



Dr. Selvaraju Narayanasamy



CURRENT RESEARCH

- Wastewater remediation for various grades of organic and inorganic pollutants using surface engineered biosorbents.
- Remediation of microplastics and other emerging contaminants from wastewater using capacitive deionization unit in collaboration with Eureka Forbes.
- Oil wastewater treatment using ceramic membranes and syngas fuel production using microchannel reactors in collaboration with ONGC, Sivasagar, Assam.

EDUCATION

- Ph. D., Chemical Engineering, Indian Institute of Technology Madras, India (2005 to 2010).
- M. Tech, Chemical Engineering, A.C. College of Tech., Anna University, Chennai (2000 to 2002).
- B. Tech, Chemical Engineering, Annamalai University, Chidambaram (1996 to 2000).

PROFESSIONAL EXPERIENCE

- Working as an Associate Professor in the Department of Biosciences and Bioengineering, IIT Guwahati (25/09/2021 to present).
- Worked as an Assistant professor in the Department of Biosciences and Bioengineering, IIT Guwahati (24/04/2017 to 24/09/2021).
- Worked as an Assistant professor in the Department of Chemical Engineering, NIT Calicut (02/06/2010 to 21/04/2017).

AWARDS/HONOURS/ACHIEVEMENTS

- Received Research Concept Grand Challenge Award (RCGCA) 2022 from IIT Guwahati. **The Award carries a grant of Rs 2 lakhs.**
- Received for Hiyoshi Think of Ecology Award 2016 (National Award) from Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd., India. **The Award carries a grant Rs 25,000/-, memento and a citation.**
- Received Kerala State Young Scientist Award 2014 by the Kerala State Council for Science, Technology and Environment (KSCSTE) for the year 2014. **The Award carries a grant Rs 50,000/-, a start-up research grant (Rs 50 Lakhs) and travel support for a trip abroad** to present the research work at a conference.

AWARDS/HONOURS/ACHIEVEMENTS BY STUDENTS

- Jyoti Prakash Ray (2022), Sandhya S (2022), Harish Kumar (2021), and C. Ragavan (2021) were **awarded with the Prime Minister Research Fellowship (PMRF)** with a monthly stipend of **Rs. 70,000** and a research grant of **Rs. 2 Lakhs per year.**
- Jyoti Prakash Ray, Ajit Kumar, C. Ragavan, Ghurupreya R. **awarded a project by IIT Guwahati-DST NEGWEN-IEDC (2022)** entitled “Green synthesis of Graphene Quantum Dots from (Agro) industrial waste biomass for photocatalytic degradation of organochlorine pesticides in North-East region of India: A sustainable approach” annual funding of **INR 2.5 lakh.**

Associate Professor,
Department of Biosciences and
Bioengineering (BSBE),
&

Adjunct Faculty,

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Research

Indian Institute of Technology
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Assam, India.



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RESEARCH INTERESTS

- Environmental Bioremediation
- Air pollution monitoring and Bioaerosol modelling
- Microfluidics and microreactors
- Biofuel Production

PUBLICATIONS

- No. of Publications: **120**
- Citations: **3944**
- h-index: **36**
- i10-Index: **84**

SPONSORED PROJECTS

- Completed: **10**
- Ongoing: **3**

Ph.D. STUDENTS

- Ongoing: **10**
- Completed: **15**

DR. SELVARAJU NARAYANASAMY

ASSOCIATE PROFESSOR

OFFICIAL ADDRESS

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Associate Professor,
Biochemical & Bioenvironmental Engineering Lab,
Department of Biosciences and Bioengineering,
&
Adjunct Professor,
Centre for Sustainable Water Research,
Indian Institute of Technology Guwahati,
Guwahati-781039, Assam, India.

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EDUCATION

PhD: Chemical Engineering

Indian Institute of Technology Madras, India

2005-2010

Master of Technology: Chemical Engineering

A.C. College of Technology, Anna University, Chennai, India

2000-2002

Bachelor of Technology: Chemical Engineering

Annamalai University, Chidambaram, India

1996-2000

PROFESSIONAL EXPERIENCE

25.09.2021 to till date

Working as **Associate Professor** in the Department of Biosciences and Bioengineering, IIT Guwahati.

24.04.2017 to 24.09.2021

Worked as **Assistant Professor** in the Department of Biosciences and Bioengineering, IIT Guwahati.

02.06.2010 to 21.04.2017

Worked as **Assistant Professor** in the Department of Chemical Engineering, NIT Calicut.

Oct-2009 to Apr-2010

Worked as a **Project Officer** in IIT Madras.

Jan-2002 to Dec-2004

Worked as **Lecturer** in the Department of Chemical Engineering (Affiliated to Anna University), Pallavan College of Engineering, Kanchipuram, Tamil Nadu, India.

RESEARCH EXPERTISE

- Environmental Bioremediation
- Air Pollution Monitoring & Modelling
- Water Quality Model
- Biofuel Production
- Bioaerosol
- Advanced Oxidation Process

HONOURS & AWARDS

- Received **Research Concept Grand Challenge Award (RCGCA) 2022** from IIT Guwahati. **The Award carries a grant of Rs 2 lakhs.**
- Received for **Hiyoshi Think of Ecology Award 2016 (National Award)** from Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd., India. **The Award carries a grant Rs 25,000/, memento and a citation.**
- Received **Kerala State Young Scientist Award 2014** by the Kerala State Council for Science, Technology and Environment (KSCSTE) for the year 2014. **The Award carries a grant Rs 50,000/-, a start-up research grant (Rs 50 Lakhs) and travel support for a trip abroad** to present the research work at a conference.
- **Total Cash Award of Rs 7,50,000** has been received for publishing **50 Articles in peer reviewed SCI Journals (SCI Journal).**
- Received **National Doctoral fellowship (NDF)** from AICTE since Jan 2006 to Jan 2009. NDF is the most prestigious and highly valued scholarships given by All India Council for Technical Education (AICTE) to the top 50 research scholars in India.

LIST OF SPONSORED PROJECT COMPLETED & ONGOING AS PI

S.no	Title	Cost in INR	Role	Agency
11.	Water filtration, Capacitive deionization treatments for removal of emerging contaminants in water.	43.04 Lakhs IITG share (Total: 105.23)	Principal Investigator (Ongoing)	Department of Science & Technology
10.	Development of an integrated wastewater treatment and fuel production system using ceramic membranes and microchannel reactors.	68.92 Lakhs IITG share (Total:110.69)	Principal Investigator (Ongoing)	Department of Science & Technology
9.	Sustainable Production of Algal Biomass for Production of Biofuels. A Holistic Approach with Bioremediation & Economical Harvesting Technique.	2.40 Lakhs	Principal Investigator (Ongoing)	DBT-NECBH
8.	Benchtop Disinfection and Sanitization Unit for Virus similar to COVID-19.	3.87Lakhs	Principal Investigator (Completed)	Pyrotech work space

7.	Removal of Arsenic From Aqueous Solutions using Polyelectrolytes in Membrane Based System.	2.36 Lakhs	Principal Investigator (Completed)	Aqua Solution
6.	Sequestration of Hexavalent Chromium from Simulated and Electroplating Effluent using Novel Lignocellulosic Biosorbents.	5.00 Lakhs	Principal Investigator (Completed)	Indian Institute of Technology Guwahati (Startup Grant)
5.	Experimental and Numerical Investigation of Reactive Extraction and Phase Transfer Catalysis in a Microfluidic System.	50.00 Lakhs	Principal Investigator (Completed)	Kerala State Council for Science, Technology and Environment (KSCSTE)
4.	Investigation over the Experimental and Mathematical Modelling of Aerosols in Kozhikode District.	15.216 Lakhs	Principal Investigator (Completed)	Kerala State Council for Science, Technology and Environment (KSCSTE)
3.	Investigation over the Experimental and Mathematical Modelling of Novel Plant Based Biosorbents for the Sequestration of Hexavalent Chromium.	5.642 Lakhs	Principal Investigator (Completed)	Kerala State Council for Science, Technology and Environment (KSCSTE)
2.	Experimental & Deterministic Model Studies in Regeneration of Microbial Biosorbents after Heavy Metal Desorption.	8.82 Lakhs	Principal Investigator (Completed)	Department of Science & Technology
1.	Reaction in Two Immiscible Flows & Liquid-Liquid Extraction for Efficient Separation using Micro Channel.	5.00 Lakhs	Principal Investigator (Completed)	National Institute of Technology Calicut (Faculty Research Grant)

ACHIEVEMENTS BY STUDENTS

- Jyoti Prakash Ray was **awarded with the Prime Minister Research Fellowship (PMRF)** in 2022. PMRF fellowship comes with a monthly stipend of **Rs. 70,000** and a research grant of **Rs. 2 Lakhs per year**.
- Jyoti Prakash Ray (PI), Ajit Kumar, C. Ragavan, Ghurupreya R. **awarded a project by IIT Guwahati-DST NEGWEN-IEDC (2022)** entitled “Green synthesis of Graphene Quantum Dots from (Agro) industrial waste biomass for photocatalytic degradation of organochlorine pesticides in North-East region of India: A sustainable approach” annual funding of **INR 2.5 lakh**.

- Sandhya S. **awarded with the Prime Minister Research Fellowship (PMRF)** in 2022. PMRF fellowship comes with a monthly stipend of **Rs. 70,000** and a research grant of **Rs. 2 Lakhs per year**.
- Sandhya S. was **awarded 3rd prize** in the **Open Category of the New Generation Ideation Contest-2021**, organized by Hindustan Petroleum Green R&D Centre.
- Harish Kumar was **awarded with the Prime Minister Research Fellowship (PMRF)** in 2021. PMRF fellowship comes with a monthly stipend of **Rs. 70,000** and a research grant of **Rs. 2 Lakhs per year**.
- C. Ragavan **awarded with the Prime Minister Research Fellowship (PMRF)** in 2021. PMRF fellowship comes with a monthly stipend of **Rs. 70,000** and a research grant of **Rs. 2 Lakhs per year**.
- Chandi Patra (PI), Tasrin Shahnaz and Harish Kumar were **awarded a project by IIT Guwahati-DST NEGWEN-IEDC (2022)** entitled “Cleaner production of porous carbon using Surgical/N95 masks for wastewater treatment: A circular economy approach” annual funding of **INR 2.5 lakh**.
- Chandi Patra was awarded the **second-best poster award** at the **Research and Industrial Conclave (RIC 2022)** held at the Indian Institute of Technology Guwahati, Guwahati, Assam, India with a **cash prize of Rs 1,500**.
- Chandi Patra was awarded the **best rapid presentation & poster award** at the **International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BRE3CH-2021)**, organized by CSIR-INDIA, CSIR-Indian Institute of Petroleum Dehradun and The Biotech Research Society-India (BRSI).
- Tasrin Shahnaz and Vivek Sharma were awarded the **Annual best paper award of 2020, by Elsevier** for the research article “Multivariate Optimisation of Cr (VI), Co (III) and Cu (II) adsorption onto Nanobentonite incorporated Nanocellulose/Chitosan Aerogel using Response Surface Methodology”, *Journal of Water Process Engineering*, 2020, <https://doi.org/10.1016/j.jwpe.2020.101283> (Elsevier, SCI IF: 7.340).
- Tasrin Shahnaz was **awarded Best poster presentation award** at **International Conference on Nanoscience and Nanotechnology (Virtual Conference) SRM Institute of Science and Technology– ICONN, Feb 2021**.

LIST OF PhD STUDENTS COMPLETED

S.no	Student Details	Research Topic	Institute
15.	Name Dr. Tasrin Shahnaz Date of Joining December, 2017 Date of completion July, 2022 Guide Name Dr. Selvaraju Narayanasamy	Simultaneous Biosorption of Heavy Metals and Dye Mixture complemented by Kinetic and Thermodynamic Studies	IIT Guwahati
14.	Name Dr. Chandi Charan Patra Date of Joining July, 2017 Date of completion July, 2022 Guide Name Dr. Selvaraju Narayanasamy	Development of biomass-derived surface-modified carbon and polymer-based adsorbents for adsorptive elimination of organic and inorganic pollutants from aqueous setups	IIT Guwahati
13.	Name Dr. Shravan Kumar Date of Joining September, 2017 (Joined to our lab) Date of completion February, 2021	Hexavalent Chromium Removal from Aqueous Solutions using Novel Biosorbent.	IIT Guwahati

	Guide	Dr. R. Prasanna Venkatesh (IITG)		
	Co-Guide	Dr. Selvaraju Narayanasamy		
12.	Name	Dr. Abhishek Ajmani	Biosorption of Hexavalent Chromium Cr (VI) from aqueous solutions by Novel Biosorbents.	IIT Guwahati
	Date of Joining	July, 2017 (Joined to our lab)		
	Date of completion	March, 2020		
	Guide	Dr. Selvaraju Narayanasamy		
11.	Name	Dr. Eldho Abraham	Experimental and Numerical Investigation on Liquid-Liquid reactive extraction in Microfluidic system	NIT Calicut
	Date of Joining	July, 2016		
	Date of completion	August 2020		
	Guide	Dr. Selvaraju Narayanasamy		
	Co-Guide	Dr. Bhuvaneswari S (NITC)		
10.	Name	Dr. Keerthi R	Investigation over the Experimental and Mathematical modeling of Aerosols in Kozhikode District	NIT Calicut
	Date of Joining	December 2015		
	Date of completion	March 2020		
	Guide	Dr. Selvaraju Narayanasamy		
	Co-Guide	Dr. Lity Alen Varghese (NITC)		
9.	Name	Dr. Saranya S	Experimental and Mathematical Investigation of plant based biosorbents and microbes for the removal of Hexavalent Chromium from Aqueous Solutions	NIT Calicut
	Date of Joining	July, 2015		
	Date of completion	July, 2018		
	Guide	Dr. Selvaraju Narayanasamy		
	Co-Guide	Prof. Sivasubramanian V (NITC)		
8.	Name	Dr. Aneesh V	Role of Backstepping technique and the need of Simultaneous design and Control of Chemical Processes	NIT Calicut
	Date of Joining	July, 2014		
	Date of completion	August, 2018		
	Guide	Dr. Selvaraju Narayanasamy Dr. Ganesh Paramasivan (ISRO)		
7.	Name	Dr. Nidhin Sreekumar	Investigation of Lipid Production from Microalgae in Tubular PBR and Open Raceway Pond Reactor	NIT Calicut
	Date of Joining	December, 2013		
	Date of completion	February, 2018		
	Guide	Dr. Selvaraju Narayanasamy Dr. Ajit Haridas (CSIR-NIIST)		
6.	Name	Dr. Nakkeeran E	Experimental and Mathematical Modeling of Novel Plant based Biosorbents for the Separation of Hexavalent Chromium	NIT Calicut
	Date of Joining	December, 2013		
	Date of completion	February, 2018		
	Guide	Dr. Selvaraju Narayanasamy		
5.	Name	Dr. Giri Nandagopal	Experimental and Numerical Investigation on Liquid-Liquid Two Phase Flow Dynamics in Microfluidic System	NIT Calicut
	Date of Joining	July, 2013		
	Date of completion	April, 2017		
	Guide	Dr. Selvaraju Narayanasamy		
4.	Name	Dr. Rangabhashiyam	Sequestration of Hexavalent Chromium from Simulated and	NIT Calicut
	Date of Joining	December, 2012		

	Date of completion	November, 2015	Electroplating Effluent using Novel Lignocellulosic Biosorbents	
	Guide	Dr. Selvaraju Narayanasamy		
3.	Name	Dr. Vishnuganth	Investigation of granular Activated Carbon supported TiO ₂ composites for aqueous Carbofuran Removal in Photocatalytic Systems	NIT Calicut
	Date of Joining	July, 2012		
	Date of completion	September, 2016		
	Guide	Dr. Selvaraju Narayanasamy		
	Co-Guide	Dr. Mathava Kumar (IIT Madras)		
2.	Name	Dr. Rahul Antony	Experimental and Numerical Investigations over Liquid-Liquid Mass Transfer in Microchannel Devices	NIT Calicut
	Date of Joining	December, 2011		
	Date of completion	June, 2016		
	Guide	Dr. Selvaraju Narayanasamy		
1.	Name	Dr. Anu	A Holistic Approach and Coupled Receptor – Dispersion model in Air Quality Data Analysis	NIT Calicut
	Date of Joining	July, 2010		
	Date of completion	May, 2015		
	Guide	Dr. Selvaraju Narayanasamy		

LIST OF PhD STUDENTS (ONGOING)

S.no	Student Details	Research Topic	Institute	
10.	Name	Mr. Vishnu Priyan V	Bio-remediation of Antibiotics and Emerging Contaminants (EC) from Wastewater using Plant Based Biosorbents	IIT Guwahati
	Date of Joining	July, 2019		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
9.	Name	Mr. Ajit Kumar	Remediation of Persistent Organic Pollutants (POPs) from Simulated Wastewater using Biobased Adsorbents	IIT Guwahati
	Date of Joining	July, 2019		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
8.	Name	Ms. Sandhya S	Metabolic Engineering of Microbial Cell for Wax Ester Production	IIT Guwahati
	Date of Joining	July, 2020		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
	Co-Guide Name	Prof. Senthilkumar S (IITG)		
7.	Name	Mr. Ragavan C	Heterogenous Electro-Fenton process for the Degradation of Recalcitrant Pharmaceutical Pollutants: Modelling and Toxicity Studies	IIT Guwahati
	Date of Joining	July, 2020		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
6.	Name	Mr. Harish Kumar R	Adsorption of Wastewater Contaminants Using Metal-Organic Frameworks	IIT Guwahati
	Date of Joining	December, 2020		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		

5.	Name	Mr. Jyoti Prakash Ray	Hybrid sono-photocatalytic process for degradation and mineralisation of Contaminants of emerging concerns	IIT Guwahati
	Date of Joining	December, 2021		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
4.	Name	Ms. Jothika J		IIT Guwahati
	Date of Joining	July, 2022		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
3.	Name	Mr. Jeevanantham S		IIT Guwahati
	Date of Joining	July, 2022		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
2.	Name	Mr. Mohammed Askkar Deen F		IIT Guwahati
	Date of Joining	July, 2022		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
1.	Name	Mr. Ajithkumar V.		
	Date of Joining	December, 2022		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		

LIST OF M. TECH STUDENTS

S.no	Student Details		Research Topic	Institute
9.	Name	Ms. Ghurupreya R	Sequestration of Endocrine disruptor Bisphenol A from water by modified Chitosan and its ecotoxicological assessment via Phyto and Fish toxicity studies	IIT Guwahati
	Date of Joining	July, 2021		
	Date of completion	Ongoing		
	Guide Name	Dr. Selvaraju Narayanasamy		
8.	Name	Mr. Nirvesh	Facile preparation of chitosan/CMC beads for adsorptive removal of Congo Red: Sorbate-sorbent interaction and Phytotoxicity	IIT Guwahati
	Date of Joining	July, 2020		
	Date of completion	July, 2022		
	Guide Name	Dr. Selvaraju Narayanasamy		
7.	Name	Mr. Das Bedadeep	Mitigating the levels of organic pollutant and non-steroidal anti-inflammatory drug in simulated wastewater using functionalized adsorbents	IIT Guwahati
	Date of Joining	July, 2020		
	Date of completion	July, 2022		
	Guide Name	Dr. Selvaraju Narayanasamy		
6.	Name	Mr. Nitesh Kumar	Synthesis of CMC/PPY Composite for the removal anionic pharmaceutical Ibuprofen from synthetic water	IIT Guwahati
	Date of Joining	July, 2019		
	Date of completion	July, 2021		
	Guide	Dr. Selvaraju Narayanasamy		
5.	Name	Ms. Anjali J		

	Date of Joining	July, 2019	Adsorption of methylene blue using grass nanocellulose: Isotherm, kinetics, thermodynamics and phytotoxicity studies	IIT Guwahati
	Date of completion	July, 2021		
	Guide	Dr. Selvaraju Narayanasamy		
4.	Name	Mr. Rishabh Gupta	Cationic surfactant modified acid-activated biomass for effective sequestration of anionic diazo dyes in single and binary systems and their phytotoxicity studies.	IIT Guwahati
	Date of Joining	July, 2018		
	Date of completion	July, 2020		
	Guide	Dr. Selvaraju Narayanasamy		
3.	Name	Mr. Fazil SMM	Synthesis of nano-cellulose/polypyrrole composite and its application in the adsorptive removal of Congo Red dye and Chromium in binary mixture.	IIT Guwahati
	Date of Joining	July, 2018		
	Date of completion	July, 2020		
	Guide	Dr. Selvaraju Narayanasamy		
2.	Name	Mr. Mediseti Rajmohan Naidu	Heavy metal adsorption using activated carbon and chitosan conjugates from aqueous solutions in batch and continuous column systems	IIT Guwahati
	Date of Joining	July, 2017		
	Date of completion	July, 2019		
	Guide	Prof. Kannan Pakshirajan		
	Co-Guide	Dr. Selvaraju Narayanasamy		
1.	Name	Mr. Vivek Sharma	Synthesis of Nanobentonite Impregnated Nanocellulose-Chitosan Based Aerogel and its application in removal of Hazardous Water Pollutants	IIT Guwahati
	Date of Joining	July, 2017		
	Date of completion	July, 2019		
	Guide	Dr. Selvaraju Narayanasamy		

LIST OF B. TECH STUDENTS

S.no	Student Details	Research Topic	Institute
6.	Name Mr. Ayush Raj		IIT Guwahati
	Date of Joining July, 2019		
	Date of completion Ongoing		
	Guide Dr. Selvaraju Narayanasamy		
5.	Name Mr. Ayush Jain	Sequestration of chromium from aqueous solutions in batch and continuous column systems using acid activated biomass.	IIT Guwahati
	Date of Joining July, 2015		
	Date of completion July, 2019		
	Guide Dr. Selvaraju Narayanasamy		
4.	Name Mr. Das Bedadeep	Bio-remediation of heavy metals and dyes from simulated wastewater using batch and column experiments and related model studies.	IIT Guwahati
	Date of Joining July, 2016		
	Date of completion July, 2020		
	Guide Dr. Selvaraju Narayanasamy		
3.	Name Ms. Bhawana Benda		IIT Guwahati
	Date of Joining July, 2017		
	Date of completion July, 2021		
	Guide Dr. Selvaraju Narayanasamy		
2.	Name Mr. Murala Abhishek		

	Date of Joining	July, 2017		IIT
	Date of completion	July, 2021		Guwahati
	Guide	Dr. Selvaraju Narayanasamy		
1.	Name	Mr. Piyush B Prince	Magnetization effect on the adsorptive removal of a rare earth element cerium by magnetic-activated carbon	IIT Guwahati
	Date of Joining	July, 2018		
	Date of completion	July, 2022		
	Guide	Dr. Selvaraju Narayanasamy		

INTERNATIONAL JOURNAL PUBLICATIONS

Year 2023

120. Das Bedadeep, Tasrin Shahnaz, V Manu Sankar, Lingaraj Sahoo, Selvaraju Narayanasamy, 2023, Organic polymer doped graphene-based composite for the effective elimination of diclofenac: A detailed study with phytotoxic assessments. **Journal of Environmental Chemical Engineering**, 109223, <https://doi.org/10.1016/j.jece.2022.109223> (Elsevier; SCI IF 2022: 7.968)

Year 2022

119. Chandi Patra, Selvaraju Narayanasamy, 2022, Polypyrrole complexation on biomass-derived powdered carbon for adsorptive elimination of emerging pharmaceutical contaminant Sulfamethoxazole: A comprehensive insight. **Journal of Cleaner Production**, 133565, <https://doi.org/10.1016/j.jclepro.2022.133565> (Elsevier; SCI IF 2022: 11.072)

118. Vishnu Priyan V, Nitesh Kumar, Harish Kumar Rajendran, Jyotiprakash Ray, Selvaraju Narayanasamy, 2022, Sequestration and toxicological assessment of emerging contaminants with polypyrrole modified carboxymethyl cellulose (CMC/PPY): Case of ibuprofen pharmaceutical drug **International Journal of Biological Macromolecules**, <https://doi.org/10.1016/j.ijbiomac.2022.09.046> (Elsevier; SCI IF 2022: 8.025)

117. Ajit Kumar, Chandi Patra, Harish Kumar Rajendran, Selvaraju Narayanasamy. "Activated carbon-chitosan based adsorbent for the efficient removal of the emerging contaminant diclofenac: Synthesis, characterization and phytotoxicity studies." **Chemosphere**, 307 (2022): 135806. <https://doi.org/10.1016/j.chemosphere.2022.135806> (Elsevier; SCI IF 2022: 8.943)

116. Vishnu Priyan V, Selvaraju Narayanasamy. "Effective removal of Pharmaceutical Contaminants Ibuprofen and Sulfamethoxazole from water by Corn starch nanoparticles: An ecotoxicological assessment." **Journal Environmental Toxicology and Pharmacology** (2022): 103930. <https://doi.org/10.1016/j.etap.2022.103930> (Elsevier; SCI IF 2022: 5.785).

115. Chandrasekar, Ragavan, Harish Kumar Rajendran, and **Selvaraju Narayanasamy**. "Valorization of sawdust by mineral acid assisted hydrothermal carbonization for the adsorptive removal of bisphenol A: A greener approach." **Chemosphere**, (2022): 135171. <https://doi.org/10.1016/j.chemosphere.2022.135171> (Elsevier; SCI IF **2022: 8.943**).

114. Vishnu Priyan V, Nitesh Kumar, **Selvaraju Narayanasamy**, 2022, Toxicological assessment and adsorptive removal of lead (Pb) and Congo red (CR) from water by synthesized iron oxide/activated carbon (Fe₃O₄/AC) nanocomposite. **Chemosphere**, 294, 133758, <https://doi.org/10.1016/j.chemosphere.2022.133758> (Elsevier; SCI IF **2022: 8.943**).

113. Tasrin Shahnaz, Das Bedadeep, **Selvaraju Narayanasamy**, 2022, Investigation of the adsorptive removal of methylene blue using modified nanocellulose, **International Journal of Biological Macromolecules**, 200, 162-171, <https://doi.org/10.1016/j.ijbiomac.2021.12.081> (Elsevier; SCI IF **2022: 8.025**)

112. Ajit Kumar, Chandi Patra, Shravan Kumar, **Selvaraju Narayanasamy**, 2022, Effect of magnetization on the adsorptive removal of an emerging contaminant ciprofloxacin by magnetic acid activated carbon, **Environmental Research**, 206, 112604, <https://doi.org/10.1016/j.envres.2021.112604> (Elsevier; SCI IF **2022: 8.431**).

111. Ramesh Vinayagam, Shraddha Pal, Gokulakrishnan Murugesan, Thivaharan Varadavenkatesan, **Selvaraju Narayanasamy**, Raja Selvaraj, 2022, Magnetic activated charcoal/Fe₂O₃ nanocomposite for the adsorptive removal of 2,4-Dichlorophenoxyacetic acid (2,4-D) from aqueous solutions: Synthesis, characterization, optimization, kinetic and isotherm studies, **Chemosphere**, 286, 131938, <https://doi.org/10.1016/j.chemosphere.2021.131938> (Elsevier; SCI IF **2022: 8.943**).

110. Namboodiri, MM Tejas, Tanushree Paul, Raj Mohan Naidu Mediseti, Kannan Pakshirajan, **Selvaraju Narayanasamy**, and G. Pugazhenthii. "Solid state fermentation of rice straw using Penicillium citrinum for chitosan production and application as nanobiosorbent." **Bioresource Technology Reports** 18 (2022): 101005. <https://doi.org/10.1016/j.biteb.2022.101005> (Elsevier; SCOPUS indexed).

Year 2021

109. V Vishnu Priyan, Tasrin Shahnaz, Ajaikumar B Kunnumakkara, Varsha Rana, Muthupandian Saravanan, **Selvaraju Narayanasamy**, 2021, Antioxidant, anti-inflammatory and biosorption properties of starch nanocrystals in vitro study: Cytotoxic and Phytotoxic Evaluation, **Journal of Cluster Science**, 32, 1419-1430, <https://doi.org/10.1007/s10876-020-01905-5> (Springer; SCI IF **2022: 3.447**)

108. Ramesh Vinayagam, Chenxi Zhou, Shraddha Pai, Thivaharan Varadavenkatesan, Manoj Kumar Narasimhan, **Selvaraju Narayanasamy**, Raja Selvaraj, 2021, Structural characterization of green synthesized magnetic mesoporous Fe₃O₄NPs@ME,

Materials Chemistry and Physics, 262, 124323, <https://doi.org/10.1016/j.matchemphys.2021.124323> (Elsevier; SCI IF 2022: 4.778)

107. Tasrin Shahnaz, Vishnu Priyan V, Anjali Ajaykumar, **Selvaraju Narayanasamy**, 2021, Magnetic nanocellulose from *Cyperus rotundas* grass in the absorptive removal of rare earth element Cerium (III): toxicity studies and interpretation, **Chemosphere**, 287, 131912, <https://doi.org/10.1016/j.chemosphere.2021.131912> (Elsevier; SCI IF 2022: 8.943).

106. Chandrani Debnath, Tarun Kanti Bandyopadhyay, Biswanath Bhunia, Umesh Mishra, **Selvaraju Narayanasamy**, Muthusivaramapandian Muthuraj, 2021, Microalgae: Sustainable resource of carbohydrates in third-generation biofuel production, **Renewable and Sustainable Energy Reviews**, 150, 111464, <https://doi.org/10.1016/j.rser.2021.111464> (Elsevier; SCI IF 2022: 14.982)

105. Tasrin Shahnaz, Anjali Jayakumar, Das Bedadeep, **Selvaraju Narayanasamy**, 2021, A Review on tailored graphene material for Industrial Wastewater, **Journal of Environmental Chemical Engineering**, 105933, <https://doi.org/10.1016/j.jece.2021.105933> (Elsevier; SCI IF 2022: 7.968)

104. Muthupandian Saravanan, Ebrahim Mostafavi, Savariar Vincent, Hadush Negash, Rajapriya Andavar, Venkatesan Perumal, Namas Chandra, **Selvaraju Narayanasamy**, Kalishwaralal Kalimuthu, Hamed Barabadi, 2021. Nanotechnology-based approaches for emerging and re-emerging viruses: Special emphasis on COVID-19. **Microbial pathogenesis**, 104908, <https://doi.org/10.1016/j.micpath.2021.104908> (Elsevier; SCI IF 2022: 3.848)

103. V Vishnu Priyan, Nitesh Kumar, **Selvaraju Narayanasamy**, 2021. Development of Fe₃O₄/CAC nanocomposite for the effective removal of contaminants of emerging concerns (Ce³⁺) from water: An ecotoxicological assessment, **Environmental Pollution**, 285, 117326. <https://doi.org/10.1016/j.envpol.2021.117326> (Elsevier; SCI IF 2022: 9.988)

102. Chandi Patra, E Suganya, Senthilkumar Sivaprakasam, G Krishnamoorthy, **Selvaraju Narayanasamy**, 2021. A detailed insight on fabricated porous chitosan in eliminating synthetic anionic dyes from single and multi-adsorptive systems with related studies. **Chemosphere**, 281, 130706. <https://doi.org/10.1016/j.chemosphere.2021.130706> (Elsevier; SCI IF 2022: 8.943)

101. Shahnaz, T., Priyan, V.V., Sivakumar, P. and **Narayanasamy, S.**, 2021. Nanocellulose extracted from grass for adsorption abatement of Ciprofloxacin and Diclofenac removal with phyto, and fish toxicity studies. **Environmental Pollution**, 268, 115494. <https://doi.org/10.1016/j.envpol.2020.115494> (Elsevier; SCI IF 2022: 9.988)

Year 2020

100. Vinayagam, R., Pai, S., Varadavenkatesan, T., Narasimhan, M.K., **Narayanasamy, S.**, Selvaraj, R., 2020. Structural characterization of green synthesized α -Fe₂O₃ nanoparticles using the leaf extract of *Spondias dulcis*. **Surfaces and Interfaces**, 20,100618. <https://doi.org/10.1016/j.surfin.2020.100618> (Elsevier; SCI IF 2022: 6.137)
99. Priyan, V.V., Shahnaz, T., Suganya, E., Sivaprakasam, S., **Narayanasamy, S.**, 2020, Ecotoxicological assessment of micropollutant Diclofenac biosorption on magnetic sawdust: Phyto, Microbial and Fish toxicity studies. **Journal of Hazardous Materials**, 403,123532. <https://doi.org/10.1016/j.jhazmat.2020.123532> (Elsevier; SCI IF 2022: 14.224)
98. Saranya, N., Suganya, E., **Narayanasamy, S.**, Sivaprakasam, S., Sivasubramanian, V., Pandian, S. and Selvaraj, R., 2020. 3-level Box–Behnken optimization of hexavalent chromium reduction by chromate resistant *Trichoderma asperellum* cells from simulated and industrial effluent. **Environmental Technology & Innovation**, 19, 101024. <https://doi.org/10.1016/j.eti.2020.101024> (Elsevier; SCI IF 2022: 7.758)
97. Abraham, E., Prabhu, A., Soundarajan, B. and **Narayanasamy, S.**, 2020. Experimental Study on Influencing Factors of Microfluidic Reactive Extraction of Citric Acid Using TOA in 1-Decanol and Flow Schemes for Performance Improvement. **Industrial & Engineering Chemistry Research**, 59(34),15343-15356. <https://doi.org/10.1021/acs.iecr.0c03046> (ACS Publications; SCI IF 2022: 4.326)
96. Sangrola, S., Kumar, A., Nivedhitha, S., Chatterjee, J., Subbiah, S., **Narayanasamy, S.**, 2020. Optimization of backwash parameters for hollow fiber membrane filters used for water purification. **Journal of Water Supply: Research and Technology-Aqua**, 69(6),523-537. <https://doi.org/10.2166/aqua.2020.079> (IWA Publishing; SCI Impact 2022: 3.007)
95. Shahnaz, T., M.M.F., Subbiah, S., **Narayanasamy, S.**, 2020. Facile preparation of nanocellulose embedded polypyrrole for dye removal: unary and binary process optimization and seed toxicity. **International Journal of Environmental Science and Technology**, 18, 365-378, <https://doi.org/10.1007/s13762-020-02814-w> (Springer; SCI IF 2022: 3.519)
94. Patra, C., Gupta, R., Bedadeep, D., **Narayanasamy, S.**, 2020. Surface treated acid-activated carbon for adsorption of anionic azo dyes from single and binary adsorptive systems: A detail insight. **Environmental Pollution** 266, 115102. <https://doi.org/10.1016/j.envpol.2020.115102> (Elsevier; SCI IF 2022: 9.988)
93. Shahnaz, T., S., M.M.F., Vishnu, P., **Narayanasamy, S.**, 2020. Surface modification of nanocellulose using polypyrrole for the adsorptive removal of Congo red dye and chromium in binary mixture. **International Journal of Biological Macromolecules** 151, 322–332. <https://doi.org/10.1016/j.ijbiomac.2020.02.181> (Elsevier; SCI IF 2022: 8.025)

92. Chandrasekaran, A., Patra, C., **Narayanasamy, S.**, Subbiah, S., 2020. Adsorptive removal of Ciprofloxacin and Amoxicillin from single and binary aqueous systems using acid-activated carbon from Prosopis juliflora. **Environmental Research** 188, 109825. <https://doi.org/10.1016/j.envres.2020.109825> (Elsevier; SCI IF 2022: 8.431)
91. Ajmani, A., Patra, C., Subbiah, S., **Narayanasamy, S.**, 2020. Packed bed column studies of hexavalent chromium adsorption by zinc chloride activated carbon synthesized from Phanera vahlii fruit biomass. **Journal of Environmental Chemical Engineering** 8, 103825. <https://doi.org/10.1016/j.jece.2020.103825> (Elsevier; SCI IF 2022: 7.968)
90. E., S., N., S., Sivaprakasam, S., Varghese, L.A., **Narayanasamy, S.**, 2020. Experimentation on raw and phosphoric acid activated Eucalyptuscamadulensis seeds as novel biosorbents for hexavalent chromium removal from simulated and electroplating effluents. **Environmental Technology & Innovation** 19, 100977. <https://doi.org/10.1016/j.eti.2020.100977> (Elsevier; SCI IF 2022: 7.758)
89. Shahnaz, T., Sharma, V., Subbiah, S., **Narayanasamy, S.**, 2020. Multivariate optimisation of Cr (VI), Co (III) and Cu (II) adsorption onto nanobentonite incorporated nanocellulose/chitosan aerogel using response surface methodology. **Journal of Water Process Engineering** 36, 101283. <https://doi.org/10.1016/j.jwpe.2020.101283> (Elsevier; SCI IF 2022: 7.340)
88. N, S., E, S., **Narayanasamy, S.**, Sivaprakasam, S., V, S., Pandian, S., Selvaraj, R., 2020. 3-level Box-Behnken optimization of hexavalent chromium reduction by chromate resistant Trichoderma asperellum cells from simulated and industrial effluent. **Environmental Technology & Innovation**, 19, 101024. <https://doi.org/10.1016/j.eti.2020.101024> (Elsevier; SCI IF 2022: 7.758)
87. Kumar, S., Patra, C., **Narayanasamy, S.**, Rajaraman, P.V., 2020. Performance of acid-activated water caltrop (Trapa natans) shell in fixed bed column for hexavalent chromium removal from simulated wastewater. **Environmental Science and Pollution Research** 27, 28042–28052. <https://doi.org/10.1007/s11356-020-09155-8> (Springer; SCI IF 2022: 5.190)
86. Tasrin, S., Mohamed Madhar Fazil, S., Senthilmurugan, S., **Selvaraju, N.**, 2020. Facile preparation of nanocellulose embedded polypyrrole for dye removal: unary and binary process optimization and seed toxicity. **International Journal of Environmental Science and Technology** <https://doi.org/10.1007/s13762-020-02814-w> (Springer; SCI IF 2022: 3.519)
85. Sharma, V., Shahnaz, T., Subbiah, S., **Narayanasamy, S.**, 2020. New Insights into the Remediation of Water Pollutants using Nanobentonite Incorporated Nanocellulose Chitosan Based Aerogel. **Journal of Polymers and the Environment** 28, 2008–2019. <https://doi.org/10.1007/s10924-020-01740-9> (Springer; SCI IF 2022: 4.705)

84. Kumar, S., Shahnaz, T., **Selvaraju, N.**, Rajaraman, P.V., 2020. Kinetic and thermodynamic studies on biosorption of Cr (VI) on raw and chemically modified Datura stramonium fruit. **Environmental Monitoring and Assessment** 192, 248. <https://doi.org/10.1007/s10661-020-8181-x> (Springer; SCI IF 2022: 3.307)
83. Shahnaz, T., Patra, C., Sharma, V., **Selvaraju, N.**, 2020. A comparative study of raw, acid-modified and EDTA-complexed Acacia auriculiformis biomass for the removal of hexavalent chromium. **Chemistry and Ecology** 36, 360–381. <https://doi.org/10.1080/02757540.2020.1723560> (Taylor & Francis; SCI IF 2022: 2.381)
82. Patra, C., Shahnaz, T., Subbiah, S., **Narayanasamy, S.**, 2020. Comparative assessment of raw and acid-activated preparations of novel Pongamia pinnata shells for adsorption of hexavalent chromium from simulated wastewater. **Environmental Science and Pollution Research** 27, 14836–14851. <https://doi.org/10.1007/s11356-020-07979-y> (Springer; SCI IF 2022: 5.190)
81. Durai, N.J., Gopalakrishna, G.V.T., Padmanaban, V.C., **Selvaraju, N.**, 2020. Oxidative removal of stabilized landfill leachate by Fenton's process: process modeling, optimization & analysis of degraded products. **RSC Advances** 10, 3916–3925. <https://doi.org/10.1039/C9RA09415F> (RSC; SCI IF 2022: 4.036)

Year 2019

80. Karthik, V., Saravanan, K., Patra, C., Ushadevi, B., Vairam, S., **Selvaraju, N.**, 2019. Biosorption of Acid Yellow 12 from simulated wastewater by non-viable *T. harzianum*: kinetics, isotherm and thermodynamic studies. **International Journal of Environmental Science and Technology** 16, 6895–6906. <https://doi.org/10.1007/s13762-018-2073-4> (Springer; SCI IF 2022: 3.519)
79. Chandrasekaran, A., Subbiah, S., Ramachandran, S., **Narayanasamy, S.**, Bartocci, P., Fantozzi, F., 2019. Natural Draft-Improved Carbonization Retort System for Biocarbon Production from *Prosopis juliflora* Biomass. **Energy & Fuels** 33, 11113–11124. <https://doi.org/10.1021/acs.energyfuels.9b02639> (ACS Publications; SCI IF 2022: 4.654)
78. Keerthi, K., **Selvaraju, N.**, Varghese, L.A., 2020. Use of combined receptor modeling technique for prediction of possible sources of particulate pollution in Kozhikode, India. **International Journal of Environmental Science and Technology** 17, 2623–2636. <https://doi.org/10.1007/s13762-019-02553-7> (Springer; SCI IF 2022: 3.519)
77. Yaranal, N.A., Kumari, S., **Narayanasamy, S.**, Subbiah, S., 2020. An analysis of the effects of pressure-assisted osmotic backwashing on the high recovery reverse osmosis system. **Journal of Water Supply: Research and Technology-Aqua** 69, 298–318. <https://doi.org/10.2166/aqua.2019.089> (IWA Publishing; SCI IF 2022: 3.007)
76. Ajmani, A., Shahnaz, T., Subbiah, S., **Narayanasamy, S.**, 2019. Hexavalent chromium adsorption on virgin, biochar, and chemically modified carbons prepared from *Phanera vahlii* fruit biomass: equilibrium, kinetics, and

thermodynamics approach. **Environmental Science and Pollution Research** 26, 32137–32150.

<https://doi.org/10.1007/s11356-019-06335-z> (Springer; SCI IF 2022: 5.190)

75. Patra, C., Mediseti, R.M.N., Pakshirajan, K., Narayanasamy, S., 2019. Assessment of raw, acid-modified and chelated biomass for sequestration of hexavalent chromium from aqueous solution using *Sterculia villosa* Roxb. shells. **Environmental Science and Pollution Research** 26, 23625–23637. <https://doi.org/10.1007/s11356-019-05582-4> (Springer; SCI IF 2022: 5.190)

74. E, Suganya, N, Saranya, Patra, C., Varghese, L.A., N, Selvaraju, 2019. Biosorption potential of *Gliricidia sepium* leaf powder to sequester hexavalent chromium from synthetic aqueous solution. **Journal of Environmental Chemical Engineering** 7, 103112. <https://doi.org/10.1016/j.jece.2019.103112> (Elsevier; SCI IF 2022: 7.968)

73. Saravanakumar, R., Muthukumaran, K., Selvaraju, N., 2019. Enhanced Pb (II) ions removal by using magnetic NiO/Biochar composite. **Materials Research Express** 6, 105504. <https://doi.org/10.1088/2053-1591/ab2141> (SCI IF 2022: 2.025)

72. Manivannan, R., Sahu, D., Selvaraju, N., Victoria, S.N., 2019. Single Step Sonochemical Synthesis of Copper Zinc Tin Sulfide Nanoparticles. **Journal of Scientific and industrial Research** 78(02). <http://nopr.niscair.res.in/handle/123456789/45763> (NISCAIR; SCI IF 2022: 0.555)

71. Ajmani, A., Shahnaz, T., Narayanan, S., Narayanasamy, S., 2019. Equilibrium, kinetics and thermodynamics of hexavalent chromium biosorption on pristine and zinc chloride activated *Senna siamea* seed pods. **Chemistry and Ecology** 35, 379–396. <https://doi.org/10.1080/02757540.2019.1584614> (Taylor & Francis; SCI IF 2022: 2.381)

70. Karthik, V., Sivarajasekar, N., Padmanaban, V.C., Nakkeeran, E., Selvaraju, N., 2019. Biosorption of xenobiotic Reactive Black B onto metabolically inactive *T. harzianum* biomass: optimization and equilibrium studies. **International Journal of Environmental Science and Technology** 16, 3625–3636. <https://doi.org/10.1007/s13762-018-1841-5> (Springer; SCI IF 2022: 3.519)

69. Kumar, S., Narayanasamy, S., Venkatesh, R.P., 2019. Removal of Cr (VI) from synthetic solutions using water caltrop shell as a low-cost biosorbent. **Separation Science and Technology** 54, 2783–2799. <https://doi.org/10.1080/01496395.2018.1560333> (Taylor & Francis; SCI IF 2022: 2.799)

Year 2018

68. Saranya, N., Ajmani, A., Sivasubramanian, V., Selvaraju, N., 2018. Hexavalent Chromium removal from simulated and real effluents using *Artocarpus heterophyllus* peel biosorbent - Batch and continuous studies. **Journal of Molecular Liquids** 265, 779–790. <https://doi.org/10.1016/j.molliq.2018.06.094> (Elsevier; SCI IF 2022: 6.633)

67. Nakkeeran, E., Patra, C., Shahnaz, T., Rangabhashiyam, S., **Selvaraju, N.**, 2018. Continuous biosorption assessment for the removal of hexavalent chromium from aqueous solutions using *Strychnos nux vomica* fruit shell. **Bioresource Technology Reports** 3, 256–260. <https://doi.org/10.1016/j.biteb.2018.09.001> (Elsevier; SCOPUS indexed)
66. Keerthi, R., **Selvaraju, N.**, Varghese, L.A., Anu, N., 2018. Source apportionment studies for particulates (PM10) in Kozhikode, South Western India using a combined receptor model. **Chemistry and Ecology** 34, 797–817. <https://doi.org/10.1080/02757540.2018.1508460> (Taylor & Francis; SCI IF 2022: 2.381)
65. Selvan, S.T., Balasubramani, G., **Narayanasamy, S.**, Ramamurthy, D., 2019. Evaluation of Multitudinous Potentials of Photosynthetic Microalga, *Neochloris aquatica* RDS02 Derived Silver Nanoparticles. **Smart Science** 7, 116–129. <https://doi.org/10.1080/23080477.2018.1491743> (Taylor & Francis; SCI IF 2022: 1.83)
64. Padmanaban, V., **Selvaraju, N.**, Vasudevan, V. and Achary, A., 2018. Radiolytic degradation of reactive textile dyes by ionizing high energy (γ -Co60) radiation: artificial neural network modelling. **Desalination and Water Treatment**, 131, 343-350. <https://doi.org/10.5004/dwt.2018.23039> (Taylor & Francis; SCI IF 2022: 1.273)
63. Karthik, V., Sivarajasekar, N., Padmanaban, V.C., Nakkeeran, E., **Selvaraju, N.**, 2019. Biosorption of xenobiotic Reactive Black B onto metabolically inactive *T. harzianum* biomass: optimization and equilibrium studies. **International Journal of Environmental Science and Technology** 16, 3625–3636. <https://doi.org/10.1007/s13762-018-1841-5> (Springer; SCI IF 2022: 3.519)
62. Abhishek, A., Saranya, N., Chandi, P., **Selvaraju, N.**, 2018. Studies on the remediation of chromium (VI) from simulated wastewater using novel biomass of *Pinus kesiya* cone. **Desalination and Water Treatment**. <https://doi.org/10.5004/DWT.2018.22321> (Taylor & Francis; SCI IF 2022: 1.273)
61. Padmanaban, V.C., **Selvaraju, N.**, Vasudevan, V.N., Achary, A., 2018. Augmented radiolytic ($^{60}\text{Co } \gamma$) degradation of direct red 80 (Polyazo dye): optimization, reaction kinetics & G-value interpretation. **Reaction Kinetics, Mechanisms and Catalysis** 125, 433–447. <https://doi.org/10.1007/s11144-018-1410-4> (Springer; SCI IF 2022: 2.081)
60. Sreekumar, N., Chennattussery, A.J., Mariya, A., **Selvaraju, N.**, 2018. Anaerobic digester sludge as nutrient source for culturing of microalgae for economic biodiesel production. **International Journal of Environmental Science and Technology** 15, 2607–2614. <https://doi.org/10.1007/s13762-017-1491-z> (Springer; SCI IF 2022: 3.519)
59. Sreekumar, N., Haridas, A., Godwin, G.S., **Selvaraju, N.**, 2018. Lipid enhancement in microalgae by temporal phase separation: Use of indigenous sources of nutrients. **Chinese Journal of Chemical Engineering** 26, 175–182. <https://doi.org/10.1016/j.cjche.2017.03.004> (Elsevier; SCI IF 2022: 3.898)

Year 2017

58. Nakkeeran, E., **Selvaraju, N.**, 2017. Biosorption of chromium (VI) in aqueous solutions by chemically modified Strychnine tree fruit shell. **International Journal of Phytoremediation** 19, 1065–1076. <https://doi.org/10.1080/15226514.2017.1328386> (Taylor & Francis; SCI IF 2022: 4.003)
57. Abraham, E., Mukunthan Sulochana, G.N., Soundarajan, B., **Narayanasamy, S.**, 2017. Experimental Investigation on Microfluidic Reactive Extraction of Citric Acid Using Trioctylamine/1-Decanol System in Uniform and Nonuniform Circular Microchannels. **Industrial & Engineering Chemistry Research** 56, 10845–10855. <https://doi.org/10.1021/acs.iecr.7b02982> (ACS publications; SCI IF 2022: 4.326)
56. Kumar, N., Jothi, T.J.S., **Selvaraju, N.**, 2017. Effect of nanoparticle deposition rate on critical heat flux in pool boiling. **Journal of Engineering Research** 5, 209-224. <http://kuwaitjournals.org/jer/index.php/JER/article/view/1620> (SCI IF 2022: 1.325)
55. Nandagopal, M.S.G., Abraham, E., **Selvaraju, N.**, 2017. Advanced neural network prediction and system identification of liquid-liquid flow patterns in circular microchannels with varying angle of confluence. **Chemical Engineering Journal** 309, 850–865. <https://doi.org/10.1016/j.cej.2016.10.106> (Elsevier; SCI IF 2022: 16.744)
54. Saranya, N., Nakkeeran, E., Giri Nandagopal, M.S., **Selvaraju, N.**, 2017. Optimization of adsorption process parameters by response surface methodology for hexavalent chromium removal from aqueous solutions using Annona reticulata Linn peel microparticles. **Water Science and Technology** 75, 2094–2107. <https://doi.org/10.2166/wst.2017.092> (IWA Publishing; SCI IF 2022: 2.430)
53. Karthik, V., Saravanan, K., Nakkeeran, E., **Selvaraju, N.**, 2017. Biosorption of Turquoise Blue dye from aqueous solution by dried fungal biomass (*Trichoderma harzianum*) - kinetic, isotherm and thermodynamic studies. **Desalination and Water Treatment** 74, 362–370. <https://doi.org/10.5004/DWT.2017.20575> (Taylor & Francis; SCI IF 2022: 1.273)
52. Saranya, N., Nakkeeran, E., Shrihari, S., **Selvaraju, N.**, 2017. Equilibrium and Kinetic Studies of Hexavalent Chromium Removal Using A Novel Biosorbent: *Ruellia Patula* Jacq. **Arabian Journal for Science and Engineering** 42, 1545–1557. <https://doi.org/10.1007/s13369-017-2416-3> (Springer; SCI IF 2022: 2.807)
51. Vishnuganth, M.A., Remya, N., Kumar, M., **Selvaraju, N.**, 2017. Carbofuran removal in continuous-photocatalytic reactor: Reactor optimization, rate-constant determination and carbofuran degradation pathway analysis. **Journal of Environmental Science and Health, Part B** 52, 353–360. <https://doi.org/10.1080/03601234.2017.1283141> (Taylor & Francis; SCI IF 2022: 1.990)

50. Aneesh, V., Antony, R., Nandagopal, M.S.G., Paramasivan, G., **Selvaraju, N.**, 2017. Resilient controller design availing recursive technique rooted Lyapunov function for a dynamic system. **Microsystem Technologies** 23, 187–198. <https://doi.org/10.1007/s00542-015-2733-y> (Springer; SCI IF 2022: 2.276)

Year 2016

49. Nandagopal, M.S.G., Nakkeeran, E., Venkatesh, R.P., **Selvaraju, N.**, 2016. Advance Microfluidic Approach over Conventional Batch and CTR for Improving the Efficiency of E-coli Cell Lysis by CuO Nanoparticles. **International Journal of Chemical Reactor Engineering** 15, 20160105. <https://doi.org/10.1515/ijcre-2016-0105> (DE GRUYTER; SCI IF 2022: 1.636)

48. Giri Nandagopal, M.S., **Selvaraju, N.**, 2016. Prediction of Liquid–Liquid Flow Patterns in a Y-Junction Circular Microchannel Using Advanced Neural Network Techniques. **Industrial & Engineering Chemistry Research** 55, 11346–11362. <https://doi.org/10.1021/acs.iecr.6b02438> (ACS publications; SCI IF 2022: 4.326)

47. Vishnuganth, M.A., Remya, N., Kumar, M., **Selvaraju, N.**, 2016. Photocatalytic degradation of carbofuran by TiO₂-coated activated carbon: Model for kinetic, electrical energy per order and economic analysis. **Journal of Environmental Management** 181, 201–207. <https://doi.org/10.1016/j.jenvman.2016.06.016> (Elsevier; SCI IF 2022: 8.910)

46. Padmanaban, V.C., Giri Nandagopal, M.S., Achary, A., Vasudevan, V.N., **Selvaraju, N.**, 2016. Optimisation of radiolysis of Reactive Red 120 dye in aqueous solution using ionising ⁶⁰Co gamma radiation by response surface methodology. **Water Science and Technology** 73, 3041–3048. <https://doi.org/10.2166/wst.2016.175> (IWA Publishing; SCI IF 2022: 2.430)

45. Padmanaban, V.C., Giri Nandagopal, M.S., Madhangi Priyadharshini, G., Maheswari, N., Janani Sree, G., **Selvaraju, N.**, 2016. Advanced approach for degradation of recalcitrant by nanophotocatalysis using nanocomposites and their future perspectives. **International Journal of Environmental Science and Technology** 13, 1591–1606. <https://doi.org/10.1007/s13762-016-1000-9> (Springer; SCI IF 2022: 3.519)

44. Aneesh, V., Antony, R., Paramasivan, G., **Selvaraju, N.**, 2016. Distillation technology and need of simultaneous design and control: A review. **Chemical Engineering and Processing: Process Intensification** 104, 219–242. <https://doi.org/10.1016/j.cep.2016.03.016> (Elsevier; SCI IF 2022: 4.264)

43. Sreekumar, N., Giri Nandagopal, M.S., Vasudevan, A., Antony, R., **Selvaraju, N.**, 2016. Marine microalgal culturing in open pond systems for biodiesel production—Critical parameters. **Journal of Renewable and Sustainable Energy** 8, 023105. <https://doi.org/10.1063/1.4945574> (SCI IF 2022: 2.847)
42. Rangabhashiyam, S., Nandagopal, M.S.G., Nakkeeran, E., **Selvaraju, N.**, 2016. Adsorption of hexavalent chromium from synthetic and electroplating effluent on chemically modified *Swietenia mahagoni* shell in a packed bed column. **Environmental Monitoring and Assessment** 188, 411. <https://doi.org/10.1007/s10661-016-5415-z> (Springer; SCI IF 2022: 3.307)
41. Nakkeeran, E., Saranya, N., Giri Nandagopal, M.S., Santhiagu, A., **Selvaraju, N.**, 2016. Hexavalent chromium removal from aqueous solutions by a novel powder prepared from *Colocasia esculenta* leaves. **International Journal of Phytoremediation** 18, 812–821. <https://doi.org/10.1080/15226514.2016.1146229> (Taylor & Francis; SCI IF 2022: 4.003)
40. Nandagopal, G.M.S., Antony, R., Rakesh, A.K.O., **Selvaraju, N.**, 2016. Conservative Level Set Simulation of Droplet Formation in a Circular T and Y Junction Microchannel. **Journal of Scientific and Industrial Research** 75(12), 730-734. <http://nopr.niscair.res.in/handle/123456789/38164> (NISCAIR; SCI IF 2022: 0.555)
39. Nakkeeran, E., Rangabhashiyam, S., Nandagopal, M.S.G., **Selvaraju, N.**, 2016. Removal of Cr(VI) from aqueous solution using *Strychnos nux-vomica* shell as an adsorbent. **Desalination and Water Treatment** 57, 23951–23964. <https://doi.org/10.1080/19443994.2015.1137497> (Taylor & Francis; SCI IF 2022: 1.273)
38. Rangabhashiyam, S., Nandagopal, M.S.G., Nakkeeran, E., Keerthi, R., **Selvaraju, N.**, 2016. Use of Box–Behnken design of experiments for the adsorption of chromium using immobilized macroalgae. **Desalination and Water Treatment** 57, 26101–26113. <https://doi.org/10.1080/19443994.2016.1163514> (Taylor & Francis; SCI IF 2022: 1.273)
37. Suganya, E., Rangabhashiyam, S., Lity, A.V., **Selvaraju, N.**, 2016. Removal of hexavalent chromium from aqueous solution by a novel biosorbent *Caryota urens* seeds: equilibrium and kinetic studies. **Desalination and Water Treatment** 57, 23940–23950. <https://doi.org/10.1080/19443994.2015.1134355> (Taylor & Francis; SCI IF 2022: 1.273)
36. Rangabhashiyam, S., Suganya, E., Lity, A.V., **Selvaraju, N.**, 2016. Equilibrium and kinetics studies of hexavalent chromium biosorption on a novel green macroalgae *Enteromorpha* sp. **Research on Chemical Intermediates** 42, 1275–1294. <https://doi.org/10.1007/s11164-015-2085-3> (Springer; SCI IF 2022: 3.134)
35. Rangabhashiyam, S., **Selvaraju, N.**, Raj Mohan, B., Muhammed Anzil, P.K., Amith, K.D., Ushakumary, E.R., 2016. Hydrous Cerium Oxide Nanoparticles Impregnated *Enteromorpha* sp. for the Removal of Hexavalent

Chromium from Aqueous Solutions. **Journal of Environmental Engineering** 142, 4015-4016. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0000988](https://doi.org/10.1061/(ASCE)EE.1943-7870.0000988) (ASCE Library; SCI IF 2022: 2.479)

34. Rangabhashiyam, S., Suganya, E., **Selvaraju, N.**, 2016. Packed bed column investigation on hexavalent chromium adsorption using activated carbon prepared from Swietenia Mahogani fruit shells. **Desalination and Water Treatment** 57, 13048–13055. <https://doi.org/10.1080/19443994.2015.1055519> (Taylor & Francis; SCI IF 2022: 1.273)

33. Nandagopal, M.S.G., Antony, R., **Selvaraju, N.**, 2016. Comparative study of liquid–liquid extraction in miniaturized channels over other conventional extraction methods. **Microsystem Technologies** 22, 349–356. <https://doi.org/10.1007/s00542-014-2391-5> (Springer; SCI IF 2022: 2.276)

Year 2015

32. Rangabhashiyam, S., **Selvaraju, N.**, 2015. Efficacy of unmodified and chemically modified Swietenia mahagani shells for the removal of hexavalent chromium from simulated wastewater. **Journal of Molecular Liquids** 209, 487–497. <https://doi.org/10.1016/j.molliq.2015.06.033> (Elsevier; SCI IF 2022: 6.633)

31. Antony, R., Nandagopal, G.M.S., Rangabhashiyam, S., Anu, N., **Selvaraju, N.**, 2015. Numerical investigation of stratified flow-parallel reaction microchannel system: A deterministic approach. **Indian Journal of Chemical Technology** 22(5), 258-263. <http://nopr.niscair.res.in/handle/123456789/33528> (NISCAIR; SCI IF 2022: 0.760)

30. Sreekumar, N., **Selvaraju, N.**, Aneesh, C., Haridas, A., 2015. Fluorescence Transients as a Selection Tool for Marine Microalgal Consortia in a Raceway Pond Reactor for Biofuel Production. **Journal of Scientific and industrial Research** 74(11), 645-650. <http://nopr.niscair.res.in/handle/123456789/33112> (NISCAIR; SCI IF 2022: 0.555)

29. Antony, R., Nandagopal, M.S.G., Manikrishna, C., **Selvaraju, N.**, 2015. Experimental comparison on efficiency of alkaline hydrolysis reaction in circular microreactors over conventional batch reactor. **Journal of Scientific and industrial Research** 74(07), 390-394. <http://nopr.niscair.res.in/handle/123456789/31775> (NISCAIR; SCI IF 2022: 0.555)

28. Rangabhashiyam, S., **Selvaraju, N.**, 2015. Adsorptive remediation of hexavalent chromium from synthetic wastewater by a natural and ZnCl₂ activated Sterculia guttata shell. **Journal of Molecular Liquids** 207, 39–49. <https://doi.org/10.1016/j.molliq.2015.03.018> (Elsevier; SCI IF 2022: 6.633)
27. Anu, N., Rangabhashiyam, S., Antony, R., **Selvaraju, N.**, 2015. Optimization of wind speed on dispersion of pollutants using coupled receptor and dispersion model. **Sadhana** 40, 1657–1666. <https://doi.org/10.1007/s12046-015-0396-0> (Springer, SCI IF 2022: 1.214)
26. Rangabhashiyam, S., Nakkeeran, E., Anu, N., **Selvaraju, N.**, 2015. Biosorption potential of a novel powder, prepared from Ficus auriculata leaves, for sequestration of hexavalent chromium from aqueous solutions. **Research on Chemical Intermediates** 41, 8405–8424. <https://doi.org/10.1007/s11164-014-1900-6> (Springer; SCI IF 2022: 3.134)
25. Asha, R.C., Vishnuganth, M.A., Remya, N., **Selvaraju, N.**, Kumar, M., 2015. Livestock Wastewater Treatment in Batch and Continuous Photocatalytic Systems: Performance and Economic Analyses. **Water, Air, & Soil Pollution** 226, 132. <https://doi.org/10.1007/s11270-015-2396-4> (Springer; SCI IF 2022: 2.520)
24. Suganya, E., Rangabhashiyam, S., Varghese, L.A., **Selvaraju, N.**, 2015. Dynamic adsorption modeling study using a modified Redilch–Peterson isotherm model. **Journal of Scientific and industrial Research** Vol.74(06), 358–361. <http://14.139.47.15/handle/123456789/31609> (NISCAIR; SCI IF 2022: 0.555)
23. Anu, N., Nandagopal, M.S.G., Aneesh, V., **Selvaraju, N.**, 2015. Coupled Receptor-Dispersion model evaluation for the assessment of area source emission rate. **Journal of Scientific and industrial Research** Vol.74(05), 296–301. <http://nopr.niscair.res.in/handle/123456789/31450> (NISCAIR; SCI IF 2022: 0.555)
22. Giri Nandagopal, M.S., Antony, R., Sreekumar, N., **Selvaraju, N.**, 2015. Experimental Exploration on Degradation of Orange G 16 an Azo Dye by Novel Pseudoalteromonas sp. and Its Enzyme Activity. **Arabian Journal for Science and Engineering** 40, 1005–1013. <https://doi.org/10.1007/s13369-015-1581-5> (Springer; SCI IF 2022: 2.807)
21. Vishnuganth, M.A., Rangabhashiyam, S., Remya, N., Kumar, M., **Selvaraju, N.**, 2015. Optimization of GAC supported TiO₂ photocatalytic process for competent carbofuran removal from an aqueous system. **Journal of Scientific and industrial Research** 74(04), 225–231. <http://nopr.niscair.res.in/handle/123456789/31318> (NISCAIR; SCI IF 2022: 0.555)

20. Anu N., Rangabhashiyam S., Rahul Antony, **Selvaraju N.**, 2015. Evaluation of optimization methods for solving the receptor model for chemical mass balance. **Journal of the Serbian Chemical Society** 80, 253–264. <https://doi.org/10.2298/JSC131124052A> (SCI IF 2022: 1.100)

19. Rangabhashiyam, S., **Selvaraju, N.**, 2015. Evaluation of the biosorption potential of a novel *Caryota urens* inflorescence waste biomass for the removal of hexavalent chromium from aqueous solutions. **Journal of the Taiwan Institute of Chemical Engineers** 47, 59–70. <https://doi.org/10.1016/j.jtice.2014.09.034> (Elsevier; SCI IF 2022: 5.477)

Year 2014

18. Giri Nandagopal, M.S., Antony, R., Rangabhashiyam, S., Sreekumar, N., **Selvaraju, N.**, 2014. Overview of microneedle system: a third-generation transdermal drug delivery approach. **Microsystem Technologies** 20, 1249–1272. <https://doi.org/10.1007/s00542-014-2233-5> (Springer; SCI IF 2022: 2.276)

17. Antony, R., Giri Nandagopal, M.S., Sreekumar, N., **Selvaraju, N.**, 2014. Detection principles and development of microfluidic sensors in the last decade. **Microsystem Technologies** 20, 1051–1061. <https://doi.org/10.1007/s00542-014-2165-0> (Springer; SCI IF 2022: 2.276)

16. Antony, R., Nandagopal, M.S.G., Sreekumar, N., Rangabhashiyam, S., **Selvaraju, N.**, 2014. Liquid-liquid Slug Flow in a Microchannel Reactor and its Mass Transfer Properties - A Review. **Bulletin of Chemical Reaction Engineering & Catalysis** 9, 207–223. <https://doi.org/10.9767/bcrec.9.3.6977.207-223> (Scopus indexed Journal)

15. Antony, R., Nandagopal, M.S.G., Rangabhashiyam, S., **Selvaraju, N.**, 2014. Probabilistic Neural Network prediction of liquid- liquid two phase flows in a circular microchannel. **Journal of Scientific and industrial Research** 73(08), 525-529. <http://nopr.niscair.res.in/handle/123456789/29196> (NISCAIR; SCI IF 2022: 0.555)

14. Rangabhashiyam, S., Suganya, E., **Selvaraju, N.**, Varghese, L.A., 2014. Significance of exploiting non-living biomaterials for the biosorption of wastewater pollutants. **World Journal of Microbiology and Biotechnology** 30, 1669–1689. <https://doi.org/10.1007/s11274-014-1599-y> (Springer; SCI IF 2022: 3.312)

13. Giri Nandagopal, M.S., Antony, R., Rangabhashiyam, S. and **Selvaraju, N.**, 2014. Advance approach on environmental assessment and monitoring. **World Journal of Microbiology and Biotechnology** 18(7), 78-90. (SCI IF 2022: 0.25)

12. Rangabhashiyam, S., Anu, N., Giri, N.M.S., **Selvaraju, N.**, 2014. A Novel approach of the modified BET Isotherm towards continuous column study. **Journal of Scientific and industrial Research** 73(07), 489-494. <http://nopr.niscair.res.in/handle/123456789/29008> (NISCAIR; SCI IF 2022: 0.555)
11. Rangabhashiyam, S., Anu, N. and **Selvaraju, N.**, 2014. Equilibrium and kinetic modeling of chromium (VI) removal from aqueous solution by a novel biosorbent. **Research Journal of Chemistry and Environment**, 18(4), 30-36. (SCI IF 2022: 0.25)
10. Rangabhashiyam, S., Anu, N., Giri Nandagopal, M.S., **Selvaraju, N.**, 2014. Relevance of isotherm models in biosorption of pollutants by agricultural byproducts. **Journal of Environmental Chemical Engineering** 2, 398–414. <https://doi.org/10.1016/j.jece.2014.01.014> (Elsevier; SCI IF 2022: 7.968)

Year 2013

9. **Selvaraju, N.**, Pushpavanam, S., Anu, N., 2013. A holistic approach combining factor analysis, positive matrix factorization, and chemical mass balance applied to receptor modeling. **Environmental Monitoring and Assessment** 185, 10115–10129. <https://doi.org/10.1007/s10661-013-3317-x> (Springer; SCI IF 2022: 3.307)
8. Rangabhashiyam, S., Anu, N., **Selvaraju, N.**, 2013. Sequestration of dye from textile industry wastewater using agricultural waste products as adsorbents. **Journal of Environmental Chemical Engineering** 1, 629–641. <https://doi.org/10.1016/j.jece.2013.07.014> (Elsevier; SCI IF 2022: 7.968)
7. Rangabhashiyam, S., Anu, N. and **Selvaraju, N.**, 2013. Biosorption of heavy metals using low cost agricultural by products. **Research Journal of Chemistry and Environment**, 17(11), 112-123.
6. Anu, N., Rangabhashiyam, S., **Selvaraju, N.**, Pushpavanam, S., 2013. A Holistic approach Combining Factor Analysis, Positive Matrix Factorization and UNMIX Applied to Receptor Modeling. **Journal of Scientific and industrial Research** Vol.72(12), 754-759. <http://nopr.niscair.res.in/handle/123456789/24479> (NISCAIR; SCI IF 2022: 0.555)
5. Rangabhashiyam, S., Anu, N. and **Selvaraju, N.**, 2013. The significance of fungal laccase in textile Dye degradation—a review. **Research Journal of Chemistry and Environment**

Before Year 2013

4. Ashir, A., Sivasubramanian, V., Haribabu, K. and **Selvaraju, N.**, 2011. Mathematical Model using Statistical Design of Experiments for the Determination of Minimum Fluidization Velocity in Inverse Fluidized Bed Bioreactor with Non-Newtonian Fluids. **Research Journal of Chemistry and Environment** Vol, 15, p.2.
3. Venkatesh, R.P., Bhaskar, M., Sakthivel, S., **Selvaraju, N.**, Velan, M., 2010. Pilot Plant Studies on Accelerated Deactivation of Commercial Hydrotreating Catalyst. **Petroleum Science and Technology** 28, 93–102. <https://doi.org/10.1080/10916460903066478> (Taylor & Francis; **SCI Impact Factor 2022: 1.695**)
2. **Selvaraju, N.**, Pushpavanam, S., 2010. Refining emission rate estimates using a coupled receptor–dispersion modeling approach. **Atmospheric Environment** 44, 3935–3941. <https://doi.org/10.1016/j.atmosenv.2010.07.011> (Elsevier; **SCI Impact Factor 2022: 4.798**)
1. **Selvaraju, N.**, Pushpavanam, S., 2009. Adsorption characteristics on sand and brick beds. **Chemical Engineering Journal** 147, 130–138. <https://doi.org/10.1016/j.cej.2008.06.040> (Elsevier; **SCI Impact Factor 2022: 16.744**)

PATENTS

S.no	Patent Title	Authors	Patent No/ Application No	Status
1.	Disinfectant Tunnel	Puneet Talesara, Aditya Kochar, Senthilmurugan Subbiah, Selvaraju Narayanasamy , Rohan Sharma	Indian Patent Application No 202011030617	Applied
2.	A Smart Conveyor System for Disinfecting Belongings & Hands and Predicting Viral Infections	Puneet Talesara, Harish Vyas, Senthilmurugan Subbiah, Selvaraju Narayanasamy	Indian Patent Application No 202011027891	Applied
3.	A Smart Check-in System and Method for Disinfecting Hands & Belongings and Predicting Viral Infections	Puneet Talesara, Harish Vyas, Senthilmurugan Subbiah, Selvaraju Narayanasamy	Indian Patent Application No 202011024053	Applied
4.	Cyperus rotundus as a new cellulose source for remediation of Basic fuchsine dye: A static and flow adsorptive approach	Tasrin Shahnaz, Selvaraju Narayanasamy	Indian Patent Application No 2022032220000101	Applied

Professional Affiliations

1. Editorial Board Member of **Scientific Reports (Nature)** (SCI IF: 4.379)
2. Academic Editor of **Adsorption Science & Technology (Hindawi)** (SCI IF: 4.232)
3. Academic Editor of **International Journal of Chemical Engineering (Hindawi)** (SCI IF: 1.61)
4. Guest Editor for a Special issue “Advanced functional materials and state of the art technologies for water remediation (AFMSATWR’ 22)” in **Environmental Science and Pollution Research (Springer)** (SCI IF: 5.190)
5. Guest Editor for a Special issue “Biochemical Biomass Conversion to Bio-Butanol” in **Biomass Conversion and Biorefinery (Springer)** (SCI IF: 4.987)

ADMINISTRATIVE RESPONSIBILITIES

A. Institute Level

S. No.	Details
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- | | |
|----|---|
| 1. | Appointed as a Warden in Siang Hostel (01.07.2021 to 30.06.2023) |
| 2. | Appointed as a Faculty Co-convenor for Research & Industrial Conclave 2021 |
| 3. | Served as an Associate Warden in Siang Hostel (04.04.2019 to 30.06.2021) |
| 4. | Coordinator of Silver Jubilee Celebration of IITG from Department of BSBE (September 2018-2019) |
| 5. | Institute Representative (IR) for GATE-JAM 2018, 2019, 2020, 2021, and 2022 |
| 6. | Member of Joint Admission Committee for International Joint Master of Technology Degree in Food Science and Technology (IMDFST) |

B. Department Level (Department of Biosciences and Bioengineering, IIT Guwahati)

1. DPPC Member (October 2022 to Ongoing)
2. DPPC Secretary (October 2021 to September 2022)
3. Department Retreat coordinator (September 2020 to September 2022)
4. Department Internship coordinator (September 2020 to September 2022)
5. DFAC- Department coordinator (November 2017 to September 2019)
6. TEQIP- Department coordinator (November 2017 to September 2020)
7. Coordinator – MTech courses curriculum revision
8. Member of DPPC committee (September 2020 to September 2021)
9. Joint-PhD programme coordinator (September 2020 to September 2022)
10. Member of CWWEC (September 2020 to September 2022)
11. Member of New BSBE Building and Dept. Space committee (September 2020 to September 2022)

12. Member of II&SI committee (September 2020 to September 2022)

13. Member of R&D IRDC committee (September 2020 to September 2022)

14. Faculty Advisor of MTech (2018 Batch)

UNDERGRADUATE COURSES TAUGHT

Course	Institution	Year
Bio-thermodynamics (BT 202)	IIT Guwahati	2021
Bio-reaction Engineering (BT 209)	IIT Guwahati	2021
Transport Phenomenon in Bioprocess (BT 208)	IIT Guwahati	2022
Chemical Reaction Engineering (CL208)	IIT Guwahati	2019
Chemical Engineering Thermodynamics (CL203)	IIT Guwahati	2018
Mass Transfer (CL205)	IIT Guwahati	2017
Environmental Biotechnology (BT 416)	IIT Guwahati	2017
Process Modelling & Simulation (CH 4027D)	NIT Calicut	2010-17
Chemical Process Optimization (CH4003D)	NIT Calicut	2010-17
Mathematical Methods in Chemical Engineering (CH 4029D)	NIT Calicut	2010-17
Computer Applications in Chemical Engineering (CH4002D)	NIT Calicut	2010-17

POST GRADUATE COURSES TAUGHT

Course	Institution	Year
Metabolic Engineering (BT 523)	IIT Guwahati	2021
Biological Wastewater Treatment (CH6025D)	NIT Calicut	2014-17
Advanced Process Modelling & Simulation (CH6004D)	NIT Calicut	2014-17

INTERNATIONAL CONFERENCES

10. A. Kumar, C. Patra, N. Selvaraju "Effect of magnetization on activated carbon for the remediation of antibiotics from aqueous solution" **International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BRE3CH-2021)**, CSIR-Indian Institute of Petroleum Dehradun (Uttarakhand), India, **01-04 December, 2021**.
9. C. Patra, A. Kumar, N. Selvaraju "Polypyrrole doped acid activated carbon for efficient removal of emerging antibiotic contaminant from simulated wastewater setups" **International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BRE3CH-2021)**, CSIR-Indian Institute of Petroleum Dehradun (Uttarakhand), India, **01-04 December, 2021**.
8. M.M.S Fazil, T. Shahnaz, N. Selvaraju "Preparation and Characterisation of Nanocellulose/Polypyrrole composites and its application in antibiotic removal in wastewater" **International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE 2020)**, NIT Rourkela (Odisha), **05-07 March, 2020**.
7. M.A.Vishnuganth, N. Selvaraju, Mathava Kumar "Continuous-mode Photocatalysis Reactor Operation for livestock Wastewater Treatment" Abstract accepted in **International Symposium on Integrated Water Resources Management (IWRM - 2014)**, Centre for Water Resources Development and Management, Kozikhode, Kerala, **19-21 February, 2014**.
6. Anu N, A. Vinod M, J. Ahammed A.P, N. Selvaraju, and Suganya E "Comparison of CMB and UNMIX Receptor Model in Source Apportionment of PM2.5 Data " **International Conference on Advances in Chemical Engineering (ICACE-2013)**, NIT Raipur, **05-06 April, 2013**.
5. Anu N, Arun K. T.M., Jaseel M.V., N. Selvaraju, Suganya E " Estimations of Source Contribution using PMF and UNMIX analysis of PM2.5 Data " **International Conference on Advances in Chemical Engineering (ICACE-2013)**, NIT Raipur, **05-06 April, 2013**.
4. R.K. Sikarwar, N. Selvaraju, S.Choudhury, V. M. Tripathi , A.Ranjan "Optimization of the properties of a Microbial fuel cell by Dynamic Modelling" **International Conference on Advances in Chemical Engineering (ICACE-2013)**, NIT Raipur, **05-06 April, 2013**.
3. S. Choudhury, N. Selvaraju, R. K. Sikarwar, A. Ranjan, "Dynamic Modeling and Simulation of Microfluidic Fuel cell using COMSOL Multiphysics" **International Conference on Advances in Chemical Engineering (ICACE-2013)**, NIT Raipur, **05-06 April, 2013**.
2. Ashir, V. Sivasubramanian, K. Haribabu, N. Selvaraju, "Mathematical Model using Statistical Design of Experiments for the Determination of Minimum Fluidization Velocity in Inverse Fluidized Bed Bioreactor with Non-Newtonian Fluids" **5th International Congress of Chemistry and Environment (ICCE-2011)**, Port Dickson, Malaysia, **27-29 May, 2011**.

1. Anu, N. **Selvaraju**, V. Sivasubramanian, "Estimation of wind velocities using coupled receptor and dispersion model approach" **International Conferences on Recent Advances in Chemical Engineering and Technology (RACET-2011)**, IChE Kochi Regional Centre, Kochi, 10-12, March 2011.

NATIONAL CONFERENCES

13. C. Patra, A. Kumar, N. **Selvaraju** "Surface porosity modified biopolymer for enhanced sequestration of dye from simulated water", **REFLUX 2019**, IIT Guwahati (Assam), 28-29 September, 2019.

12. T. Shahnaz, M.M.S Fazil, N. **Selvaraju** "Facile preparation of nanocellulose embedded polypyrrole composite for bromophenol blue and direct blue 6 removal: unary and binary process optimisation and seed toxicity", **REFLUX 2019**, IIT Guwahati (Assam), 28-29 September, 2019.

11. R. Gupta, D. Bedadeep, N. **Selvaraju** "Cationic Surfactant modified acid activated biomass for effective sequestration of anionic diazo dyes.", **WATER 2020**, IIT Guwahati (Assam), 23-25 January, 2020.

10. T. Shahnaz, V. Vishnu Priyan, N. **Selvaraju** "Optimisation of Cr (VI), Co (III) and Cu (II) adsorption onto synthesized Nanobentonite incorporated Nanocellulose/Chitosan Aerogel using Central Composite Design", **WATER 2020**, IIT Guwahati (Assam), 23-25 January, 2020.

9. S. M. M. Fazil, T. Shahnaz, N. **Selvaraju** "Synthesis of Nanocellulose Embedded Polypyrrole composite and its application in the removal of Congo red and Chromium", **WATER 2020**, IIT Guwahati (Assam), 23-25 January, 2020.

8. Anu N., N. **Selvaraju** "Source apportionment using receptor model: comparison of receptor model by optimization techniques using genetic algorithm and receptor model tool box" **Indian Chemical Engineering Congress, CHEMCON 2012**, NIT Jalandhar, 27-30 December, 2012.

7. Amit Ranjan, S. Ramanathan, N. **Selvaraju** "Experimental determination of non-uniformity in microwave heating of food, by in situ temperature measurement" **Indian Chemical Engineering Congress, CHEMCON 2012**, NIT Jalandhar, 27-30 December, 2012.

6. A. Seenivasan, N. **Selvaraju**, "Biohydrogen: An effective alternate to fossil fuel", **Recent Trends in Alternate Energy (RTAE-2011)**, NITC, Kozhikode, 09-10 June, 2011.

5. S. Pushpavanam, N. **Selvaraju**, " Modeling approaches in Environmental Engineering", **Biological Wastewater Treatment towards Green Environment (BWTGE-2011)**, NITC, Kozhikode, 09-10 June, 2011.

4. K. Haribabu, N. **Selvaraju**, V. Sivasubramanian 'Hysteresis Phenomena in an Inverse Fluidized Bed Reactor', **Indian Chemical Engineering Congress, CHEMCON 2010**, Annamalai University, Tamil Naidu, 28-30 December, 2010.

3. **N.Selvaraju**, Srinivasan R., Senthil Raja S., and Kubendran T.R., “Viscosity and Density of Binary and Ternary Mixtures for Methanol, Toluene and 1,4 Dioxane”, **Indian Chemical Engineering Congress, CHEMCON 2002, IChE, Hyderabad, 19-22 December, 2002.**

2. Ravi G., **N.Selvaraju**, Kubendran T.R. and Rajendran M. “Salt Effect on Enthalpy of Mixing of Methanol-Benzene at 303.15K” **Indian Chemical Engineering Congress, CHEMCON 2001, Chennai, 19-22 December, 2001.**

1. Srinivasan, R., **N.Selvaraju**, Kubendran T.R., “Viscosity and Density of Binary and Ternary Mixtures for Benzene, 1,4 Dioxane and 2-Propanol”, **Indian Chemical Engineering Congress, CHEMCON 2001, Chennai, 19-22 December, 2001.**

GIAN COURSES ORGANIZED

Coordinator of the 5 days Programme on “Multidimensional Engineering Approaches for Resolving Complex Environmental Issues ”, December 19-23, 2016 (**Sponsored by MHRD**).

INTERNATIONAL WORKSHOP ORGANIZED

S.no	Workshop Title	Duration	Sponsors
2.	Empowerment And Autonomy of Women Through A Bio-Based Circular Economy Design: Resource Recovery From Waste	July 22-July 26, 2019 (5 Days)	<ul style="list-style-type: none">• IHE Delft• TMT• NUFFIC• IIT Guwahati
1.	Advanced Mathematical Approaches in Chemical and Environmental Engineering Using MATLAB and Simulink	February 28 - March 1, 2015 (5 Days)	<ul style="list-style-type: none">• TEQIP II

NATIONAL WORKSHOP ORGANIZED

S.no	Workshop Title	Duration	Sponsors
3.	Computational Modeling and Simulation for Bioengineering Applications	June 9, 2018 (1 day)	<ul style="list-style-type: none">• DBT
2.	Advanced Optimization Techniques in Chemical Process industries	April 18 - 19, 2015 (2 days)	<ul style="list-style-type: none">• TEQIP II
1.	Advanced Mathematical Approaches in Chemical and Environmental Engineering Using Matlab and Simulink	February 28 - March 1, 2015 (2 days)	<ul style="list-style-type: none">• TEQIP II

NATIONAL CONFERENCES ORGANIZED

S.no	Conference Title	Duration	Sponsors
2.	Recent Trends in Alternate Energy	June 9-10, 2011 (2 Days)	<ul style="list-style-type: none">• MNRE• CSIR• DRDO• KSCSTE
1.	Biological wastewater Treatment towards Green Environment	January 28-29, 2011 (2 Days)	<ul style="list-style-type: none">• DST• CSIR• DBT

FACULTY DEVELOPMENT PROGRAMME ORGANIZED

S.no	Programme Title	Duration	Sponsors
5.	Theory and Applications of Adsorption Processes	June 27-July 2, 2016 (6 days)	<ul style="list-style-type: none">• MHRD• KSCSTE• TEQIP II
4.	Novel Separation Technologies	June 14-June 19, 2015 (6 days)	<ul style="list-style-type: none">• MHRD• AICTE• TEQIP II
3.	Recent Research Trends in Chemical and Environmental Engineering	May 27-May 31, 2013 (5 days)	<ul style="list-style-type: none">• MHRD• AICTE• TEQIP II
2.	Modeling and Simulation in Chemical and Environmental Engineering	May 28-June 2, 2012 (5 days)	<ul style="list-style-type: none">• MHRD• AICTE
1.	Computer Applications in Chemical and Biological Engineering	June 13-18, 2011 (6 days)	<ul style="list-style-type: none">• MHRD• AICTE