PERSONAL INFORMATION

Subrata Dolui

India, West Bengal, Dhanyaghori, Hooghly
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Sex Male |Date of birth 12/12/1995 | Nationality Indian

WORK EXPERIENCE

Ph.D. (Running)

Indian Institute of Technology, Bhilai

Work Experience

Synthesis of Stimuli-responsive functional molecular materials, Polymerization, Polymerization reaction via Reversible Deactivation Radical Polymerization. (ATRP, RAFT, Cationic polymerization for industrial application, Microwave RAFT) Synthesis of polyethersulfone ketones for Li-ion battery, electrochemical properties. Synthesis of organic ligand, inorganic monomer, Microwave synthesis.
Application- Biomedical field

(July 2018 to May 2019)

Position held

Jawaharlal Nehru University, New Delhi

M.sc Project Student

Work Experience

Synthesis of Organic Ligand synthesis, synthesis of metal complex, Synthesis of bipyridine ligands, Bipyridine based pyridine ligand, bipyridine based PEG ligand, b-d-glucose based metal complex synthesis, Iridium based monomer synthesis, Iridium based dimer synthesis.
Application- Detection of Endotoxin

(May 2018 to July 2018) The National Institute of Science Education and Research (**NISER**)

Position held Summer project student

Work Experience Synthesis of organic derivative of Quinazolinone using DDQ, PIDA, OXONE, I_2, NIS, Synthesis of organic molecule via solid phase Ball-milling reaction. Application- Biomedical field

PROJECTEXPERIENCE

Project

1. ***Stimuli Responsible Functional molecule: Design, Synthesis and Application***
2. ***Synthesis of* cyclometallated *Iridium(iii) complexes and detection of Endotoxin.***
3. ***Mechanochemical Synthesis of Quinazolinones using DDQ***

Duration

1. 3 Years
2. 1Year
3. 2 Months

Supervisor

Dr. Sanjib Banerjee (Associate Professor.)

Dr. Pijus Kumar Sasmal (Assistant Professor.)

Dr. Prasenjit Mal (Associate Professor.)

Area of Interest The main area of interest is synthesis of organic molecule, synthesis of smart polymeric material mainly stimuli-responsive functional materials, Application in bio-field, drug delivery, and study of properties of the synthesized molecule. Polymer Chemistry, Bio-inspired macromolecule, Fluoropolymer, and material Science.

EDUCATION AND TRAINING

Place and Date	**INDIAN INSTITUTE OF TECHNOLOGY, BHILAI (Dec. 2019 to till date)**
Title of qualification	**Ph.D. (CGPA – 9.6 out of 10)**
Place and Date	**JAWAHARLAL NEHRU UNIVERSITY, NEW DELHI (July 2017 to May 2019)**
Title of qualification	**Masters of Science in Chemistry (CGPA 6.3 out of 10)** specialized courses are taken: Advance Inorganic Chemistry, Chemical Crystallography, Physical Organic Chemistry, Advance Organic Chemistry, Bio-inorganic Chemistry, Analytical Chemistry, Polymer Chemistry, Organic Chemistry laboratory, Inorganic Chemistry laboratory, Physical Chemistry laboratory and Analytical Chemistry laboratory.
Place and Date	**RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE (July 2014- June 2017)**
Title of qualification	**Bachelor of Science in Chemistry (60.75 percent)** Courses undertook: Stereochemistry, Pericyclic reactions, Co-ordination Chemistry, Organometallics, Group Theory, Quantum Chemistry, Molecular spectroscopy. General Organic, Inorganic and Physical Chemistry.
Place and Date	**HIGHER SECONDAY (GHATAL VIDYASAGAR HIGH SCHOOL) (76 percent)**
Title of qualification	WBCHSE-XII (Senior secondary school certificate) qualified
Place and Date	**SECONDARY EDUCATION (DHANYAGHORI HIGH SCHOOL) (75 percent)**
	WBSE-X (Secondary School Certificate) qualified

TECHNICALSTRENGTH

Laboratory Handling and Instrumentation	Schlenk line techniques. Column chromatography, UV-VIS, IR, Fluorescence, NMR spectroscopy, Microwave reactor, TGA, DSC, Rheology, GPC, Ball-milling, CHNS-O, Photoreactor, Fridge dryer, DLS, FESEM, AFM, PL, Centrifuge
Software's and operating system	Origin, MestRenova and Chemdraw, End-note and MS-office

LANGUAGE STRENGTH

Known language	Bengali (Mother tongue) English Hindi

ACHIEVEMENT

National Achievement	Central University Common Entrance Test, JNUEE entrance (NTA), ISM Dhanbad. Junior Research Fellow (DST, SERB PI- Dr. Sanjib Banerjee)
International Achievement	**Silesian University of Technology (Poland, Ph.D. world rank 21)** https://rekrutacja.polsl.pl/wp-content/uploads/2021/09/lista-przyjetych-DP.pdf **University of Bologna (Italy, PhD world rank 97)** https://www.unibo.it/en/teaching/phd/attachments/final-rankig-list-chemistry-37th-cycle General English Certification Test (International Business Management Institute, Germany) - GECT 77.5 out of 100 (B2 level) 447874-163-004-1483 (ID NO)
Conference	ICFM -2020 (INTERNATIONCONFERENCE) IIT KHARAGPUR, Poster presentation Topic- Stimuli-responsive functional molecular materials Abstract submission- SPSI-MACRO-2020 (IIT Indian Institute of Technology Guwahati) Topic- Macromolecular Emginnering approach for the Synthesis of Multi-arm star Stimuli-Responsive Macromolecules

RESEARCH OUTCOME

Publication in peer review journal

1. **S. Dolui**, D. Kumar, S. Banerjee***** and B. Amedrui* "Well-Defined Fluorinated Copolymers: Current Status and Future Perspectives" (Published) *Acc. Mater. Res.* **2021**, *DOI:* https://doi.org/10.1021/accountsmr.1c00015

2. S. A. Mohammad, **S. Dolui**, D. Kumar. M.M. Alam and S. Banerjee***** "Anisotropic and Self-healing Copolymer with Multi-responsive Capability via Recyclable Alloy-mediated RDRP" *Macromol. Rapid Commun.* **2021**, *DOI:* https://doi.org/10.1002/marc.202100096

3. S. A. Mohammad, **S. Dolui**, D. Kumar, S. R. Mane and S. Banerjee***,** *"*Facile Access to Functional Polyacrylates with Dual Stimuli Response and Tunable Surface Hydrophobicity*"* *Polym. Chem.***,** **2021**, Accepted Manuscript https://doi.org/10.1039/D1PY00378J

4. l-Histidine-Derived Smart Antifouling Biohybrid with Multistimuli Responsivity (Biomacromolecule) S. A. Mohammad, **S. Dolui**, D. Kumar, S. R. Mane and S. Banerjee***, https://pubs.acs.org/doi/abs/10.1021/acs.biomac.1c00748**

5. S. Shingdilwar, **S. Dolui**, D. Kumar and **S. Banerjee*,** *"*Facile Access to Template-shape Replicated Nitrogen-rich Mesoporous Carbon Nanospheres for Highly Efficient CO2 Capture and Contaminant Removal*"*
Mater. Adv. **2022**, *3*, 665 , **https://doi.org/10.1039/D1MA00891A**

6. S. Shingdilwar, **S. Dolui** and **S. Banerjee*,** *"*Facile Fabrication of Functional Mesoporous Polymer Nanospheres for CO2 Capture*"*
Ind. Eng. Chem. Res. **2022**, *61*, 1140-1147. https://doi.org/10.1021/acs.iecr.1c04580

7. Enhancement of electrochemical performances of Li-S batteries using PPESK and Nelumbo nucifera derived porous carbon modified separator.
Tamilarasan Mathivanan, Nandhini Panjulingam, **Subrata Dolui**, (Joint first author) Senthilkumar Lakshmipathi, Sanjib Banerjee, Ramakrishnan Kalai Selvan *Materials Letters 315 (2022) 131935*

8. Multi-stimuli responsive amphiphilic diblock copolymers by a combination of ionic liquid-mediated cationic polymerization and recyclable alloy nanoparticle-mediated photoRDRP (Devendra Kumar , **Subrata Dolui** , Bhanendra Sahu , Sanjib Banerjee, European Polymer Journal 175 (2022) 111348)

9. "Experimental and Theoretical Analysis of Synthesized Poly-(pthalazinone ether sulfone ketone) Copolymer Modified Separators for Li-S Batteries" Tamilarasan Mathivanan[a†], **Subrata Dolui**[b†], Panjulingam Nandhini[c†], Kanakaraj Rajkumar[a], Senthilkumar Lakshmipathi[c*], Sanjib Banerjee[b*], Ramakrishnan Kalai Selvan[a*] (https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/celc.202200561)

Google Scholar, Research Gate account

https://scholar.google.com/citations?user=PBSxzRAAAAAJ&hl=en&authuser=1

https://www.researchgate.net/

Peer review Journal award

Reviewer of Polymers for Advanced Technologies (Wiley)

Submitted

1. Recyclable Nanoscale Zerovalent Iron (nZVI)-mediated PhotoRDRP towards Boronic Acid-containing Triple-Stimuli Responsive Copolymers (Submitted)

Book Chapter

1. **Electroactive pH-Responsive Polymers: Current Status and Future Applications**

   (Submitted)

Students work under my co-guide- Three Summer Research students and one M.sc student

References	Dr. Sanjib Banerjee (Associate Prof.)
Hobby	I like to learn from Open Sources. I enjoy very much playing and watching Cricket I love to listen to music Tabla and Cooking