

Dr. Rohitkumar Gulabrao Gore, Ph.D.

Present position

- Assistant Professor

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Work Experience

- Since Teaching: 16 years
- Research/Industrial: 10 years

Personal Profile

I am a passionate teacher with the experience of teaching for more than 16 years. During my PhD, I got interested in teaching while doing demonstrator duties. My inclination towards research was developed during my Master's project where I have made a novel glycopolymer synthesis from D-Glucose under the guidance of Prof. D. D. Dhavale in Department of Chemistry, University of Pune.

After completing my master's degree, I joined India's leading research institute National Chemical Laboratory (NCL), Pune as a Project Assistant. During this tenure I was working as a member of a team dedicated to synthesis, isolation & characterisation of several morphine derivatives pertaining to anti-cancer activity. This project was sponsored by Wyeth, USA. Apart from this we have developed methodology for a series of molecules that act as β -blockers. Five such drug molecules synthesized using enantioselective L-Proline catalysts; (S)-Mephenesin, (S)-Guaifenesin, (S)-Moprolol, (S)-Propranolol, (S)-Naftopidil. This work was done under the guidance of Dr. S. P. Chavan and Dr. U. R. Kalkote.

My doctoral thesis focused on the design, synthesis and application of ionic liquids (ILs) in the context of Green Chemistry principles in Organic synthesis. A library of novel imidazolium ionic liquids was designed and synthesised in efforts to find molecules which had reduced anti-microbial toxicity and increased aerobic biodegradation. Ionic

liquids synthesized in the lab have been tested either as a catalyst in acetalization reactions, or as a solvent in Baylis-Hillman and asymmetric Carbonyl-Ene reactions.

Course(s) Taught (Only Titles)

1. Stereochemistry of Organic Molecules
2. Designing Organic Synthesis
3. Asymmetric Synthesis
4. Advanced Organic Chemistry
5. Chemistry of Natural Products

Field of Specialization/Areas of Interests

- Organic Synthesis
- Asymmetric synthesis
- Organocatalysis
- Green Chemistry

Education

- Ph.D. (Chemistry): from September 2008 to November 2012
Title of the Thesis: "Novel low antimicrobial toxicity imidazolium ionic liquids: design, synthesis and their applications in organic synthesis"
Name of University: Dublin City University, Dublin, Ireland
Year of Award: 2012
- Master of Science (Organic Chemistry): 2006
Annasaheb Magar College, University of Pune, Pune
- Bachelor of Science (subject name): 2004
Fergusson College, University of Pune, Pune

Fellowship/Awards/ Certifications/Achievements/Recognitions

1. "EPA Ph. D. Scholarship" given by Environmental Protecting Agency (EPA), Ireland during 2008 to 2012.
2. "Wesley Cocker Award, 2014" given by Society of Chemical Industry of UK and Ireland, 2014.
3. Post-Doctoral Fellowship as a Research Scientist under grant ERA Chair of Green Chemistry, Tallinn University of Technology (TalTech), Tallinn, Estonia during 2018-2019.

Member of College Committees/ Professional Bodies and Others

College Level	Professional Bodies	Others
• Coordinator, Office of International Collaborations		
• Member, Institutional Development Plan (IDP) Committee		
• Member, Research and Development Cell (RDC)		
• Member, Feedback Committee		
• Member, Board of Studies (BoS)		

Employment History

- 1) Organization: Tallinn University of Technology (TalTech), Tallinn, Estonia
Role: Research Scientist
Duration: 2018-2019

Responsibilities	• Carry out research. • Guide Ph.D. Students for their work towards the thesis
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- 2) Organization: Dublin City University, Dublin, Ireland
Role: Demonstrator
Duration: 2008-2012

Responsibilities	• Demonstrate how to perform chemistry experiments in laboratory. • Teach theory and practicals • Evaluate students based on their performance
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- 3) Organization: National Chemical Laboratory (NCL), Pune
Role: Project Assistant
Duration : 2006-2008

Responsibilities	• Carry out research • Prepare report on the project
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Research Publications in National and International Journals

1. Ethoxy-Ester Functionalized Imidazolium based Ionic Liquids for Lithium Ion Batteries, T. Nirmale, N. Khupse, [R. Gore](#), J. Ambekar, M. Kulkarni, A. Varma and B. Kale; *ChemistrySelect*, 2018, 3, 6255-6261
2. "Low toxic" ionic liquids: greener and alternative solvent for asymmetric carbonyl-ene reaction of phenylglyoxal, [R. G. Gore](#), T.-K.-T. Truong, M. Spulak, S. Connon and N. Gathergood, *Current Green Chem.*, 2014, 1, 239-248.
3. A new generation of aprotic yet Brønsted acidic imidazolium salts: effect of ester/amide groups in the C-2, C-4 and C-5 on antimicrobial toxicity and biodegradation, [R. G. Gore](#), L. Myles, M. Spulak, Ian Beadham, M. T. Garcia, S. J. Connon and N. Gathergood, *Green Chem.*, 2013, 15, 2747- 2760.
4. A new generation of aprotic yet Brønsted acidic imidazolium salts: low toxicity, high recyclability and greatly improved activity, L. Myles, [R. G. Gore](#), N. Gathergood and S. J. Connon, *Green Chem.*, 2013, 15, 2740-2746.
5. Tandem ionic liquid antimicrobial toxicity and asymmetric catalysis study: carbonyl-ene reactions with trifluoropyruvate, [R. G. Gore](#), T.-K.-T. Truong, M. Spulak, L. Myles, S. Connon and N. Gathergood, *Green Chem.*, 2013, 15, 2727-2739.
6. Highly recyclable, imidazolium derived ionic liquids of low antimicrobial and antifungal toxicity: A new strategy for acid catalysis, L. Myles, [R. Gore](#), M. Spulak, N. Gathergood and S. J. Connon, *Green Chem.*, 2010, 12, 1157-1162.
7. Organocatalytic enantioselective synthesis of β -blockers: (S)-Propranolol and (S)-Naftopidil, S. P. Panchgalle, [R. G. Gore](#), S. P. Chavan and U. R. Kalkote, *Tetrahedron: Asymmetry*, 2009, 20(15), 1767-1770

Participation in Conferences/Seminars/Symposia/Workshop:

Oral Presentations:

1. Biodegradable Catalytic Asymmetric Methods - A study of solvents, organocatalysts and magnetic nanoparticle-supported catalysts, Conference: Green Chemistry in Ireland: including highlights of Environmental Technology projects funded by the EPA, DCU, Dublin, 15 April 2010.

2. Biodegradable, non-bactericidal Ionic liquids, Conference: 62nd Irish Universities Chemistry Research Colloquium, Queen's University Belfast, 1-2 July 2010.
3. Green Catalysts for Organic Synthesis, Conference: 9th Annual Postgraduate Seminar, Dublin, 17 November 2011.
4. Greener Organocatalysis: Toxicity and biodegradation studies, Conference: Green Chemistry II: Sustainable Catalysis and Emerging Environmental Technologies, DCU, Dublin, 12 July 2012.

Poster Presentations:

1. Biodegradable, non-bactericidal Ionic liquids, R. G. Gore, S. Morrissey, B. Pegot, D. Coleman, I. Beadham, M. Gurbisz, M. Ghavre, M. T. Garcia, D. Ferguson, B. Quilty, N. Gathergood, Biodegradability and Toxicity of Ionic Liquids 2 (BATIL 2), 28-29 September 2009 in Frankfurt/Main, Germany.
2. Biodegradable, non-bactericidal Ionic liquids, R. G. Gore, L. Myles, D. Coleman, I. Beadham, M. Gurbisz, M. Ghavre, M. Spulak, M. Pour, B. Quilty, S. Connors and N. Gathergood, EPA National Research Conference, 23 June 2010, Croke Park, Dublin.
3. Highly recyclable, low antimicrobial and antifungal toxicity ionic liquids: A new strategy for Brønsted acid catalysed reaction, R. G. Gore, L. Myles, M. Spulak, M. Pour, S. Connors and N. Gathergood, Green Solvents Conference, 10-13 October 2010, Berchtesgaden, Germany.

Events Organized/Coordinated:

Sr. No	Name of the Event	Name of organizing Institute/ College/ University	Nature of contribution	Dates
1	Workshop on 'Operation and Maintenance Of Opto-Analytical Laboratory Equipments' in collaboration with Western Regional Instrumentation Centre (WRIC), Mumbai	Fergusson College (Autonomous), Pune	Coordinator	3 rd January 2023 to 7 th January 2023

Additional skills/Activities

Consultancy Services