

Detailed Biodata

Personal website: www.nanochemistrylab.com

1. Name and full correspondence address: Dr. Priyabrat Dash
Associate Professor, Department of Chemistry, NIT Rourkela, Rourkela, Odisha 769 008
2. Email(s) and contact number(s): dashp@nitrkl.ac.in, pdash1234@rediffmail.com, 8895121141(M), 0661-246-2664(O)
3. Institution: NIT Rourkela, Rourkela, Odisha
4. Date of Birth: 25/10/1979
5. Gender (M/F/T): M
6. Category Gen/SC/ST/OBC: Gen
7. Whether differently abled (Yes/No): No
8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	BSc	1999	Chemistry (Hons.)	Utkal University	72.6
2.	MSc	2001	Chemistry	Utkal University	73.4
3.	M.Tech	2004	Materials Science	IIT Bombay	9.24/10
4.	PhD	2010	Chemistry	University of Saskatchewan, Canada	83.8

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.
**“Towards Rational Design of Nanoparticle Catalysts”, Prof. Robert W. J. Scott,
University of Saskatchewan, Canada, 2010**
10. Work experience (in chronological order)

S.No.	Positions held	Name of the Institute	From	To	Pay scale
1.	Associate Professor	NIT Rourkela	02/02/2018	onwards	139600 pay 13A2 level
2.	Assistant Professor	NIT Rourkela	01/01/2016	01/02/2018	110800 pay 12 level
3.	Assistant Professor	NIT Rourkela	10/11/2011	31/012/2015	24900 AGP 8000
4.	Postdoctoral Fellow	University of Ottawa	16/04/2010	09/11/2011	CAD 36000/annum
5.	Research Assistant	IIT Bombay	10/09/2004	26/05/2005	INR 5000/month
6.	Research Officer	Gharda Chemicals Limited, Maharashtra	01/07/2004	04/09/2004	INR 10000/month

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

	Name of the Award	Awarding Agency	Year
9.	Prof. R. C. Tripathy Award for Best Young Scientist in Chemical Science	Odisha Chemical Society	2018
8.	Postdoctoral Fellowship	University of Ottawa, Canada	2010-2011
7.	University of Ottawa Postdoctoral Travel Award	University of Ottawa, Canada	2010
6.	Canadian Catalysis Foundation Travel Award	Canadian Catalysis Foundation	2010
5.	CGSR Student Travel Award	University of Saskatchewan, Canada	2008, 2209, 2010
4.	Graduate Teaching Fellowship	University of Saskatchewan, Canada	2005-2010
3.	CSIR-UGC-JRF-NET	CSIR, India	2002, 2003
2.	GATE	MHRD, India	2002-2004
1.	Best High School Student Award	Biswanath Bidyapith, Athagarh, Odisha	1994

12. Publications (*List of papers published in SCI Journals, in year wise descending order*). **Total Citations = 608, h-index= 14, i-10 index= 19**

S.No.	Author	Title	Name of Journal	Volume	Page	Year
30.	L. Rout, A. Kumar, L. S. K. Achary, B. Barik, P. Dash*	Ionic liquid assisted combustion synthesis of ZnO and its modification by Au-Sn bimetallic nanoparticles: An efficient photocatalyst for degradation of organic contaminants	Materials Chemistry & Physics	232	339-352	2019
29.	P. S. Nayak, B. Barik, L. S. K. Achary, A. Kumar, P. Dash*	Gold nanoparticles deposited on MnO ₂ nanorods modified graphene oxide composite: A potential ternary nanocatalyst for efficient synthesis of betti bases and bisamides	Molecular Catalysis	474	110415-110429	2019
28.	L. Rout, A. Kumar, P. K. Chand, L. S. K. Achary, P. Dash*	Microwave-Assisted Efficient One-Pot Multi-Component Synthesis of Octahydroquinazolinone Derivatives Catalyzed by Cu@Ag Core-Shell Nanoparticle	ChemistrySelect	4	5696-5706	2019
27.	B. Ekka, S. R. Nayak, L. S. K. Achary, Sarita, A. Kumar, S.	Synthesis of hydroxyapatite-zirconia nanocomposite through sonochemical route: A potential catalyst for degradation of phenolic compounds	Journal of Environmental Chemical Engineering	6(5)	6504	2018

	Mawatwal, R. Dhiman, P. Dash*, R. K. Patel*					
26.	L. S. K. Achary, A. Kumar, B. Barik, P. S. Nayak, N. Tripathy, J. P. Kar, P. Dash*	Reduced graphene oxide-CuFe ₂ O ₄ nanocomposite: A highly sensitive room temperature NH ₃ gas sensor	Sensors and Actuators B: Chemical	272	100-109	2018
25.	L. S. K. Achary, A. Kumar, L. Rout, S. V. S. Kunapuli, R. S. Dhaka, P. Dash*	Phosphate Functionalized Graphene Oxide with Enhanced Catalytic Activity for Biginelli Type Reaction under Microwave Condition	Chemical Engineering Journal	331	300-310	2018
24.	S. Milan, A. Kumar, L. Satish, B. Surisweta, P. Dash, H. Sahoo*	Insights into binding interaction between Copper ferrite Nanoparticle and Bovine Serum Albumin: An impact on protein conformation and activity	Luminiscence	DOI: 10.1002/bio.3499	DOI: 10.1002/bio.3499	2018
23.	J. K. Sahoo, A. Kumar, L. Rout, J. Rath, P. Dash, H. Sahoo*	An investigation of heavy metal adsorption by hexadentate ligand-modified magnetic nanocomposites	Separation Science and Technology	53	863-876	2018
22.	L. Rout, A. Kumar, R. S. Dhaka, G.N. Reddy, S. Giri, P. Dash*	Bimetallic Au-Cu Alloy Nanoparticles on Reduced Graphene Oxide Support: Synthesis, Catalytic Activity and Investigation of Synergistic Effect by DFT Analysis	Applied Catalysis A: General	538	107-122	2017
21.	A. Kumar, L. Rout, L. S. K. Achary, R. S. Dhaka, P. Dash*	Greener Route for Synthesis of aryl and alkyl-14H-dibenzo [a,j] xanthenes using Graphene Oxide-Copper Ferrite Nanocomposite as a Recyclable Heterogeneous Catalyst	Scientific Reports	7	42975-42992	2017
20.	B. Ekka, R. S. Dhaka, R. K. Patel*, P. Dash*	Fluoride Removal in Waters using Ionic Liquid-Functionalized Alumina as a Novel Adsorbent	Journal of Cleaner Production	151	303-318	2017
19.	A. Kumar, L. Rout, L. S. K. Achary, S. K. Mohanty, P.	A Combustion Synthesis Route for Magnetically Separable Graphene Oxide-CuFe ₂ O ₄ -ZnO Nanocomposite with	New Journal of Chemistry	41	10568-10583	2017

	Dash*	Enhanced Solar Light-Mediated Photocatalytic Activity				
18.	S.A. Pappus, B. Ekka, S. Sahu, D. Sabat, P. Dash , M. Mishra*	A toxicity assessment of Hydroxyapatite nanoparticles on development and behavior of Drosophila melanogaster	Journal of Nanoparticle Research	19	136-151	2017
17.	J. K. Sahoo, A. Kumar, J. Rath, T. Mohanty, P. Dash , H. Sahoo*	Guar gum-coated iron oxide nanocomposite as an efficient adsorbent for Congo red dye	Desalination and Water Treatment	95	342-354	2017
16.	M. Mishra*, D. Sabat, B. Ekka, S. Sahu, U. P, P. Dash	Oral intake of Zirconia nanoparticle alters neuronal development and behaviour of Drosophila melanogaster	Journal of Nanoparticle Research	19	282-293	2017
15	D. Sabat, A. Pattnaik, B. Ekka, P. Dash , M. Mishra*	Investigation of Titania Nanoparticles on Behaviour and Mechanosensory Organ of Drosophila melanogaster	Physiology & Behaviour	167	76-85	2016
14	B. Ekka, M. K. Sahoo, R. K. Patel*, P. Dash*	Titania Coated Silica Nanocomposite Prepared via Encapsulation Method For The Degradation of Safranin-O Dye From Aqueous Solution: Optimization Using Statistical Design	Water Resources & Industry	10.1016/j.wri.2016.08.001	10.1016/j.wri.2016.08.001	2016
13.	A. Kumar, L. Rout, R. S. Dhaka, L. S. K. Achary, A. Mohanty, P. Dash*	An Investigation into the Solar Light-Driven Enhanced Photocatalytic Properties of a Graphene Oxide-SnO ₂ -TiO ₂ Ternary Nanocomposite	RSC Advances	6	32074-32088	2016
12	L. Rout, A. Kumar, R. S. Dhaka, P. Dash*	Bimetallic Ag-Cu alloy nanoparticles as a highly active catalyst for the enamination of 1,3-dicarbonyl compounds	RSC Advances	6	49923-49940	2016
11.	L. Satish, S. Rana, M.	Impact of imidazolium based ionic liquids on the	Spectroscopy Letters	49	383-390	2016

	Arakha, L. Rout, B. Ekka, P. Dash, H. Sahoo	structure and stability of lysozyme				
10.	A. Kumar, L. Rout, R. S. Dhaka, S. L. Samal, P. Dash*	Design of a Graphene Oxide-SnO ₂ Nanocomposite with Superior Catalytic Efficiency for the Synthesis of β -enaminones and β -enaminoesters.	RSC Advances	5	39193-39204	2015
9.	B. Ekka, L. Rout, M. K. Sahu, A. Kumar, R. K. Patel*, P. Dash*	Removal efficiency of Pb(II) from aqueous solution by 1-alkyl-3-methylimidazolium bromide ionic liquid mediated mesoporous silica	Journal of Environmental Chemical Engineering	3	1356-1364	2015
8.	L. Rout, P. Rengasamy, B. Ekka, A. Kumar, P. Dash*	Supported Bimetallic AgSn Nanoparticle as an Efficient Photocatalyst for Degradation of Methylene Blue Dye	Nano	10	1550059-1550072	2015
7.	T. Balcha, J. Strobl, C. Fowler, P. Dash, R. W. J. Scott	Selective Aerobic Oxidation of Crotyl Alcohol using Au-Pd Core-shell Nanoparticles	ACS Catalysis	1	425-436	2011
6	C. F. Calver, P. Dash, R. W. J. Scott	Selective Hydrogenation Activity of Ag-Pd Catalysts Prepared by Galvanic Exchange Reactions	ChemCatChem	3	695-697	2011
5	P. Dash, R. W. J. Scott	One-pot synthesis of supported-Nanoparticle Materials in Ionic Liquid solvents	Materials Letters	65	7-9	2011
4.	P. Dash, S. Miller, R. W. J. Scott	Stabilizing Nanoparticle Catalysts in Imidazolium-based Ionic Liquids: A Comparative Study	Journal of Molecular Catalysis A: Chemical	329	86-95	2010
3.	P. Dash, T. Bond, C. Fowler, W. Hou, N. Coombs, R. W. J. Scott	Rational Design of Supported-PdAu Nanoparticle Catalysts from Structured Nanoparticle Precursors	Journal of Physical Chemistry C	113	12719-12730	2009
.2.	P. Dash, R.	1-Methylimidazole	Chemical	-	812-814	2009

	W. J. Scott	Stabilization of Gold Nanoparticles in Imidazolium Ionic Liquids	Communications			
1.	P. Dash , N. A. Dehm, R. W. J. Scott	Bimetallic PdAu Nanoparticles as Hydrogenation Catalysts in Imidazolium Ionic Liquids	Journal of Molecular Catalysis A: Chemical	286	114-119	2008

13. Detail of patents.: NIL.

14. Books/Reports/Chapters/General articles etc.

Book chapter:

1. L. S. K. Achary, B. Barik, **P. Dash*** Graphene Oxide-Polymer Nanocomposites for Sensing and Photocatalytic Applications (chapter: Graphene Nanocomposite) in Handbook of Polymer and Ceramic Nanotechnology, C. M. Hussain and S. Thomas (Eds.), **Springer Nature Switzerland, 2019 (accepted)**.

Refereed Proceedings:

S.No.	Title	Author's Name	Publisher	Year of Publication
8.	EDTA functionalized magnetic nanoparticle as a functional adsorbent for Congo red dye from contaminated water	J. K. Sahoo, J. Rath, P. Dash , H. Sahoo	AIP Proceedings	1832, 050087, 2017
7.	Design of binary SnO ₂ -CuO nanocomposite for efficient photocatalytic degradation of malachite green dye	A. Kumar, L. Rout, S. L. Achary, A. Mohanty, J. Marpally, P. K. Chand, P. Dash*	AIP Proceedings	1724, 020027, 2016
6.	Removal of malachite green dye from aqueous solution using mesoporous silica synthesized from 1-octyl-3-methylimidazolium chloride ionic liquid	B. Ekka, S. K. Nayak, P. Dash* , R. K. Patel*	AIP Proceedings	1724, 020011, 2016

5.	Towards the Rational Design of Supported-Bimetallic Nanoparticle Catalysts	P. Dash , R. W. J. Scott	Materials Research Society (MRS) Proceedings	1217-Y01-07, 2010
4.	Characterization of Structured Bimetallic Nanoparticle Catalysts	R. W. J. Scott, P. Dash , C. Calver	Canadian Light Source (CLS) Report	98, 2010
3.	XAFS Studies of Structured Bimetallic Nanoparticle Catalysts at the CLS	R. W. J. Scott, P. Dash	Canadian Light Source (CLS) Report	57, 2008
2.	Bimetallic Nanoparticles as Catalysts in Imidazolium Ionic Liquids	R. W. J. Scott, P. Dash	Materials Research Society (MRS) Proceedings	1082-Q04-02 , 2008
1.	Synthesis of Bioglass Ceramic Epoxy Composites	P. Dash , D. K. Pattanayak, R. C. Prasad, B. T. Rao, T. R. Rama Mohan	Transactions of Powder Metallurgy Association of India (PMAI)	30, 01, 2004

a. PhD students guided : 03 completed, 05 ongoing

Lipeeka Rout, 2017, Current Position: **Postdoctoral Fellow, Pusan National University, South Korea**

Aniket Kumar, 2018, Current Position: **Postdoctoral Fellow, Chonnam National University, South Korea**

Basanti Ekka (co-PI), 2017, Current Position: **Postdoctoral Fellow, Riga National University, Latvia/Finland joint project**

b. MSc student projects guided: 15

c. Sponsored Projects Handled: 03

Sl.No.	Title of the Project	Funding Agency	Total Financial Outlay	Year of start & total period	Name of PI	Status
1.	Synthesis and functionalization of hollow metal oxides in	DST-SERB	~ 26 lakhs	2012-2015	Priyabrat Dash	Completed, One PhD student

	ionic liquids for catalysis and sensor application					graduated.
2.	Spatial Distribution of Uranium and Associated Water Quality Parameters in Groundwater/Drinking Water in Four Districts of Odisha (Balangir, Bargarh, Nuapada and Subarnapur)	BRNS	~ 23 lakhs	2016-2018	Priyabrat Dash	Ongoing, One PhD student ongoing.
3.	Spatial Distribution of Uranium and Associated Water Quality Parameters in Groundwater/Drinking Water in Four Districts of Odisha (Sundargarh, Jharsuguda, and Sambalpur)	BRNS	~ 24 lakhs	2014-2017	Priyabrat Dash, co-PI	Completed, One PhD student ongoing.

d. Journals/Funding Agencies Refereed:

- Reviewer of journal of international repute such as **ACS Catalysis, Chemical Communications, ACS Omega, Chemical Engineering Journal, Catalysis Today, ChemElectroChem, Applied Surface Science, RSC Advances, Beilstein journal of Nanotechnology, Current Organic Chemistry, catalysis letters, materials letters, chemosphere, and journal of molecular catalysis A, chemical, Journal of Water Process Engineering, Current Nanoscience, etc.**
- Reviewer of Government of India funding agencies like **DST and DBT.**
- Reviewer of International funding agencies like **Stanford Synchrotron Facility and American Petroleum Research Fund.**

e. Invited Talks/Guest Lectures Delivered: 10

f. Work Presented at conferences: 35

g. Conferences/Workshop Conducted:

- Acted as **Convener** in national conference on “Advanced Materials for Energy and Environmental Applications” (AMEEA 2018) sponsored by DST, BRNS, and DRDO, December 12-14, 2018 at NIT Rourkela, Odisha.
- Acted as **Treasurer** in national conference (in association with Indian Photobiology Society) on Biomolecular Dynamics (BDETP), December 18-20,

2017, NIT Rourkela, Odisha.

- h. Laboratories Developed:** Water Analysis Laboratory, Nanochemistry Laboratory
- i. Administrative Positions Held:** Asst. Warden, Departmental Convener for Curriculum Development, and Institute member for science Curriculum Development
- j. Professional Memberships:** Materials Research Society (MRS), USA and Canadian Society for Chemistry (CSC), Odisha Chemical Society
- k. Trainings Undertaken:**
- Laboratory Safety for Supervisors at U of Saskatchewan, Canada.
 - Laboratory Safety and Management at U of Ottawa and Saskatchewan, Canada.
 - Agilent's GC and LC Tips and Tricks training at Saskatoon, Canada.
 - Canadian Light Source Synchrotron Summer School at CLS, Saskatoon, Canada.
- l. Workshops Attended:**
- Foundations of Project Management I workshop by MITACS Step at U of Ottawa, Canada.
 - The art of Powerful Conversation workshop by MITACS Step at U of Ottawa, Canada.
 - Using Technology to Assess Learning workshop at Centre for University Teaching, U of Ottawa, Canada.
 - Time Management workshop at Graduate Studies Mentoring Centre, U of Ottawa, Canada.
 - Innovative Ideas for Student Assignments workshop at Centre for University Teaching, U of Ottawa, Canada.
 - Developing Exams and Supporting your Students in their Studies workshop at Centre for University Teaching, U of Ottawa, Canada.