Name: Dr. Naznin Pathan

Designation: Assistant Professor (SOS)

Phone: **7878933696**
E-mail: **naznin.pathan@gsfcuniversity.ac.in**
School: School of Science

Research Interest:

- Fabrication of capped/supported nanomaterials and exploration of nanomaterials as catalysts for organic transformations like C-C and C-N coupling reactions for organic synthesis, Hydrogenation reaction, Oxidation/Reduction reaction, Asymmetric catalysis, environmental remediation, and sensing applications.
- Characterization of nanomaterials with various techniques.
- Development of magnetic and non-magnetic nanocatalysts, Study of reaction mechanism and kinetics.
- Development of environmentally benign synthetic methodology for the preparation of nanomaterials and catalytic transformations.

Academic Background:

Degree	Subject	University	Year
Ph.D.	Chemistry	M. S. University of Baroda	July-2023
GSET	Chemical science	M. S. University of Baroda	Nov-2017
M.Sc.	Organic Chemistry	M. S. University of Baroda	Apr-2014
B.Sc.	Chemistry	M. S. University of Baroda	Apr-2012

Ph.D. Thesis Title

❖ ***Fabrication of capped/supported Nanosystems: Characterization and Applications***

I have fabricated ***biopolymer/ligand-stabilized metallic/bimetallic Nanosystems*** during my doctoral research. These magnetic/Non-magnetic Nanosystems were characterized using various analytical techniques like- XPS, XANES, VSM, XRD, IR, SEM, HRTEM, HAADF-STEM, UV-Vis, TG-DTA, ICP-MS, and ESR. These nanosystems were applied for ***Suzuki coupling, Surface-enhanced Raman spectroscopy (SERS), Reduction of Nitrophenols, and catalytic and photocatalytic dye degradation studies***. I have also worked on metal recovery by ***adsorption process***.

Professional Experience:

From	Period	Position	Organization
June 2014- July 2016	2 Years 1 month	Research Associate (API-Intellectual property rights)	Alembic Pharmaceuticals Ltd
May 2021- May 2022	1 year	Quality Analyst	PerkinElmer
July 2022- June 2023	1 year	Assistant professor (Temp.)	M. S. University of Baroda

Teaching Engagements:

Title	Course Code	Class Name	School Name
Assistant professor (Temp.)	Theory and Practical	B.Sc. (Chemistry) M.Sc. (Analytical Chemistry)	M. S. University of Baroda

Publications:

- **Naznin Shaikh[a], Padmaja Pamidimukkala[a*]**,
  Magnetic chitosan stabilized palladium nanostructures: Potential catalysts for aqueous Suzuki coupling reactions, **International Journal of Biological Macromolecules**, Volume 183, 2021, Pages 1560-1573, https://doi.org/10.1016/j.ijbiomac.2021.05.103, **IF: 8.2**
- **Mohini Sadhu[a], Ronak Bhatt[a], Naznin Shaikh[a], Padmaja Pamidimukkala[a*],**
  Ag-based magnetic metal-organic framework nanocomposite as catalyst for nitrophenol removal, **Catalysis Communications**, volume 183, 2023, Page 106768, https://doi.org/10.1016/j.catcom.2023.106768, **IF: 3.7**
- **Naznin Shaikh[a], Narayan N. Som[b], Prafaulla K. Jha[c], Padmaja Pamidimukkala[a*],**
  Chitosan supported silver nanostructures as surface-enhanced Raman scattering sensor: Spectroscopic and density functional theory insights**, International Journal of Biological Macromolecules**, Volume 253, 2023, 127444, https://doi.org/10.1016/j.ijbiomac.2023.127444, **IF: 8.2**

- **Abstracts**
- **Naznin Shaikh and Padmaja Sudhakar**
  Diethylenetriaminepentaacetic acid capped Iron oxide stabilized Palladium nanostructure: An Efficient Catalyst for the Suzuki coupling Reaction, SPAST Abstracts, 1(01), 2021. https://spast.org/techrep/article/view/2817
- **Dave, H., Shaikh, N., & Pamidimukkala, P.**
  Microwave Synthesis of Silver and Zinc Oxide based Nanostructures- Potential Applications in Photocatalysis and SERS detection**.** SPAST Abstracts, 1(01), 2021. https://spast.org/techrep/article/view/2529

Book:

Awards/Recognitions:

1) Award from Geeta Gyan Vardhak Mandal, College of Education, Dabhoi for securing the highest no. of marks in Sanskrit in the SSC Board exam (GSEB)

2) Shri V M Gokhle award from M S University, Baroda for securing the highest no. of marks in T.Y B.Sc. practical.

3) 1st prize for oral presentation in 7th All Gujarat research scholars meet-2018

4) 3rd prize for poster presentation in the National Symposium on Advances in Chemical Research (ACR-2019)

5) 2nd prize for poster presentation in One day workshop on industrial catalysis (ICAT-2019)