

PREETHI ARUL MURUGAN

OBJECTIVE I am a go-getter personality, who likes to constantly learn and upgrade. I believe in team spirit and would love to serve the humanity through the knowledge acquired.

RESEARCH INTERESTS

1. To design, develop and characterize polymer-based composite for tissue engineering applications
2. Nanoparticle synthesis

EXPERIENCE

1. Teaching Assistant in Field Emission Gun Scanning Electron Microscopy, SAIF-CRNTS, IIT Bombay, 2019-2022
2. Teaching Assistant in Undergraduate Lab, Chemical Engineering, IIT Bombay, 2017-2019
3. Teaching Assistant in Petroleum Refining Engineering, Chemical Engineering, IIT Guwahati, 2016-2017
4. Teaching Assistant in Numerical methods in Chemical Engineering, Chemical Engineering, IIT Guwahati, 2016

EDUCATION

S. NO.	DEGREE	INSTITUTE	G.P.A.	PERIOD
1	Ph.D. in Chemical Engineering	Indian Institute of Technology Bombay	8.8/10	2017-PRESENT
2	M.Tech. in Chemical Engineering with specialization in material science	Indian Institute of Technology Guwahati	9.4/10	2015-2017
3	B.Tech. in Chemical Engineering	Pondicherry Engineering College, Puducherry	8.52/10	2011-2015
4	Senior secondary	ONGC Public School, Puduchery	417/500	2010-2011
5	Secondary	ONGC Public School, Puduchery	402/500	2008-2009

PROJECTS

1. Fibrous composite scaffold for bone and pelvic floor tissue engineering - Ongoing Ph.D. research project
2. Thermal and rheological properties of polystyrene nanocomposites – M.Tech project

- PUBLICATIONS**
1. Concomitant effect of quercetin and magnesium doped calcium silicate on the osteogenic and antibacterial activity of scaffolds for bone regeneration. <https://doi.org/10.3390/antibiotics10101170>
 2. Tailoring scaffolds for orthopedic application with anti-microbial properties: Current scenario and future prospects. <https://doi.org/10.3389/fmats.2020.594686>
 3. Synthesis and Characterization of Polystyrene (PS)/Modified Ni-Al LDH Nanocomposite: Role of Composition, Modifier and Synthesis Route of Layered Double Hydroxides (LDH). <https://doi.org/10.1002/masy.201800078>

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- PATENTS**
1. Patent on “Pelvic floor support membrane” has completed FER and the decision is awaited.

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- CONFERENCE ATTENDED**
1. G-20 RIIG Summit and Research Minister's meeting, IITBombay, Mumbai, Maharashtra, July 6, 2023.
 2. MEDEX 2023, IITBombay, Mumbai, Maharashtra, June 9, 2023.
 3. WRCB Summit on Next Generation Therapeutics, IITBombay, Mumbai, Maharashtra, November 18, 2022.
 4. 7th International conference on Multifunctional, Hybrid and nanomaterials-Genoa, Italy, October 19 to 22, 2022.
 5. 16th International Symposium on Metal ions in biology and medicine-Emphasis on public health and sharing best practices around covid-19 pandemic on November 30 to December 1, 2021.
 6. International conference on Advances in chemical and materials sciences organized by IICHE on April 14-15, 2022.
 7. 2nd International conference on Recent Advancements in Chemical, Environment & Energy Engineering organized by SSN college of Engineering · Feb 2017

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- HONOURS AND AWARDS**
1. **Spirit of Entrepreneurship, 2021** Issued by Desai-Sethi school for Entrepreneurship, DSSE · Jan 2022
 2. **Ideas IIT Bombay** Issued by Desai-Sethi school for Entrepreneurship, DSSE · Apr 2021
 3. **Three minutes thesis talk** Issued by Research Scholar Symposium IIT Bombay · Mar 2021
 4. **Indo-Swiss academia Industry Training Program-2020** Issued by Swissnex India and Department of Science and Technology, Government of India · Sep 2020
 5. **Best paper award** Issued by 2nd International conference on Recent Advancements in Chemical, Environment & Energy Engineering · Feb 2017
 6. **Associate life member of IICHE, LAM57669** Issued by IICHE · Jun 2016

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- SKILLS**
1. Trained in operating sophisticated instruments like field emission gun scanning electron microscopy, thermogravimetric analyzer, Differential scanning calorimetry, Rheometer, Electrospinning and Uniaxial testing machine
 2. Proficient in scaffold forming techniques like electrospinning, hydrogel, solvent casting
 3. Proficient in nanoparticle synthesis and surface modification of nanoparticle and scaffold

4. Proficient in handling SaOS-2 and L929 cell lines
5. Intermediate proficiency in MATLAB

POSITION OF	1. Ph.D. Representative, Dept. Of Chemical engineering, IIT Bombay, 2018-19
RESPONSIBILITY	2. Overall coordinator, Research Scholar Symposium, IIT Bombay, 2019
	3. Finance coordinator, Research Scholar Symposium, IIT Bombay, 2018.
	4. Member of Petrotech student chapter, IIT Guwahati, 2017.