Chemistry, Utkal University, 2011
- **M.Phil.** in Advanced Organic Chemistry, Ravenshaw (Auto) College, 1999
- **M.Sc.** in Advanced Organic Chemistry, Ravenshaw (Auto) College, 1997
- **B.Sc.** with Honours in Chemistry, Ravenshaw (Auto) College, 1995 (1st Class with Distinction)
- **NET (CSIR)** in Chemical Sciences, 2001

Professional Career

With over **25 years of academic experience** under the Department of Higher Education, Government of Odisha, Dr. Debasis Mohanty has established himself as a passionate educator and visionary academic leader.

- **Bhadrak (Auto) College**: Lecturer (1999–2006)
- **Dhenkanal (Auto) College**: Assistant Professor (2006–Present)

He teaches both **undergraduate and postgraduate students**, imparting deep conceptual clarity and research orientation.

Administrative Assignments

- **Head of the Department – Chemistry** (2014–Present)
- **Administrative Bursar** (2021–Present)
- **IQAC Coordinator** (2014–2018; 2023–Present)
- **Coordinator, NAAC Monitoring Committee** (2020–Present)
- **Deputy Controller of Examinations** (2018–2021)
- **Professor-in-Charge, UGC Monitoring** (2018–Present)
- **Convener Secretary, Youth Red Cross – Dhenkanal District** (2012–2018)

- **Member, Board of Studies** – Ravenshaw University & Utkal University

Academic and Scientific Contributions

- **Research Interest**: Material Science, Polymer Chemistry, Environmental Remediation
- **Research Projects**:
    1. *UGC Funded* – Metal Ion Uptake using Chelating Resins (₹40,000)
    2. *UGC Funded* – Removal of Toxic Metals using Schiff Base Resins (₹5,00,000)
- **Publications**: 12+ in peer-reviewed journals including *Journal of Fluorescence*, *Polymer Bulletin*, *Water, Air, and Soil Pollution*, etc.
- **Conference Presentations**: Over 20 national and international papers, including conferences in Singapore, Barcelona, and Pune.
- **Google Scholar Metrics**:
    - Citations: 131 (99 since 2020)
    - h-index: 4
    - i10-index: 2

Books Authored

Dr. Mohanty has authored and co-authored **eight textbooks**, including:

1. *Fuel & Pesticide Chemistry* (Kalyani Publishers) – Multiple Editions
2. *A Test Book of Practical Chemistry* (+2 and Higher Secondary)
3. *Environmental Education* – State-Level Standard Text
4. *Paribesha Sikhya* – Odia medium environmental studies

Popular Science Writing and Media Presence

A regular contributor to **science columns in Odia newspapers** such as *The Dharitri*, *The Samaj*, *Nitidina*, and *Bigyan Diganta*, Dr. Mohanty has written more than **25 popular science articles**. Topics range from **environmental awareness, AI, biotechnology, Nobel discoveries**, to **public health and sustainability**.
He has also participated in educational programs aired on **Doordarshan, Akashvani, and Vividh Bharati**, effectively using mass media to spread scientific temper.

Membership of Learned Societies

- **General Secretary**, Orissa Government College Teachers' Association (OGCTA) (2020-2025)
- **Secretary-cum-Treasurer**, Orissa Chemical Society (OCS)(2021-2023)

- **Life Member**, The Uranium, OCS, Ravenshaw Chemistry Alumni Association
- **Editorial Board Member**, IJRPNS and Applied Science Segmental Journal
- **Chief Editor**, *The Catalyst* – Chemistry Seminar Bulletin, Dhenkanal College

Workshops / Training / FDP Attended

Dr. Mohanty has completed over **20 training programs** in pedagogy, ICT, disaster management, spectroscopy, catalysis, and ChatGPT applications. Notable among these:

- Orientation & Refresher Courses by UGC
- FDP on Catalysis – IIT(ISM), Dhanbad
- Global Skill Program – Infosys, Bhubaneswar
- National Workshop – Kerala State Higher Education Council (ChatGPT, 2023)

Awards and Fellowships

- **Bharat Vidya Shiromani Award** – IIEM, New Delhi (National)
- **Prakriti Mitra Award** – Govt. of Odisha (State)
- **Rajiv Gandhi Sikhya Samman** – Odisha Rajiv Gandhi Students Forum (State)
- **Summer Research Fellowship** – Indian Academy of Sciences

Social & Humanitarian Contributions (Youth Red Cross)

As YRC Counselor and District Convener (2012–2018), he organized:

- **7 Blood Donation Camps** (600+ units collected)
- **6 Plantation Drives** (Herbal Garden established)
- **Multiple HIV/AIDS Awareness Seminars and Rallies**
- **Disaster Preparedness Training & First Aid Workshops**
- **Study-cum-Training Camps for YRC Volunteers**

Declaration

I hereby declare that the above information is true to the best of my knowledge and belief.

Date:

Place: Dhenkanal **Dr. Debasis Mohanty**

List of Publications:

Research Papers – Refereed Journals (Peer reviewed)

1. A Formyl Chromone based Schiff base Derivative: An Efficient Colorimetric and Fluorescence Chemosensor for the Selective Detection of Hg^{2+} ions, S R Kar , P P Dash, S N Panda, P Mohanty , **D. Mohanty** , A. K. Barick , S. K. Sahoo , P Mohapatra and B R Jali, Journal of Fluorescence(Spinger-Nature),**2025**, 35(1),483-495. ISSN-1053-0509 (print) and 1573-4994 (online)

2. Green synthesis, characterisation and antibacterial activity studies of new multifunctional nano polymeric material, which may have multidimensional application in water purification. Soumya Ranjan Kar, Priyaranjan Mohapatra, **Debasis Mohanty**, Polymer Bulletin (Spinger-Nature),**2023**,Vol-80(1) 703-723 https://doi.org/10.1007/s00289-021-04046-5 I.F.-2.87 **ISSN: 0170-0839 (print) 1436-2449 (web)**

3. Synthesis and In Vitro Antimicrobial Study of Some Novel Schiff Bases, **Debasis Mohanty**, International Journal of All Research Education and Scientific Methods (IJARESM),**2021**, Vol-9(8), 705-716, **ISSN: 2455-6211,** www.ijaresm.com

4. Conventional as well as Emerging Arsenic Removal Technologies - A Critical Review. **Debasis Mohanty**, Water, Air, and Soil Pollution (Spinger- Nature), **2017** Vol-228(10) P-381, DOI10.1007/s11270-017-3549-4, ISSN: (online); 0049-6979 (Print) 1573-2932 (Online) IF-1.702

5. Synthesis and characterization of the polymeric phenolic Schiff bases containing aminothiazole moiety **D. Mohanty**, P. Mohapatra, S. Samal, Chem. Sci. Trans. , 2014 Vol-3(4)1288-1299, ISSN: 2278-3318 (online); 2278-3458 (print)IF-0.6062

6. Antibacterial studies of the polymeric phenolic schiff bases containing aminothiazole moiety. **Debasis Mohanty** International journal of research in pharmaceutical and nano science.(IJRPNS). *2014* Vol- *3(3), 215 – 221,* ISSN: 2319-9563 IF-2.9

7. Selective removal of toxic and heavy metal ions like arsenic and copper from drinking water by using novel chelating resins immobilized on silica gel. **D. Mohanty**,

S. Acharya, S. Samal, 2013 Res. J. Pharm., Biol. Chem. Sci**.,** vol-4(1): 43-58. (*ISSN: 0975-8585) IF-0.35*

8. The antibacterial activities of thiazoles, substituted thiazoles and their metal complexes- a review. **Debasis Mohanty**, Current pharma research. 2012 ,Vol-3 (1) : 750-763. ISSN: 2230-7842 ISSN No- 2230-7834 IF-1.0488

9. Selective removal of toxic metals like copper and arsenic from drinking water by using phenol-formaldehyde type chelating resins. **Debasis Mohanty**, Shashadhar Samal, E- J. Chem. 2009; Vol.-6 (4): 1035-1046. (ISSN: 0973-4945) IF-0.772

10. Isolation, Identification and evaluation of the effective phyto-compounds for management of groundnut beetles infesting stored groundnut (*Arachis hypogaea L.*) L. Choudhury, M. Dash, S. Mohapatra, **D. Mohanty,** S. Choudhury., International Journal of Advanced and applied research, 2024, Vol-5 (27) : 50-57 (ISSN-2347-7075).

Research Papers – Proceedings etc (Talks and poster presentations)

Invited Talked

1. NanoShield : Innovative Polymeric Nano Materials to Combat Water Pollution", Debasis Mohanty, National seminar on waste Energy and Environment, Synergy Institute of Engineering and Technology, Dhenkanal, Odisha,, 23rd – 24th August-2024.

2. Combating Pollution of Industrial Effluent by using Novel Chelating Resins Containing Heterocyclic Moiety, Debasis Mohanty, State level conference on Environmental Pollution- A threat to mankind, Gadibhrama Women's College, Kaduapada, Jagtsinghpur, 10th -11th January-2018

3. Treatment of Industrial Effluent by using Novel polymeric Chelating Resins of aminothiazoles Schiff bases,Debasis Mohantyt, National Conference on Air pollution: its effect and Mitigation, Department of
Chemistry, O.P.S. Mohavidyalaya, Hindol Road, Dhenkanal,Odisha

4. Purification of Industrial Effluent Water from Toxic and Heavy Metal Ions and Pathogenic Bacteria by Using Novel Chelating Resins Containing Heterocyclic Moiety, Debasis Mohanty, National Level conference on Biotechnological intervention for abatement of industrial & mining pollution, P.G. Department of Botany, Dhenkanal Autonomous College, Dhenkanal,10th -11th December-2016

5. Combating pollution of Industrial effluents by using novel chelating resins containing hetero cyclic moiety. Debasis Mohanty, National seminar on Environmental impact assessment and Human Health: prospective , approaches & Future Directions, Department of Chemistry, Mohan Subudhi College, Baramba, Cuttack, 28th- 29th Septmber-2016

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Paper presentation

1. Green synthesis, characterization and application of Some Novel Polymeric Nano materials for treatment of contaminated drinking water and industrial effluents. Debasis Mohanty, **3rd Global Conference on Polymer, Plastics and composites**, 11th and 12th September, 2023 at **Barcelona spain**.
2. Selective removal of toxic and heavy metal ions like arsenic and copper from drinking water by using novel chelating resins immobilized on silica gel
   Debasis mohanty and shashadhar samal **, International conference, ICER-11, Surat, India, 15th -17th December-2011,**

3. Metal Ion Loaded Chelating Resins for Efficient Removal of Arsenate Ion from Water.
   D. Mohanty, P. Mohapatra, S. Samal, Singapore International Chemistry Conference, **Suntec Convention & Exhibition Centre, Singapore**, 16th -19th December 2007. ***ISBN: 978-81-904438-2-1***

4. Synthesis and metal ion behavior of formaldehyde condensed chelating resins containing aminothiazole moiety.

   D. Mohanty, S. Samal, S. Achary, P. Mohapatra, **MACRO 2006, National Chemical Laboratory, Pune,** 17th -20th December, 2006.

5. Adsorption behavior of chelating resin derived from the Schiff bases of aliphatic diamine and hydroxy benzaldehyde.
   D. Mohanty, S. Samal, S. Achary, P. Mohapatra, MACRO **2006, National Chemical Laboratory, Pune,** 17th -20th December, 2006.

6. Studies on silica gel immobilized Phenol-Formaldehyde-Type Chelating Resins obtained by condensing formaldehyde and Schiff's bases of 2, 6-diaminopyridine and o-hydroxybenzaldehyde.
   Debasis Mohanty, Shashadhar Samal, **RETICS-2008**, Sambalpur University, Jyoti Vihar, Burla, 9th-11th Feb-2008

7. Studies on Phenol-Formaldehyde-Type Chelating Resins Containing Aminothiazole Moiety
   D. Mohanty, S. Samal, **Orissa Chemical Society**, 21st Annual Conference, Orissa Engineering College, Bhubaneswar, 22nd and 23rd December 2007.
8. Metal ion uptake study of chelating resins of condensed formaldehyde Knoevenagel's adduct obtained from active methylene compounds.
   S. Samal, D. Mohanty, **Orissa Chemical Society**, 15th Annual Conference, B.J.B. Autonomous College, Bhubaneswar, 22nd and 23rd December, 2001.

9. Comparison of metal ion uptake capacity of chelating resins of formaldehyde condensed Knoevenagel's adduct from cyanoacetic ester and salicyldehyde with resin obtained from resorcinol and formaldehyde.
   S. Samal, D. Mohanty, **Orissa Chemical Society**, 15th Annual Conference, B.J.B. Autonomous College, Bhubaneswar, 22nd and 23rd December, 2001.

10. Some Plausible Solutions to Give a Sense of Direction to the Fast Decaying System of Higher Education in Orissa.
    D. Mohanty, Bhadrak Autonomous College, Bhadrak, 29th-30th Sept-2001.

11. Metal ion uptake study of chelating resins of condensed formaldehyde Knoevenagel's adduct obtained from active methylene compounds.

S. Samal, D. Mohanty, **Orissa Chemical Society**, 14th Annual Conference, Government Autonomous College, Bhawanipatna, 16th and 17th December, 2000.

12. Adsorption and removal of As (v) using Cu-loaded phenol-formaldehyde type chelating resin containing Schiff base moiety.

D. Mohanty, P. Mohapatra, S. Samal **Orissa Chemical Society**, 22nd Annual Conference, North Orissa University, Baripada, 27th and 28th December-2008

13. Nano Science and technology: Thinking small to do big things.

Debasis Mohanty Nano Technology and its applications NSNA-2011, 6th and 7th November-2011, Chitalo Mahavidhyalaya, Chitalo, Jajpur, odisha.