





# NARAJOLE RAJ COLLEGE

(NAAC Accredited B grade)

NARAJOLE: PASCHIM MEDINIPUR: PIN-721211

Contact No.9933881131 E-Mail Id. narajolerajcollege@rediffmail.com



	<ul style="list-style-type: none"> <li>Gas Transport Properties</li> <li>MOF, ZIF, COF &amp; HOF Synthesis</li> <li>Mixed Matrix Membranes</li> </ul>
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<b>Research Experience (if any)</b>	<b>8 Years</b>
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Conference/Seminar/ Workshop Organized: Title	Year	Role	Organizer
1. Effect of Bulky Group on Gas Transport Properties of Semifluorinated Poly(ether amide)s Containing Pyridine Moiety.	2015	Poster Presentation	MACRO 2015, IACS, Kolkata, India.
2. Effect of Trityl Substituted Triphenylamine Group on Gas Transport Properties.	2016	Poster Presentation	ETCMPMS-2016, University of Kalyani, West Bengal, India.
3. Semifluorinated Aromatic Polyamides with Asymmetric Pendant Phosphorus Groups: Gas Transport Properties and Molecular Dynamics Simulations.	2016	Poster Presentation	CE - 2016, Raja Narendra Lal Khan Women's College, Medinipur, West Bengal, India.
4. Gas Separation Membranes Made From Tröger's Base-based Polyamide.	2016	Poster Presentation	ICFM-2016, Indian Institute of Technology Kharagpur, India.
5. Semifluorinated Polyamides with Pendant Phosphorus Groups: Gas Transport Properties and Molecular Dynamics Simulations.	2016	Poster Presentation	Fluoropolymer 2016, Harah's Hotel, New Orleans, LA, USA.
6. Cardo Fluorene based Semifluorinated Polyamides: Gas Transport Properties and Molecular Dynamics Simulation.	2018	Poster Presentation	MACRO 2018, IISER Pune, 19-22 Dec 2018, India.

**Projects ongoing / completed:**

Title	Funding Agency	Year	Amount (Rs.)
N/A	N/A	-	-

**Involvement in Academic/ Professional Organizations: N/A**  
**SUPERVISOR : N/A**  
**ADJUDICATOR : N/A**

**REVIEWER : N/A**  
 Involvement in Academic/ Professional Organizations: : N/A  
 India Editorial Board Member : N/A

**Books :** N/A



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## Chapters in Books :

Bera, D.; Singh, A.; **Bisoi, S.**; Banerjee, S. 5 Fluorinated Polyazoles: Synthesis, Properties, and Applications, Handbook of Specialty Fluorinated Polymers, (ISBN: 9780323357920), Ed: S. Banerjee, Elsevier Inc. 2015, 227-269.

## Journals:

1. **Bisoi, S.**; Mandal, A. K.; Singh, A.; Padmanabhan, V.; Banerjee, S. Soluble, Optically Transparent Polyamides with Phosphaphenanthrene Skeleton: Synthesis, Characterization, Gas Permeation and Molecular Dynamics Simulations. **Polym. Chem.**, 2017, 8, 4220-4232.
2. **Bisoi, S.**; Mandal, A. K.; Padmanabhan, V.; Banerjee, S. Aromatic Polyamides Containing Trityl Substituted Triphenylamine: Gas Transport Properties and Molecular Dynamics Simulations. **J. Memb. Sci.** 2017, 522, 77-90.
3. **Bisoi, S.**; Bandyopadhyay, P.; Bera, D.; Banerjee, S. Effect of Bulky Groups on Gas Transport Properties of Semifluorinated Poly(ether amide)s Containing Pyridine Moiety. **Eur. Polym. J.** 2015, 66, 419-428.
4. **Bisoi, S.**; Mandal, A. K.; Singh, A.; Banerjee, S. Gas Separation Properties of Troeger's Base-Bridged Polyamides. **e-Polymers** 2017, 17 (4), 283-293.
5. Singh, A.; Kumar, A. G.; **Bisoi, S.**; Banerjee, S. Novel Sulfonated Copoly(triazole imide)s by Click Chemistry with Improved Oxidative Stability. **New J. Chem.** 2017, 41, 6849-6856.
6. Chatterjee, R.; Ghosh, S.; **Bisoi, S.**; Banerjee, S. Synthesis, Characterization and Gas Transport Properties of New Semifluorinated Poly(ether imide)s Containing Cardo Moiety. **J. Appl. Polym. Sci.** 2017, 134, 45213.
7. Mandal, A. K.; **Bisoi, S.**; Banerjee S, Komber H, Voit B. Sulfonated Copolyimides Containing Trifluoromethyl and Phosphine Oxide Moieties: Synergistic Effect Towards Proton Exchange Membrane Properties. **Eur. Polym. J.** 2017, 95, 581-595.
8. Dutta, A.; **Bisoi, S.**; Mukherjee, R.; Chatterjee, R.; Banerjee, S. Soluble Polyimides With Propeller Shape Triphenyl Core for Membrane Based Gas Separation. **J. Appl. Polym. Sci.** 2018, 46658.
9. Singh, A.; Kumar, A. G.; **Bisoi, S.**; Saha, S.; Banerjee, S. Hexafluoroisopropylidene Based Sulfonated New Copolytriazoles: Investigation of Proton Exchange Membrane Properties. **e-Polymers** 2017, 17, 107-118.
10. Singh, A.; **Bisoi, S.**; Komber H; Voit B; Banerjee S. Hydroquinone Based Sulfonated Copolytriazoles with Enhanced Proton Conductivity. **Macromol. Mater. Eng.** 2017, 302, 1700208.



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11. Padmanabhan, V.; Chatterjee, R.; **Bisoi, S.**; Banerjee, S. Nanocomposites Containing Aromatic Polymers with Bulky Pendant Groups and C60 for Gas Separation Applications. **Bulletin of The American Physical Society**, 2018.
12. Chatterjee, R.; **Bisoi, S.**; Padmanabhan, V.; Banerjee, S. Polyimides Containing Phosphaphenanthrene Skeleton: Gas Transport Properties and Molecular Dynamics Simulations. **ACS Omega** 2018, 3, 13510-13523.
13. Nikiforov R.; Belov N.; Ryzhikh V.; Kumar, A. G.; Chatterjee, R.; **Bisoi, S.**; Banerjee, S.; Yampolskii Y. New poly(ether imide)s with pendant di-tert-butyl groups: Synthesis, characterization and gas transport properties. **Separation and Purification Technology** 2019, 217, 183-194.
14. Mandal, A. K.; **Bisoi, S.**; Banerjee S. Effect of phosphophenanthrene Skeleton in Sulfonated Polyimides for Proton Exchange Membrane Application. **ACS Applied Polymer Materials** 2019, 1 (4), 893-905.
15. Singh, A.; Kumar, A. G.; Saha, S.; Mukherjee, R.; **Bisoi, S.**; Banerjee, S. Synthesis and Characterization of Chemically Stable Sulfonated Copoly(triazole imide)s with High Proton Conductivity. **Polymer Engineering and Science** 2019.

Conf. Proceedings: N/A

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