

BANKURA UNIVERSITY



FACULTY ACADEMIC PROFILE/ CURRICULUM VITAE

1. **Name:** Dr. JAYA PAL
2. **Designation:** ASSISTANT PROFESSOR
3. **Date of Birth:** 29/04/1987
4. **Specializations:** ORGANIC CHEMISTRY
5. **Contact Information:**

Contact Address: Dr. Sarvepalli Radhakrishnan Nivas (Faculty & Officers Quarter),
Bankura University,
Main Campus (Beside NH 60),
Bankura Block – II, P.O.- Purandarpur,
Dist.- Bankura, West Bengal, India. PIN – 722155

Email: jayapal2000@gmail.com, jayapal@bankurauniv.ac.in

6. **Academic qualifications:**

College/ University from which the degree was obtained	Abbreviation of the degree
The University of Burdwan	B. Sc.
The University of Burdwan	M. Sc. (First class First, Gold Medalist)
Indian Institute of Technology (IIT) Kharagpur	Ph. D

7. **Past Employments/ Academic Experience:**

- **December 2015 – February 2018:** Postdoctoral Research Fellow, IISER Pune, India
- **March 2018 – June 2019:** Postdoctoral Fellow, University of Alberta, Canada
- **July 2019 – Till Now:** Assistant Professor, Bankura University

8. **Research Interests:**

- Nanostructured metal, semiconductor, and composite materials for catalysis, photocatalysis, sensing and environmental applications.
- Synthesis, characterization and electrochemical studies of metal and semiconductor-based electrode material for hydrogen evolution reaction and oxygen evolution reactions.

9. **Research Guidance / Supervision:**

- Number of researchers pursuing Ph.D : One
- Number of project student: One

10. **Research Projects:**

Current projects:

Title of the Project	Principal Investigator	Duration	Funding Agency	Amount
Size, shape, and facet dependent synthesis of Mo-based nano-electrocatalyst for hydrogen evolution reaction	Dr. Jaya Pal	2 years (20-Dec-2021 to 19-Dec-2023)	SERB	Rs.33,00,000/-

11. **Select list of publications:**

Journals / Online Journals:

1. **Pal, J.**; Bhunia, A.; Chakraborty, S.; Manna, S.; Das, S.; Diwan, A.; Datta, S.; Nag, A. Synthesis and Optical Properties of Colloidal $M_3Bi_2I_9$ ($M = Cs, Rb$) Perovskite Nanocrystals. *J. Phys. Chem. C* **2018**, *122*, 10643-10649.
2. **Pal, J.**; Manna, S.; Mondal, A.; Das, S.; Adarsh, K. V.; Nag, A. Colloidal Synthesis and Photophysics of $M_3Sb_2I_9$ ($M = Cs$ and Rb) Nanocrystals: Lead-Free Perovskites. *Angew. Chem. Int. Ed.* **2017**, *56*, 14187-14191.
3. **Pal, J.**; Pal, T. Enzyme Mimicking Inorganic Hybrid $Ni@MnO_2$ for Colorimetric Detection of Uric Acid in Serum Samples. *RSC Adv.* **2016**, *6*, 83738-83747.
4. **Pal, J.**; Sasmal, A. K.; Ganguly, M.; Pal, T. Surface Plasmon Effect of Cu and Presence of n-p Hetero-Junction in Oxide Nanocomposites for Visible Light Photocatalysis. *J. Phys. Chem. C* **2015**, *119*, 3780-3790.
5. **Pal, J.**; Pal, T. Faceted Metal and Metal Oxide Nanoparticles: Design, Fabrication and Catalysis. *Nanoscale* **2015**, *7*, 14159-14190.
6. **Pal, J.**; Ganguly, M.; Mondal, C.; Negishi, Y.; Pal, T. Precursor Salt Assisted Syntheses of High-Index Faceted Concave Hexagon and Nanorod-Like Polyoxometalates. *Nanoscale* **2015**, *7*, 708-719.
7. **Pal, J.**; Mondal, C.; Sasmal, A. K.; Ganguly, M.; Negishi, Y.; Pal, T. Account of Nitroarene Reduction with Size- and Facet-Controlled $CuO-MnO_2$ Nanocomposites. *ACS Appl. Mater. Interfaces* **2014**, *6*, 9173-9184.
8. **Pal, J.**; Ganguly, M.; Dutta, S.; Mondal, C.; Negishi, Y.; Pal, T. Hierarchical Au-CuO Nanocomposite from Redox Transformation Reaction for Surface Enhanced Raman Scattering and Clock Reaction. *CrystEngComm* **2014**, *16*, 883-893.

9. **Pal, J.**; Ganguly, M.; Mondal, C.; Roy, A.; Negishi, Y.; Pal, T. Crystal- Plane-Dependent Etching of Cuprous Oxide Nanoparticles of Varied Shapes and Their Application in Visible Light Photocatalysis. *J. Phys. Chem. C* **2013**, *117*, 24640-24653.
10. Sasmal, A. K.; **Pal, J.**; Sahoo, R.; Kartikeya, P.; Dutta, S.; Pal, T. Superb Dye Adsorption and Dye-Sensitized Change in Cu₂O–Ag Crystal Faces in the Dark. *J. Phys. Chem. C*, **2016**, *120*, 21580-21588.
11. Ganguly, M.; **Pal, J.**; Mondal, C.; Pal, A.; Pal, T. Intriguing Manipulation of Metal-Enhanced Fluorescence for the Detection of CuII and Cysteine. *Chem. Eur. J.* **2014**, *20*, 12470-12476.
12. Ganguly, M.; **Pal, J.**; Das, S.; Mondal, C.; Pal, A.; Negishi, Y.; Pal, T. Green Synthesis and Reversible Dispersion of a Giant Fluorescent Cluster in Solid and Liquid Phase. *Langmuir* **2013**, *29*, 10945-10958.
13. Ganguly, M.; **Pal, J.**; Mondal, C.; Pal, A.; Pal, T. Imine (-CH= N-) Brings Selectivity for Silver Enhanced Fluorescence. *Dalton Trans.* **2015**, *44*, 4370-4379.
14. Mondal, C.; **Pal, J.**; Pal, K. K.; Sasmal, A. K.; Ganguly, M.; Roy, A.; Manna, P. K.; Pal, T. Serendipitous Synthesis of Ag_{1.92}Mo₃O₁₀·H₂O Nanowires from AgNO₃-Assisted Etching of Ammonium Phosphomolybdate: A Material with High Adsorption Capacity. *Cryst. Growth Des.* **2014**, *14*, 5034-5041.
15. Mondal, C.; **Pal, J.**; Ganguly, M.; Sinha, A. K.; Jana, J.; Pal, T. A One Pot Synthesis of Au-ZnO Nanocomposites for Plasmon-Enhanced Sunlight Driven Photocatalytic Activity. *N. J. Chem.* **2014**, *38*, 2999-3005.
16. Mondal, C.; Ganguly, M.; **Pal, J.**; Sahoo, R.; Sinha, A. K.; Pal, T. Pure Inorganic Gel: A New Host with Tremendous Sorption Capability. *Chem. Commun.* **2013**, *49*, 9428-9430.
17. Mondal, C.; Ganguly, M.; **Pal, J.**; Roy, A.; Jana, J.; Pal, T. Morphology Controlled Synthesis of SnS₂ Nanomaterial for Promoting Photocatalytic Reduction of Aqueous Cr(VI) under Visible Light. *Langmuir* **2014**, *30*, 4157-4164.
18. Ganguly, M.; Mondal, C.; **Pal, J.**; Pal, A.; Negishi, Y.; Pal, T. Fluorescent Au(I)@Ag₂/Ag₃ Giant Cluster for selective Sensing of Mercury(II) Ion. *Dalton Trans.* **2014**, *43*, 11557-11565.
19. Ganguly, M.; Mondal, C.; Chowdhury, J.; **Pal, J.**; Pal, A.; Pal, T. The Tuning of Metal Enhanced Fluorescence for Sensing Applications. *Dalton Trans.* **2014**, *43*, 1032-1047.
20. Mondal, C.; Ganguly, M.; Sinha, A. K.; **Pal, J.**; Sahoo, R.; Pal, Robust Cubooctahedron Zn₃V₂O₈ in Gram Quantity: A Material for Photocatalytic Dye Degradation in Water. *CrystEngComm* **2013**, *15*, 6745-6751.
21. Mondal, C.; Sinha, A. K.; Ganguly, M.; **Pal, J.**; Dhara, S.; Negishi, Y.; Pal, T. Deposition of Zinc Oxide Nanomaterial on Different Substrates for Useful Applications. *CrystEngComm* **2014**, *16*, 4322-4328.
22. Mondal, C.; Ganguly, M.; Sinha, A. K.; **Pal, J.**; Pal, T. Fabrication of a ZnO Nanocolumnar Thin Film on a Glass Slide and its Reversible Switching from a Superhydrophobic to a Superhydrophilic State. *RSC Adv.* **2013**, *3*, 5937-5944.
23. Ganguly, M.; Mondal, C.; Pal, A.; Pratik, S. M.; **Pal, J.**; Pal, T. Aggregation of Nitroaniline in Tetrahydrofuran through Intriguing H-bond Formation by Sodium Borohydride. *Phys. Chem. Chem. Phys.* **2014**, *16*, 12865-12874.
24. Mondal, C.; Sasmal, A. K.; Yusuf, S. M.; Mukadam, M. D.; **Pal, J.**; Ganguly, M.; Pal, T. Modified Hydrothermal Reaction (MHT) for CoV₂O₆·4H₂O Nanowire Formation and the Transformation to CoV₂O₆·2H₂O Single-Crystals for Antiferromagnetic Ordering and Spin-Flop. *RSC Adv.* **2014**, *4*, 56977-56983.
25. Sasmal, A. K.; Mondal, C.; Sinha, A. K.; Gauri, S. S.; **Pal, J.**; Aditya, T.; Ganguly, M.; Dey, S.; Pal, T. Fabrication of Superhydrophobic Copper Surface on Various Substrates for Roll-

off, Self-Cleaning, and Water/Oil Separation. *ACS Appl. Mater. Interfaces* **2014**, *6*, 22034-22043.

12. **Fellowships:**

- Junior Research Fellowship (2011-2013)
- Senior Research Fellowship (2013-2015)
- IISER Pune Postdoctoral Research Fellowship (December 2015-February 2018)
- Future Energy System Fellowship, University of Alberta, Canada (March 2018- June 2019)

13. **Invited lectures delivered:**

- One Day International Webinar on “World in the Nano Regime”, Organized by the Department of Physics and Chemistry, Bankura Zilla Saradamani Mahila Mahavidyapith on 18th July 2020.

14. **Awards:**

- Secured **Gold medal Award (First Class First in M. Sc. Examination)**, 2010, The University of Burdwan.
- Achieved Gourikanta Mukherjee Memorial **Gold medal Award (Highest percentage of marks in M. Sc. Examination)**, 2010, The University of Burdwan.
- Awarded Dr. Sumanta Basu memorial **Bronze medal (Highest marks in Organic Special Paper)**, 2010, The University of Burdwan.
- Secured **Merit Award by Jawaharlal Nehru Memorial Fund, Delhi (Highest percentage of marks in M. Sc. Examination)**, 2011.
- Qualified **National Eligibility Test (NET) for two times** jointly conducted by University Grants Commission (UGC) and Council of Scientific and Industrial Research (CSIR), New Delhi, India, held in December 2009 and June 2010.
- Awarded Sarojini Rudra **Silver medal for securing highest marks (in the entire state of West Bengal) in the 10th standard Life Science examination.**

15. **Papers presented in Conferences, Seminars, Workshops and Symposia:**

- Poster Presentation in Chemistry (DJSRTC-2011), Department of Chemistry, Indian Institute of Technology, Kharagpur, India.
- Oral Presentation in Structural and Physical Properties of solids (2013), Department of Applied Physics, Indian School of Mines, Dhanbad, India.
- Poster Presentation in Chemistry (ICANN-2017), Department of Chemistry, Indian Institute of Technology, Guwahati, India.

16. **Other notable activities:**

- Convener of International Webinar on New Horizons in Chemistry (IWNHC 2020), Department of Chemistry, Bankura University (August 22-24, 2020)
- Co-convener International Webinar on Current Overview and Future Aspects of ongoing COVID-19 Pandemic, Department of Chemistry, Bankura University (June 17 & 20, 2020)
- Co-convener of “Center for Recent Advancements of Chemistry”
- Member of Plagiarism Committee
- Member of UGBS