Maansi Aggarwal

Research Scholar, IIT Patna

Objective: To contribute to the ever expanding field of biochemistry with carbon dot conjugation for biomedical applications that brings out the best of creativity and imagination.

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Academic Background

Ph.D. in Chemistry — 2021-Present
Indian Institute of Technology, Patna
CGPA: 8.79/10

M.Sc. in Chemistry — 2018-2020
Thapar Institute of Engineering and Technology, Patiala
CGPA: 9.74/10

B.Sc. Non Medical — 2015-2018
M.C.M DAV College for Women, Chandigarh, Punjab University
Percentage: 83.25%

12th Class (CBSE) — 2014-2015
Holy Heart Senior Secondary School, Nahan, Himachal Pradesh
Percentage: 92%

10th Class (CBSE) — 2012-2013
Holy Heart Senior Secondary School, Nahan, Himachal Pradesh
CGPA: 9.80

Publications

- "Simultaneous sustained drug delivery, tracking, and on-demand photoactivation of DNA–hydrogel formulated from a biomass-derived DNA nanoparticle" Ravi Shankar, Suman Nayak, Sneha Singh, Abhik Sen, Nitesh Kumar, Rashmi Bhushan, **Maansi Aggarwal**, Prolay Das **(ACS Applied Bio Materials, 2023).**

- "Preparation and characterization of curcumin incorporated soy protein isolate biopolymeric films" Shikha Rani, Priya Rani, **Maansi Aggarwal**, K Dinesh Kumar, Rakesh Kumar **(Journal of Polymers and the Environment, 2022).**

- "Two-dimensional ultrathin metal-based nanosheets for photocatalytic CO_2 conversion to solar fuels" **Maansi Aggarwal**, Nagaraj P Shetti, Soumen Basu, Tejraj M Aminabhavi **(Journal Of Environmental Management, 2022).**

- "Photocatalytic carbon dioxide reduction: Exploring the role of ultrathin 2D graphitic carbon nitride (g-C_3N_4)" **Maansi Aggarwal**, Soumen Basu, Nagaraj P.Shetti, Mallikarjuna, N.Nadagouda, Eilhann, E.Kwon, Young-Kwon Park, Tejraj M.Aminabhavi **(Chemical Engineering Journal, 2021).**

- "Photocatalytic conversion of CO_2 into valuable products using emerging two-dimensional graphene-based nanomaterials: A step towards sustainability" **Maansi Aggarwal**, Soumen Basu, Nagaraj P Shetti, Mallikarjuna N Nadagouda, Tejraj M Aminabhavi **(Chemical Engineering Journal, 2021).**

Research Experience

Dec'19-July'20: Research Fellow: Exploring the role of ultrathin 2D-graphitic layer in the composites of g-C_3N_4 & GO for photocatalytic CO_2 reduction
(Thapar Institute of Engineering and Technology, Patiala)

May'19-July'19: Summer Research Fellow: Characterization of new interstellar molecules by first principle studies
(Indian Institute of Technology, Ropar)

Awards and Honours

- Prime Minister's Research Fellow (ID- 2702444 July, 2022 cycle)
- GATE Qualified (Chemistry) 2021
- Summer Internship Fellowship Programme by IAS-NASI-INSA (Assigned IIT Ropar) 2019
- IIT JAM Qualified (Chemistry) 2018

Teaching Experience

- CH103: Introductory Chemistry, IIT Patna
- CH440: Inorganic Practical, IIT Patna
- PC100103: Atomic and Molecular Structure, NSIT, Patna
- PC100203: Periodic Properties and Stereochemistry, NSIT, Patna
- CHEM130: Physical Chemistry and Introduction of Organic Chemistry to Canadian students