




Faculty Details proforma for Gargi College

**(PLEASE FILL THIS IN AND Email it to
gargi.college.website@gmail.com)**

Title	Dr	First Name	Sarath Babu	Last Name	Mookan	Photograph
Designation		Assistant Professor (Senior Lecturer)				
Address		Office: Department of Chemistry, Gargi College, (University of Delhi), Siri Fort Road, New Delhi- 110049, India. Residence: H No 41, KH No 870/3, Gali No 2, Block B Sant Nager, Burari, Delhi- 110084				
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Residence* Mobile*		Nil +91-8076480677				
Email		sarathbabum_chem@yahoo.com sarathbabum@gargi.du.ac.in				
Web-Page		http://gargi.du.ac.in/index.php?page=chemistry				
Educational Qualifications						
Degree		Institution			Year	
Ph.D. (Physical Chemistry)		University of Delhi, New Delhi, India. Thesis Title: <i>Electrochemical Studies on Rough Glassy Carbon Electrodes in Room Temperature Ionic Liquids: Experimental Validation of Theories</i>			Degree Awarded on 19 th November 2016	
M.Phil (Organic Chemistry)		Pondicherry University, Puducherry, India. Thesis Title: <i>Ketene Acetal Chemistry: Synthesis, Characterization and Theoretical Studies on Tetrahydropyrimidine</i>			November 2009	
M.Sc. (General Chemistry)		Madurai Kamaraj University, Madurai, TamilNadu, India. Dissertation Title: Photophysical properties of rehenium (I) rectangle and luminescence quenching Studies with quinines			August-2008	
B.Sc. Chemistry (General)		Thiagarajar College, Madurai Kamaraj University, Madurai, Tamil Nadu, India.			2004	

Career Profile		
19 th Oct 2015- Present:	Assistant Professor (Permanent) Department of Chemistry, Gargi College University of Delhi, New Delhi-110049, India	
19 th August 20014 up to 23 rd Sep 2015:	Assistant Professor (Ad-hoc) Department of Chemistry, Zakir Hussain College University of Delhi, New Delhi-100 023	
9 th August 20014 up to 22 nd May 2015:	Assistant Professors (Ad-hoc) Department of Chemistry, SGTB Khalsa College University of Delhi, New Delhi-100007	
Administrative Assignments		
Administrative: Chemical Society Convener, and College Committee Member of Various Society		
Areas of Interest / Specialization		
<ul style="list-style-type: none"> ➤ Electrochemistry theory and experiment technics on chronoamperometric, chronopotentiometric, chronocoulometry, cyclic voltammetry and impedance spectroscopy ➤ Organic reactions carried with electrochemical techniques. ➤ physical organic chemistry 		
Subjects Taught		
<u>Inorganic Chemistry:</u>	Atomic Structure, Chemical Bonding, Solid State	
<u>Organic Chemistry:</u>	Stereochemistry, Reaction Mechanism, Name Reactions Nucleophilic and Electrophilic Substitution Reaction in Aliphatic and Aromatic Systems, Green Chemistry	
<u>Physical Chemistry:</u>	Thermodynamics, Ionic Equilibrium, Chemical Equilibrium, Gaseous State	
<u>Practical Organic Chemistry:</u>	Preparation Organic Compounds and their Derivatives; Chromatographic Techniques	
<u>Practical Inorganic Chemistry:</u>	Qualitative and Quantitative analyses	
<u>Practical Physical Chemistry:</u>	Thermochemistry, Kinetics, Photochemistry, Surface tension and Viscosity	
Academic		
Teaching, Invigilation, Semester Questioned Setting, Paper Evaluation.		
Research Guidance		
Work		
Teaching, Research (Summer Project), Invigilation, Semester Questioned Setting, Paper Evaluation, and conducting practical for Indira Gandhi National Open University		
Recent Publications		
<ol style="list-style-type: none"> 1. “Experimental validate of the theory of anomalous EDL dynamics at heterogeneous GC-RTIL interface” (<i>Manuscript under preparation</i>). 2. “A theoretical investigation of anti-hypertensive activity of Hydrochlorothiazide and Hydroflumethiazide in the light of topological and docking analysis” Niranjana Devi Rajendran, Justin Prabakaran, Poun Raj Parvonraja, Ronaldo Anuf, Antony Stalin, Sarath Babu Mookan, Senthil Kumar Samuthirarajan, Natarajan Mookan* <i>Journal of Computer-Aided Molecular Design</i>, 2020 (In peer review) 3. “An investigation on electronic, vibrational, topological, reactivity properties and antipsychotic activity of the 3MESA molecule” Munusamy Govindarajan, Rajendran Niranjana Devi, Mookan Sarath Babu, Hu wanpeng, Mookan 		

Natarajan* *Journal of Computational Chemistry* 2020 (In peer review)

4. "A theoretical study of chemical bonding and topological and electrostatic properties of the anti-leprosy drug dapsone", Niranjana Devi Rajendran, Natarajan Mookan, Israel Samuel, **Sarath Babu Mookan**, Govindarajan Munusamy, Selvaraj Gurudeeban and Satyavani Kaliampurthi, *Journal of Molecular Modeling* 26, 2020, 138. <https://doi.org/10.1007/s00894-020-04393-6>
5. "Experimental validation of bifurcated hydrogen bond of 2,5-lutidinium bromanilate and its charge density distribution", Niranjana Devi Rajendran, Natarajan Mookan, Israel Samuel and **Sarath Babu Mookan**, *Chemical Papers* 74, 2020, 2689–2699. <https://doi.org/10.1007/s11696-020-01107-3>
6. "3-Benzyl-6-benzylamino-1-methyl-5-nitro-1,2,3,4-tetrahydropyrimidine", M. Kannan, P. Manivel, **M. Sarath babu**, R. Sathishkumar, H. Surya Prakash Rao and R. Krishna, *Acta Cryst.* 2010. E66, o515. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2983565/>
7. "Effect of Uncompensated Solution Resistance on Quasireversible Charge Transfer at Rough and Finite Fractal Electrode", R. Kant, **M. Sarath babu** and S. Srivastav, *Electrochimica Acta*, 2013, 95, 237-245. <https://doi.org/10.1016/j.electacta.2013.02.010>

Under Progress:

1. Experimental Verification of Quasi-reversible Charge Transfer in Presence of Uncompensated Resistance and Theory of Power Spectrum at Graphite Rough Electrode (**Manuscript under preparation**)
2. Experimentally Confirmation of Uncompensated Solution Resistance on Quasi-Reversible Charge Transfer Theory at Glassy Carbon-RTIL interface (**Manuscript under preparation**)
3. Anomalous Chronoamperometric Response of Ferrocene in RTILs at Glassy Carbon Electrode: Theory and Experiment (**Manuscript under preparation**)
4. Experimental validation of Anomalous Electric Double Layer Theory at Glassy Carbon-RTIL interface (**Manuscript under preparation**)

Conference Organization/ Presentations

1. Advanced training in mathematics for lecturers in geometric complex analysis from March 21, 2011 to April 2, 2011. Department of mathematics, University of Delhi, New Delhi, India.
2. Participated in National seminar on "Frontiers in Natural Products Chemistry–2008 (FNPC-'08) held in Department of Natural Products Chemistry, School of Chemistry. Madurai Kamaraj University on 20th and 21st March 2008, Madurai, Tamil Nadu, India.
3. Effect of uncompensated solution resistance on quasi-reversible charge transfer at rough and finite fractal electrode, 2nd INDO-ITALIAN WORKSHOP Department of Chemistry, Delhi University, New Delhi, India.
4. Quasi-reversible Charge Transfer on Rough Glassy Carbon Electrode in Ionic Liquid Medium: Theory and Experiment, CRSI 16TH NATIONAL SYMPOSIUM IN CHEMISTRY, Department of Chemistry, *Indian Institute of Technology Bombay*, India.
5. Anomalous Chronoamperometric Response of Ferrocene in 1-Butyl-3-methylimidazolium hexafluorophosphate [BMIM][PF6] at Glassy Carbon Electrode: Theory and Experiment. 20TH ISCB INTERNATIONAL CONFERENCE, Department of Chemistry, University of Delhi, New Delhi, India.
6. Underwent Training in workshop on "GREEN CHEMISTRY" conducted by Pondicherry University, Tamilnadu, India.
7. Combating Industrial Pollution for Sustainable Environment A Fusion of Industrial and Scientific Efforts (CIPSE on 22-23 of September 2016): National Conference, Department of Chemistry, Gargi College (University of Delhi), New Delhi-110049.
8. UGC-Sponsored Participated Orientation Programme OR-87 (on November, 25 to December, 23 2016): Human Resource Development Centre Centre for Professional Development in Higher Education University of Delhi, New

	Delhi-110049.
9.	16 th Refresher Course in Physical Science/Nano Science (27 th August 2018 to 20 th September 2018): Organized by UGC- Human Resource Development Centre Jawaharlal Nehru University, New Delhi-110067.
10.	Mentoring the Teacher-Mentors: Capacity Building Programme (19 th and 20 th of January 2018): Organised by Internal Quality Assurance Cell (IQAC), Gargi College (University of Delhi), New Delhi-110049.
11.	Emerging Trends in tertiary Education: Assessing Challenges and Possibilities (29 th and 30 th of March 2019): National Multidisciplinary Conference, Organised by BA Programme, Chemistry, English and History, Gargi College (University of Delhi), New Delhi-110049.
Research Projects (Major Grants/Research Collaboration)	
Awards and Distinctions	
	<ul style="list-style-type: none"> ➤ Qualified GATE (Graduate Aptitude Test in Engineering) exam held on April 2009 examination, Conducted by Ministry of Human Resource Development, Govt. of India. Reg. No: 7480076. ➤ Selected for Shyama Prasad Mukherjee Fellowship (SPMF)–CSIR Interview, Conducted by Ministry of Human Resource Development, Govt. of India, New Delhi, India. Reg No: 104179. ➤ Qualified Junior Research Fellowship / Lectureship (2010-2012), Conducted by Ministry of Human Resource Development, Govt. of India jointly with Council of Scientific and Industrial Research (CSIR), New Delhi, India. Reg No: 104179. ➤ Qualified Senior Research Fellowship / Lectureship (2013-2016), Conducted by Ministry of Human Resource Development, Govt. of India joint with Council of Scientific and Industrial Research (CSIR), New
Association With Professional Bodies	
Other Activities	