

Curriculum Vitae

Shaili Pal

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ACADEMICS:

Degree	Branch/Subject	Year	Board/University	%age
PhD	Chemistry	2020	I.I.T. (B.H.U.)	
M.Sc	Chemistry	2015	University of Allahabad	82.1
B.Sc	Physics, Chemistry	2013	University of Allahabad	64.37
Intermediate	Science branch	2010	U.P. Board	74
High School	Science branch	2008	U.P. Board	71.3

CSIR-NET qualified on 21st December 2014.

RESEARCH EXPERIENCE:

PhD research experience (July 2015- Dec 2020) on the topic “Iron Oxide based p-n heterojunction photocatalyst” under the supervision of Dr. Indrajit Sinha at the Department of Chemistry, IIT (B.H.U.). I have good experience of designing the p-n heterojunction nanostructure and executing the catalytic reaction based on the synthesized nanostructure. I have a basic understanding of characterization techniques, including XRD, TEM, XPS, SEM, FTIR, and MPMS. I can handle the spectroscopic instrument like UV-Vis and UV-DRS.

ACADEMIC ACHIEVEMENTS:

- Qualified the **National Eligibility Test** for lectureship conducted by Council of Scientific and Industrial Research (CSIR) India in December 2014.

- Qualified **Graduate Aptitude Test in Engineering (GATE)** in March 2015.
- Awarded **Junior Research Fellowship** funded by Indian Institute of Technology (Banaras Hindu University), Varanasi, India for two years, 2015-2017.
- Awarded **Senior Research Fellowship** funded by the Indian Institute of Technology (Banaras Hindu University), Varanasi, India for three years, 2017-2020.

PROMINENT SYMPOSIA/ CONFERENCES:

- Poster presentation on the topic “Degradation of p-Nitrophenol using Iron oxide and Starch functionalized iron oxide nanoparticles through advanced oxidation process”
Shaili Pal, P. N. Singh, D. Tiwary and I. Sinha
5th International Conference on “Advanced Nanomaterial and Nanotechnology” (**ICANN-2017**) is being organized by the Centre for Nanotechnology at the Indian Institute of Technology Guwahati (IITG), India, during Dec 18-21, **2017**.
- Oral presentation on the topic “Hydrogen peroxide production on s-Fe₃O₄/Ag/Ag₂O magnetically recyclable visible light photocatalyst” by **Shaili Pal**
International Conference on Advanced Materials, Energy & Environmental Sustainability (**ICAMEES-2018**), at UPES – Dehradun on 14th -15th December 2018.

LIST OF PUBLICATIONS:

- **S. Pal**, A. Kumar, A K De, R. Prakash and I. Sinha, Visible Light Photocatalysis on Magnetically Recyclable Fe₃O₄/Cu₂O Nanostructures, *Catalysis Letters*, 2022, 152(11), 3259-3271.
- M. Shukla, A. Verma, S. Kumar, **S. Pal**, and I. Sinha, Ionic liquid functionalized Cu₂O nanoparticles, *Journal of Molecular Structure*, 2022, 1262, 132961.
- A. Verma, **S. Pal**, J. Kuntail, N. Kamal, R. K. Mandal and I. Sinha, Visible light enhanced p-nitrophenol reduction by glycerol over Ag/Cu core-shell bimetallic nanocatalysts. *Journal of Environmental Chemical Engineering*, 2021, 9(4), 105655.
- A. Gangwar, A. Singh, **S. Pal**, I. Sinha, S. S. Meena, and N. K. Prasad, Magnetic nanocomposites of Fe₃C or Ni-substituted (Fe₃C/Fe₃O₄) with carbon for degradation of methylene orange and p-nitrophenol. *Journal of Cleaner Production*, 2021, 309, 127372.
- M. Shukla, A. Verma, S. Kumar, **S. Pal**, and I. Sinha, Experimental and DFT calculation study of interaction between silver nanoparticle and 1-butyl-3-methyl imidazolium tetrafluoroborate ionic liquid. *Heliyon*, 2021, 7(1), e06065.
- **S. Pal**, S. Kumar, A. D. Verma, A. Kumar, T. Ludwig, M. Frank, S. Mathur, R. Prakash and I. Sinha, Development of magnetically recyclable visible light photocatalysts for

- hydrogen peroxide production, *Material Science in Semiconductor Processing*, 2020, 112, 105024.
- **S. Pal**, P. N. Singh, A. D. Verma, A. Kumar, D. Tiwary, R. Prakash and I. Sinha, Visible light photo-Fenton catalytic properties of starch functionalized iron oxyhydroxide nanocomposites, *Environmental Nanotechnology, Monitoring & Management*, 2020, 100311.
 - J. Kuntail, **S. Pal** and I. Sinha, Interfacial phenomena during Fenton reaction on starch stabilized magnetite nanoparticles: Molecular dynamics and experimental investigations, *Journal of Molecular Liquids*, 2020, 114037.
 - A. K. De, S. Majumdar, **S. Pal**, S. Kumar and I. Sinha, Zn doping induced band gap widening of Ag₂O nanoparticles, *Journal of Alloys and Compound*, 2020, 832, 154127.
 - P. Verma, **S. Pal**, S. Chauhan, A. Mishra, I. Sinha, S. Singh and V. Srivastava, Starch functionalized magnetite nanoparticles: A green, biocatalyst for one-pot multicomponent synthesis of imidazopyrimidine derivatives in aqueous medium under ultrasound irradiation, *Journal of Molecular Structure*, 2020, 1203, 127410.
 - A. D. Verma, M. Shukla, S. Kumar, **S. Pal** and I. Sinha, Mechanism of visible light enhanced catalysis over curcumin functionalized Ag nanocatalysts, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2020, 240, 118534.
 - S. I. Siddiqui, P. N. Singh, N. Tara, **S. Pal**, S. A. Chaudhrya and I. Sinha, Arsenic removal from water by starch functionalized maghemite nano-adsorbents: Thermodynamics and kinetics investigations, *Colloids and Interface Science Communications*, 2020, 36, 100263.
 - S. Kumar, **S. Pal**, J. Kuntail and I. Sinha, Curcumin functionalized CuO/Ag nanocomposite: Efficient visible light Z-scheme photocatalyst for methyl orange degradation, *Environmental Nanotechnology, Monitoring & Management*, 2019, 12, 100236.
 - S. Kumar, **S. Pal**, J. Kuntail, A. K. De and I. Sinha, Construction of a Visible Light Zscheme Photocatalyst: Curcumin Functionalized Cu₂O/Ag Nanocomposites, *Chemistry Select*, 2019, 4(36), 10709-10718.
 - S. Kumar, A. D. Verma, **S. Pal** and I. Sinha, Curcumin Functionalized Ag/Ag₂O Nanocomposites: Efficient Visible Light Z-scheme Photocatalysts, *Photochemistry and Photobiology*, 2018, 94, 641-649.
 - A. D. Verma, **S. Pal**, P. Verma, V. Shrivastava and I. Sinha, Ag-Cu bimetallic nanocatalysts for p-nitrophenol reduction using a green hydrogen source, *Journal of Environmental Chemical Engineering*, 2017, 5, 6148-6155.

