

Curriculum vitae

Dr. Debojeet Sahu, M.Sc., Ph. D.

Assistant Professor, Department of Chemistry, Royal School of Applied & Pure Sciences, Assam
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Permanent address:

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P.O.: Jorhat, Jorhat-781028
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Personal details:

Date of birth: 08/01/1986

Gender: Male

Marital Status: Single

Nationality: Indian

Religion: Hindu

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Academic details

Year of Passing	Name of Exam	Name of Institution	Board/University	Division	% of Marks	Subjects
2010	M.Sc.	Dibrugarh University	Dibrugarh University	I	66.6	Chemistry (Inorganic)
2008	B.Sc.	Science College (Jorhat)	Dibrugarh University	I	64.3	Chem(H), Phy, Maths, Eng.
2005	H.S.	J.B College (Jorhat)	A.H.S.E.C.	II	59	Phy, Chm, Maths, Biol, Eng, Alt Eng.
2003	H.S.L.C	Don Bosco High School (Jorhat)	S.E.B.A	I	66.6	G.Sc, Maths, Adv. Maths, S.St, Eng, Alt Eng, As

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Ph.D. Thesis:

Thesis Title: *Designing novel palladium and iron-based heterogeneous catalysts for the Suzuki-Miyaura and alcohol oxidation reactions*

Supervisor: Prof Pankaj Das, Department of Chemistry, Dibrugarh University, Dibrugarh, Assam

Languages known: Assamese, English, Hindi

Instruments handled: FT-IR, HPLC, UV spectrometer, GC-MS, DTA-TGA, BET thermal analyzer, Microwave reactor, Autoclave reactor, etc.

Research Interest

- ❖ Inorganic Nanomaterial Synthesis
- ❖ Homogeneous/Heterogeneous Catalysis
- ❖ Material Chemistry,
- ❖ Environmental Chemistry

Research skills:

- Synthesis and characterization of supported metal nanocatalysts and homogeneous and heterogeneous catalysis
- Catalytic transformation of various carbon-carbon coupling reactions.
- Designing first row transition metal catalysts for alcohol oxidation reactions
- Green chemical reactions involving degradation of toxic hydrocarbons such as crude oil and organic dyes.
- Developing sustainable materials from biomass and waste for sustainable construction materials
- Purification of organic compounds through chromatographic separation and Spectroscopic investigation via ^1H NMR, ^{13}C NMR, IR, LCMS, GCMS etc.

Teaching Experience: 6 Years (January 2017 to till date)

1. **Assistant Professor** in Department of Chemistry in University of Science and Technology Meghalaya (USTM). **(January 2017 – June 2018)**
2. **Assistant Professor** in Department of Chemistry in Assam Royal Global University, Guwahati **(July 2018 – Till date)**

Project Granted

1. **Title:** Metal Nanoparticles for petroleum spill degradation
Funding Agency: Assam Science Technology Environment Council (ASTEC) under DST
2. **Title:** Development of bamboo charcoal reinforced composites for sustainable construction material.
Funding agency: Student's Research Project, Assam Royal Global University

Membership of Professional/Scientific Societies:

- **Life member of Assam Science Society**

Achievements/Awards

Best Poster Award: 18th CRSI National Symposium in Chemistry (CRSI 2016), Department of Chemistry, Punjab University, Chandigarh, Punjab on 4th-7th February, 2016

Research Paper Published in Journals:

1. **D. Sahu**, N. Shahnaz and P. Das, *Facile Synthesis of Pd Nanoparticles On Silica Supports As Recyclable Catalysts For Suzuki-Miyaura Reaction In Water: Effect Of Donor Ligands*, **JAFS**, 4(2) 2018
2. **Debojeet Sahu**, Ana R. Silva and Pankaj Das, “*Facile synthesis of palladium nanoparticles on silica: An effective recyclable catalyst for Suzuki coupling of aryl chloride in aqueous media*” **Catal. Commun.**, 2016, 86, 32

3. **Debojeet Sahu**, Ana R. Silva and Pankaj Das, “A novel iron(III)-based heterogeneous catalyst for aqueous oxidation of alcohols using molecular oxygen” *RSC Adv.*, **2015**, 5, 78553.
4. **Debojeet Sahu** and Pankaj Das, “Phosphine-stabilized Pd nanoparticles supported on silica as a highly active catalyst for the Suzuki-Miyaura cross-coupling reaction” *RSC Adv.*, **2015**, 5, 3512.
5. **Debojeet Sahu**, BiplabBanik, Malabika Borah and Pankaj Das, “Efficient Alcohol Oxidation Reaction Catalyzed by a Cobalt (II) and an Iron (III) Complexes Containing DPEPhos Ligand using H₂O₂ as Oxidant” *Lett. Org. Chem.*, **2014**, 11, 671.
6. **Debojeet Sahu**, Chandan Sarmah and Pankaj Das, “A highly efficient and recyclable silica-supported palladium catalyst for alcohol oxidation reaction” *Tetrahedron Lett.*, **2014**, 55, 3422.
7. Chandan Sarmah, **Debojeet Sahu** and Pankaj Das, “An effective strategy for immobilizing a homogeneous palladium complex onto silica: Efficient and reusable catalyst for Suzuki–Miyaura reactions” *Catal. Commun.*, **2013**, 41, 75.
8. Chandan Sarmah, **Debojeet Sahu** and Pankaj Das, “Anchoring palladium acetate onto imine functionalized silica gel through coordinative attachment: An effective recyclable catalyst for the Suzuki–Miyaura reaction in aqueous-isopropanol” *Catal. Today*, **2012**, 198, 197.

Books/Book Chapters

1. J. Baruah and **D. Sahu**, *Comparative Studies on Carbon dots Application in Plant system*, Elsevier Science Publishing, 2022. ISBN: 9780323902601
2. S. Barua, **D. Sahu**, N. Shahnaz, *Two-Dimensional Nanostructures for Biomedical Technology: A Bridge between Material Science and Bioengineering*, Elsevier Science Publishing Co Inc, 2020, ISBN: 978-0128176504
3. **D. Sahu** and P. Borah, *Chemistry of Palladium catalyzed C-C coupling: Nobel prize reactions*, LAP LAMBERT Academic Publishing, ISBN: 978-620-4-74543-5, 2021

Conferences/ Seminars/Symposiums Attended:

1. **International Conference on Emerging areas of Science & Technology (EAST 2021)** at Royal Global University; organized by RSAPS, RGU on 1st & 2nd June, 2021
2. *Facile synthesis of Pd nanocatalysts for C-C coupling reactions*, UGC sponsored national seminar on Recent Trends in Chemistry towards Utilization of Natural Resources, 30th-31st August, 2017 in collaboration with **Assam Science Society**, Jagiroad College, Jagiroad. (**Selected Oral Presentation**)
3. *Silica supported palladium nanocatalysts for Suzuki-Miyaura reaction: Effect of donor ligands*, Materials Research Society of India (**MRSI**) Symposium-2016, 18th-21st February, 2016, CSIR-NEIST, Jorhat, Assam. (Poster presentation)
4. *Highly Efficient Silica Supported Palladium Nanocatalyst for Aqueous Suzuki-Miyaura Reaction*, 18th CRSI National Symposium in Chemistry (**CRSI 2016**), Department of Chemistry, Punjab University, Chandigarh, Punjab on 4th-7th February, 2016 (Poster presentation)
5. *Novel silica supported iron catalyst for alcohol oxidation reaction in aqueous medium*, 10th Mid-Year Chemical Research Society of India (**CRSI**) Symposium in Chemistry, 23rd-25th July, 2015, National Institute of Technology (NIT), Tiruchirappalli. (Poster presentation)
6. *Facile synthesis of palladium nanoparticles on silica support: highly active catalyst for alcohol oxidation reaction*, National Seminar on Recent Trends in Fundamental and Chemical Science (**RTFACS-2014**), 19th-21st November, 2014, Dibrugarh University, Dibrugarh, Assam. (Poster presentation)
7. *New Schiff-base derived palladium catalysts for room temperature Suzuki-Miyaura reaction in aqueous isopropanol*, 8th Mid-Year Chemical Research Society of India (**CRSI**) National Symposium in Chemistry, 10th-12th July, 2014, CSIR-NEIST, Jorhat, Assam. (Poster presentation)
8. *P,N-based palladium complex immobilized on silica: an excellent reusable catalyst for alcohol oxidation reactions*, National Seminar on Recent Advances in Chemical Research (**RACR-2014**), 20th-21st, March 2014, Rajiv Gandhi University, Arunachal Pradesh. (Poster presentation)
9. *Iron(III) complex with DPEphos ligand as an excellent catalyst for alcohol oxidation reaction*, UGC Sponsored National Seminar on "Recent Challenges for Chemical Research and Practices: Moulding Chemistry towards a better tomorrow" (**RCCRP**), 9th-10th November, 2012, Darrang College, Tezpur, Assam. (Oral presentation)

Workshop Attended

1. Attended and successfully completed the BRNS-AEACI Summer School on Analytical Chemistry (SAC-4), held at VECC, Kolkata from 22-29th July, 2012
2. Attended the Advanced NMR Spectroscopy School organized by UGC-Networking Resource Center, held at University of Hyderabad from August 12-24, 2013
3. Attended One-day Workshop on Patent Search, organized by IPR Cell, Dibrugarh University, Dibrugarh, Assam on 23rd November, 2015.

Trainings Short-Term Course Attended:

1. Faculty Development Programme on “Recent Advances in Materials Science” organized by Department of Chemistry, Amity Institute of Applied Sciences, Amity University, Kolkata from 8/7/2020 to 12/7/2020.
2. Department Lecture series titled "The rechargeable world with Li-ion Batteries (LIBs)" organized by Department of Chemistry, SRM University –AP, Andhra Pradesh held on 14th July 2020.
3. Department Lecture series titled “Molecular Docking and Repurposing of Drug molecules for SARS-CoV-2” organized by Department of Chemistry, SRM University – AP, Andhra Pradesh held on 21st July 2020.
4. Department Lecture series titled “Optoelectronic Properties of perovskite Semiconductor Nanocrystals” organized by Department of Chemistry, SRM University –AP, Andhra Pradesh held on 7th July 2020.
5. Workshop on Artificial Intelligence and Machine Learning at Royal Global University; organized by Department of Mathematics, RSAPS, Royal Global University from 7/3/2022 to 11/3/2022.
6. Faculty Development Programme on “Recent Trends in Material Frontiers: Chemical and Biological Aspects” organized by Amity Institute of Applied Sciences, Amity University, Kolkata from 1/8/2022 to 5/8/2022.

Conduction of Conferences/ Seminars:

- Member of organizing committee of International Conference on Emerging areas of Science & Technology (EAST 2021) at Royal Global University; organized by RSAPS, RGU on 1st & 2nd June, 2021.

Research Guidance:

S No.	Degree	No. of Students enrolled	Status	Degree
1	M.Sc.	16	Completed	Awarded
2	B.Sc.	5	Completed	Awarded

Academic position within RGU

- ❖ Member of Board of Studies (BOS), Department of Chemistry, RSAPS, RGU
 - ❖ Member of Central Examination committee, RGU
 - ❖ Member of Departmental Research Committee (DRC), Department of Chemistry, RSAPS, RGU
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