

**Name: Dr. Saheli Roy**

**Designation: Assistant Professor**

**Branch: Chemistry**



**Educational Qualification(s):**

Qualification(s)	Institute/University
<b>Bachelors of Science (Chemistry)</b>	<b>Bethune College, University of Calcutta</b>
<b>Master of Science (Chemistry)</b>	<b>West Bengal State University</b>
<b>Doctor of Philosophy</b>	<b>IIT Kharagpur</b>
<b>Post-doctorate</b>	<b>CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar</b>

**Experience in years:**

Academic: 2 years

Details:

Sl. No.	Organization	Position Held	Duration	
			From	To
1	Bhavnagar University	Guest Faculty	June 2017	October, 2017
2.	CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar	Research Associate	November, 2017	April, 2019

Industrial: Nil

**Other Information:**

**PUBLICATIONS (Total Citations = 166)**

---

1. **Roy, S.**; Bhalani, D. V.; Jewrajka, S. K. Surface segregation of segmented

- amphiphilic copolymer of poly(dimethylsiloxane) and poly(ethylene glycol) on poly(vinylidene fluoride) blend membrane for oil–water emulsion separation. *Sep. Purif. Technol.* **2020**, 232, 115940. (Impact Factor: 5.774)
2. Bhalani, D. V.; Chandel, A. K. S.; Trivedi, J. S.; **Roy, S.**; Jewrajka, S. K. High molecular weight poly(vinyl pyrrolidone) induces hierarchical surface morphology in poly(vinylidene fluoride) membrane and facilitates separation of oil-water emulsions. *J. Membrane Sci.* **2018**, 566, 415-427. (Impact Factor: 7.183)
  3. **Roy, S.**; Srivastava, S. K.; Pionteck, J.; Mittal V. Assembly of layered double hydroxide on multi-walled carbon nanotubes as reinforcing hybrid nanofiller in thermoplastic polyurethane/nitrile butadiene rubber blends. *Polym. Int.* **2016**, 65, 93-101. (Impact Factor: 2.574)
  4. **Roy, S.**; Srivastava, S. K.; Mittal V. Facile noncovalent assembly of MWCNT-LDH and CNF-LDH as reinforcing hybrid fillers in thermoplastic polyurethane/nitrile butadiene rubber blends. *J. Polym. Res.* **2016**, 23, 1-11. (Impact Factor: 2.42)
  5. **Roy, S.**; Srivastava, S. K.; Mittal V. Noncovalent assembly of carbon nanofiber-layered double hydroxide as reinforcing hybrid filler in thermoplastic polyurethane-nitrile butadiene rubber blends. *J. Appl. Polym. Sci.* **2016**, 133. (Impact Factor: 2.52)
  6. **Roy, S.**; Srivastava, S. K.; Pionteck, J.; Mittal V. Mechanically and Thermally Enhanced Multiwalled Carbon Nanotube-Graphene Hybrid filled Thermoplastic Polyurethane Nanocomposites. *Macromol. Mater. Eng.* **2015**, 300, 346-357. (Impact Factor: 2.781)
  7. Pradhan, B.; **Roy, S.**; Srivastava, S. K.; Saxena, A. Synergistic effect of carbon nanotubes and clay platelets in reinforcing properties of silicon rubber nanocomposites. *J. Appl. Polym. Sci.* **2015**, 132. (Impact Factor: 2.52)
  8. Kartick, B.; **Roy, S.**; Srivastava, S. K. Synthesis and Characterization of Poly(N-vinylcarbazole)/Graphene Nanocomposites. *J. Nanosci. Nanotechnol.* **2015**, 15, 3733-3742. (Impact Factor: 1.354)
  9. **Roy, S.**; Srivastava, S. K.; Pionteck, J.; Mittal V. Montmorillonite-Multiwalled Carbon Nanotube Nanoarchitecture Reinforced Thermoplastic Polyurethane. *Polym. Compos*

.2014,37, 1775-1785.(Impact Factor: 2.265)

## CONFERENCE PRESENTATIONS

---

1. Poster Presented on International conference on **Indo-German Bilateral Workshop on Membranes for Water and Energy (IGSTC-2019)**, organized by **CSIR-Central salt & marine chemicals research institute**, Bhavnagar during 18-2-2019 to 20-2-2019.
2. Poster Presented at 15<sup>th</sup> International conference on **“Polymer Science and Technology” (SPSI-MACRO-2018)** jointly organized by **IISER PUNE, NCL PUNE and Savitribai Phule Pune University, IISER PUNE** on 19-22 December, 2018.
3. Poster Presented at National Symposium on **“Electrochemistry in Materials and Devices (NSEMD-2018)”** jointly organized by **CSIR-Central salt & marine chemicals research institute and Indian Society for Electroanalytical Chemistry**, Bhavnagar on 28-29 September, 2018.
4. Poster Presented at National conference on **“Recent Trends on Membranes and Separation Technology”** **CSIR-Central salt & marine chemicals research institute**, Bhavnagar on 22-23 November, 2017.
5. Poster presentation in Research Scholars’ Day 2015 organized by Department of Chemistry, **Indian Institute of Technology Kharagpur** (August 2015).
6. Poster Presented at International conference on **“Diamond Jubilee Symposium on Recent Trends in Chemistry (DJSRTC-2011)”**, **Indian Institute of Technology Kharagpur** on 21-23rd October 2011.

## RESEARCH AREAS

---

- ❖ Polymer nanocomposites and materials chemistry
- ❖ Polymeric membranes addressing waste water treatment
- ❖ Fabrication of amphiphilic antifouling coating material
- ❖ High performance polymers, blends and their nanocomposites
- ❖ Hybrid nanomaterials
- ❖ Modification of carbon based materials (CNT, CNF, graphene) and layered materials (montmorillonite, layered double hydroxide), silica nanoparticle and some magnetic

material ( $\text{Fe}_3\text{O}_4$ ) for their extensive use in fabrication of high performance polymeric nanocomposites and polymeric membranes.

## EXPERTISE AND SKILLS

---

- ✓ **Analytical Instrument:** Operating experience on NMR, FT-IR, UV-Vis-NIR spectrophotometer.
- ✓ **Specialised Instrument:** Transmission Electron Microscope (TEM), Atomic force microscope (AFM), Scanning Electron Microscope (SEM) and Field Emission Scanning Electron Microscope (FESEM), Powder X-ray diffractometer, Raman, X-ray Photoelectron spectroscopy, GPC, Tensile testing machine, Two roll milling and moulding machine, thermal analyzer etc.
- ✓ **Computer Skills:** Adept in using various packages such as MS Office, ChemDraw, Power point, Origin, Nova P9, Gwyddion, Image J etc.