

CURRICULUM VITAE

Siddhartha Das

Research Scholar

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Date of Birth: 04/02/1991

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Education

- **Ph. D. (Chemistry) (Thesis submitted)** Vidyasagar University, Midnapore, West Bengal. **Thesis Title:** *Synthesis, Self-organization and Gelation Behaviour Studies of Some Selected Nitrogen Based Heterocyclic Amphiphiles.*
- **M.Sc. (Chemistry)** degree in 2016 from Vidyasagar University, Midnapore, West Bengal.
- **B.Sc. (Chemistry Hons)** degree in 2014 from Vidyasagar University, West Bengal.
- **Higher Secondary** in 2010 under W.B.C.H.S.E.
- **Secondary Education** in 2007 under W.B.B.S.E.

Award and Achievement

- ❖ Qualified **National Eligibility Test (NET) December, 2015** examination conducted by Joint CSIR-UGC, India.

Research Area

- C-C coupling
- Peptide coupling
- Alkylation
- Substitution
- Reduction
- Hydrogel
- Organogel
- Metallogel
- Gel-emulsion
- Phase selectivity
- Waste water treatment
- Pyridine based amphiphile
- Pyrimidine-based compound
- Boronic acid-based molecule
- Benzene sulphonamido based amphiphile
- Glucose based gelator
- Amino Acid Based Gel
- Surface chemistry
- Drug delivery & entrapment
- Sensing
- Nano particle formation
- Catalytical activity

Equipment Handled

- ✓ UV-Vis-NIR/UV-Vis Spectrophotometer
- ✓ FT-IR
- ✓ Atomic Absorption Spectrophotometer
- ✓ Fluorescence & Fluorescence life time
- ✓ NMR spectrophotometer
- ✓ HPLC
- ✓ GC-MS
- ✓ Column chromatography
- ✓ Rheometer
- ✓ DLS-Zeta potential analyzer
- ✓ Lyophilizer
- ✓ Optical microscopy
- ✓ AFM
- ✓ Surface tension tensiometer
- ✓ pH meter and Conductometer
- ✓ Polarimeter

Skill

- ❖ Synthesis of organic compounds via C-C coupling, Peptide Coupling, alkylation, substitution and reduction.
- ❖ Skilled in isolation and purification of organic compounds by column chromatography and crystallisation.
- ❖ Involved in the development of supramolecular hydrogel, gel-emulsion and organogel as potential drugs carrier.
- ❖ Involved in the synthesis of supramolecular surfactants to form vesicle as a drug carrier and Nanoparticle formation.
- ❖ Involved in the development of absorbent hydrogels.
- ❖ Depth knowledge on characterizations of various supramolecular materials, which includes ^1H and ^{13}C -NMR signals, LC-MS, FT-IR, UV-VIS, Fluorescence, Atomic Absorption Spectroscopy, CD, XRD, Rheology, Surface Tension, pH and Conductivity measurement, Optical microscopy, SEM, TEM and AFM.
- ❖ Running Gaussian 09 program package for theoretical calculation.
- ❖ Experience in working with Basic Chemistry Software (Chem Office, Microcal Origin, ChemDraw Ultra 7.0 etc.) and Photographic software like Corel draw and Adobe Photoshop.

Project Mentor

- ◆ I assisted in the project work and dissertation completion of nine master degree students of Vidyasagar University, beside my Ph.D. research.

Project handled

Project title: “*Synthesis and self-organization studies of some selected benzenesulphonyl-carboxylic acid amphiphiles and their salts in water: self-assembly and gelation properties.*”

Funding agency: CSIR, Status: Completed.

List of Publications

- ❖ **Das S**, Roy S* (2020) 6-acylamino nicotinic acid-based hydrogelators applicable in phase selective gelation, reproducible mat formation and toxic dye removal. *Chemical Papers* 74 (12), 4267-4282
- ❖ Guchhait S, Roy A, **Das S**, Khan M, Pradhan A, Choudhury SM, Roy S* (2021) Tripeptide Based Nontoxic Hydrogelators as Carrier of Vitamin B₁₂ and Doxorubicin. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 126483
- ❖ Roy S*, Kar B, **Das S**, Datta R (2020) Effect of hydrogen bonding and hydrophobicity on gel emulsions by benzenesulphonamide moiety-based amphiphiles: entrapment and release of vitamin B 12. *Chemical Papers*, 1-18
- ❖ Roy S*, Maiti M, **Das S**, Roy A (2020) Effect of hydrophobic moiety on the gelation behavior of pyridyl boronic acid-derived amphiphiles: application in entrapment and release of vitamin B₁₂. *Chemical Papers* 74 (1), 183-196

List of conference presentations

- **Siddhartha Das** and Sumita Roy, Science Beyond Boundary: Invention, Discovery, Innovation and Society, 2021, poster presentation.
- **Siddhartha Das** and Sumita Roy, Frontiers in Chemical sciences, National symposium 2019, poster presentation.
- Trends in Surface Science and Related Areas: September, 2019.
- International Conference on Emerging Materials (ICEM 2017).
- Science Academies' Three Days Lecture Workshop on Recent Advancements and Achievements in Chemical Sciences: February, 2016.

References

Dr. Sumita Roy (Ph. D. Supervisor)

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Declaration

I, hereby declare that the above-furnished particulars are true to the best of my knowledge and belief. If given a chance, I will prove my efficiency, my loyalty and willingness to work.

With Regards



Siddhartha Das
Vidyasagar University