

Dr P. SURESH

Assistant Professor

Department of Natural Products Chemistry
School of Chemistry
Madurai Kamaraj University



[Group Website](#)

Educational Qualifications : M. Sc., Ph. D.,

Professional Experience : 10 years

Research Experience : 17 Years

FIELD OF SPECIALIZATION

- Organic Chemistry
- Natural Products Chemistry
- Catalysis

RESEARCH SPECIALIZATION

- Catalysis (Homogenous and Heterogeneous catalysis)
- Metal Organic Frameworks (MOFs)-Catalysis
- Graphene Oxide and its Covalent Modifications- Catalysis and Sensor Applications
- Synthesis of Modified Cyclodextrins and its Catalytic and Photophysical Studies
- Development of Chemosensors
- Supramolecular Chemistry
- Isolation and Characterization of Natural Products

RESEARCH SUPERVISION

Program	Completed	Ongoing
Ph.D	2	8
M.Phil	8	-

PROFESSIONAL EXPERIENCE

Institution	Position	From	To	Duration
University of Puerto Rico, Puerto Rico, USA	Postdoctoral fellow	June 2001	August 2010	1 year, 3 months
Madurai Kamaraj University	UGC-UPE - Assistant Professor	August 20, 2010	May 30, 2013	2 years, 10 months
Madurai Kamaraj University	Assistant Professor	May 31, 2013	Till date	

HONORS/AWARDS/RECOGNITIONS

- SERB International Travel Grant (2019) to deliver an invited talk at 10th ACC, China
- UGC-Raman Fellowship-2015-2016
- DST-Young Scientist Award 2012
- NIH Post-doctoral fellowship from University of Puerto Rico, USA (2009-2010)
- Best Poster Award in CRSI Regional Symposium (2006)
- Junior Research Fellow by Department of Science and Technology, India (2004-2008)
- Academic Proficiency Testimonial award in Bachelor of Science (1999-2000)

RESEARCH COLLABORATION (BOTH NATIONAL & INTERNATIONAL)

Name of the Collaborator	Institute	Collaboration Details	Collaboration Output (Papers/Patents/Research/Online)
Prof. Raphael G. Raptis	Florida International University (FIU), Miami, USA	MOF synthesis and crystallography	Under Preparation

COMPLETED RESEARCH PROJECT

No.	Title of the Project	Funding Agency	Year
1	Design, synthesis and characterization of catalytically active Metal-Organic Frameworks (MOF): An efficient, tunable heterogeneous catalyst for industrially important organic transformations	SERB	2012-2016 (Completed)
2	Functionalized Graphene Oxide and Transition Metal Nanocomposite: An Efficient Hybrid Catalyst for Coupling Reactions	UGC-MRP	2013-2017 (Completed)
3	Development of Chirally Functionalized Graphene Oxide: Sustainable Nano-organocatalyst for Asymmetric Transformations in Organic Synthesis	CSIR	2014-2018 (Completed)

PUBLICATIONS

- *Framework copper-catalyzed oxidative synthesis of quinazolinones: A benign approach using Cu₃(BTC)₂ MOF as an efficient and reusable catalyst, G. Latha, N. Devarajan, P. Suresh,* [ChemistrySelect](#), 2020 (published online).*
- Green-synthesized nickel nanoparticles on reduced graphene oxide as an active and selective catalyst for Suzuki and Glaser-Hay coupling reactions, K. Karthik, N. Devarajan, K. Pavithara N. Saravana Ganesan, P. Suresh,* [Applied Organometallic Chemistry](#), 2020, e5778 (1-11).
- Nitrogen-Doped graphene oxide as a sustainable carbonaceous catalyst for greener synthesis: Benign and solvent-free synthesis of pyranopyrazoles, N. Saravana Ganesan, P. Suresh,* [ChemistrySelect](#), 2020, 5, 4988-4993.
- Discovery and optimization of novel phenyldiazepine and pyridodiazepine based Aurora kinase inhibitors, N. Tamizharasan, C. Gajendran, S. P. Sulochana, D. Sivanandhan, R. Mullangi, L. Mathivathanan, G. Hallur, P. Suresh,* [Bioorganic Chemistry](#), 2020, 99, 103800.

- Iron-MOF catalyzed domino cyclization and aromatization strategy for the synthesis of 2,4-diarylquinolines, N. Devarajan, **P. Suresh,*** *Asian Journal of Organic Chemistry*, **2020**, *9*, 437-444.
- Nickel-catalyzed oxidative hydroxylation of arylboronic acid: Ni(HBTC)BPY MOF as an efficient and ligand-free catalyst to access phenolic motifs, G. Latha, N. Devarajan, M. Karthik, **P. Suresh,*** *Catalysis Communications*, **2020**, *136*, 105911.
- Graphene oxide as a carbocatalyst for Sustainable *ipso*-hydroxylation of arylboronic acids: A simple and straightforward strategy to access phenols, M. Karthik, **P. Suresh***, *ACS Sustainable Chemistry & Engineering*, **2019**, *7*, 9022-9034.
- MIL-101-SO₃H metal-organic framework as a Brønsted acid catalyst in Hantzsch reaction: An efficient and sustainable methodology for one-pot synthesis of 1,4-dihydropyridine, N. Devarajan, **P. Suresh***, *New Journal of Chemistry*, **2019**, *43*, 6806-6814.
- Brønsted acidic reduced graphene oxide as a sustainable carbocatalyst: A selective method for the synthesis of C-2 substituted benzimidazole, M. Karthik, **P. Suresh,*** *New Journal of Chemistry*, **2018**, *42*, 17931-17938.
- Copper-catalyzed oxidative coupling of arylboronic acids with aryl carboxylic acids: Cu₃(BTC)₂ MOF as a sustainable catalyst to access aryl ester, N. Devarajan, **P. Suresh,*** *Organic Chemistry Frontiers*, **2018**, *5*, 2322-2331.
- Effectual binding of gallic acid with *p*-sulfonatocalix[4]arene: An experimental and theoretical interpretation, C. Saravanana, R. K. Chitumalla, B. C. M. A. Ashwin, M. Senthilkumaran, **P. Suresh**, J. Jang, P. Muthu Mareeswaran, *Journal of Luminescence*, **2018**, *196*, 392–398.
- Copper catalyzed oxidative homocoupling of terminal alkynes to 1,3-diynes: A Cu₃(BTC)₂ MOF as an efficient and ligand free catalyst for Glaser–Hay coupling, N. Devarajan, M. Karthik, **P. Suresh,*** *Organic and Biomolecular Chemistry*, **2017**, *15*, 9191–9199. (Highlighted in *Synfacts*, **2018**, *14*(02), 0220)
- Greener synthesis of reduced graphene oxide-nickel nanocomposite: Rapid and sustainable catalyst for the reduction of nitroaromatics, M. Karthik, **P. Suresh,*** *Chemistry Select*, **2017**, *2*, 6916–6928.
- Spectral and electrochemical investigation of *p*-sulfonatocalix[4]arene-stabilized vitamin E aggregation, B. C. M. Arputham Ashwin, C. Saravanan, M. Senthilkumaran, R. Sumathi, **P. Suresh**, P. Muthu Mareeswaran, *Supramolecular Chemistry*, **2017**, *30*, 32-14.

- Spectral and electrochemical investigation of 1,8-diaminonaphthalene upon encapsulation of *p*-sulfonatocalix[4]arene, C. Saravanan, M. Senthilkumaran, B. C. M. A. Ashwin, **P. Suresh**, P. Muthu Mareeswaran, *Journal of Inclusion Phenomenon and Macrocyclic Chemistry*, **2017**, *88*, 239-246.
- Electrochemical 4-chlorophenol sensing properties of plasma-treated multilayer graphene modified photolithography patterned platinum electrode, P. Karthick Kannan, R. V. Gelamo, H. Morgan, **P. Suresh**, C. S. Rout, *RSC Advances*, **2016**, *6*, 105920–105929.
- Framework Copper Catalyzed C-N Cross Coupling of Arylboronic Acids with Imidazole: Convenient and Ligand Free Synthesis of N-Arylimidazoles, N. Devarajan, **P. Suresh**,* *ChemCatChem*, **2016**, *8*, 2953–2960.
- Fabrication of highly efficient visible light driven Ag/CeO₂ photocatalyst for degradation of organic pollutants, K. Saravanakumar, M. Mymoon Ramjan, **P. Suresh**, Muthuraj, *Journal of Alloys and Compounds*, **2016**, *664*, 149-160.
- Palladium nanoparticles embedded on thioureamodified chitosan: A green and sustainable heterogeneous catalyst for the Suzuki reaction in water, *RSC Advances*, **2015**, *5*, 27533-27539.
- Aerobic homocoupling of arylboronic Acids Catalysed by Copper terephthalate metal organic frameworks, P. Puthiaraj, **P. Suresh** and K. Pitchumani, *Green Chemistry*, **2014**, *16*, 2895-2875.
- Per-6-amino-β-cyclodextrin/CuI catalysed cyanation of aryl halides with K₄[Fe(CN)⁶], I. Abulkalam Azath, **P. Suresh**, K. Pitchumani, *New Journal of Chemistry*, **2012**, *36*, 2334-2339.
- Pyridinium ylide-assisted KY zeolite catalyzed tandem synthesis of polysubstituted cyclopropanes, V. Rama, K. Kanagaraj, T. Subramanian, **P. Suresh**, K. Pitchumani, *Catalysis Communications*, **2012**, *26*, 39-43.
- Per-6-Ammonium-β-Cyclodextrin/*p*-Nitrophenol complex as a colorimetric sensor for phosphate and pyrophosphate anions in water, I. Abulkalam Azath, **P. Suresh**, K. Pitchumani, *Sensors and Actuators B: Chemical*, **2011**, *155*, 909-914.
- Per-6-amino-β-cyclodextrin as a reusable promoter and chiral host for enantioselective Henry reaction, K. Kanagaraj, P. Suresh, K. Pitchumani, *Organic Letters*, **2010**, *12*, 4070-4073.

- Naked-eye detection of Fe³⁺ and Ru³⁺ in water: Colorimetric and ratiometric sensor based on per-6-amino-β-cyclodextrin/*p*-nitrophenol, **P. Suresh** and K. Pitchumani, *Sensors and Actuators B: Chemical*, **2010**, 146, 273-277.
- Novel photohydration of *trans*-stilbenes and *trans*-anethole inside cyclodextrin nanocavity in aqueous medium, **P. Suresh** and K. Pitchumani, *Journal of Photochemistry Photobiology A: Chemistry*, **2009**, 206, 40-45.
- Per-6-amino-β-cyclodextrin as an efficient supramolecular ligand and host for Cu(I)-catalyzed *N*-arylation of imidazole with aryl bromides, **P. Suresh** and K. Pitchumani, *Journal of Organic Chemistry*, **2008**, 73, 9121-9124.
- Per-6-amino-β-cyclodextrin catalyzed asymmetric Michael addition of nitromethane and thiols to chalcones in water, **P. Suresh** and K. Pitchumani, *Tetrahedron: Asymmetry*, **2008**, 19, 2037-2044.
- Regioselective monobromination of substituted phenols in the presence of β-cyclodextrin, **P. Suresh**, S. Annalakshmi and K. Pitchumani, *Tetrahedron*, **2007**, 63, 4959-4967.

PAPER PRESENTED IN CONFERENCE/SEMINAR/WORKSHOP

2019

- Participated and presented a poster entitled "*Graphene Oxide as Carbonaceous Heterogeneous Acid Catalyst for Greener Synthesis of β-Amnioketones via Mannich Reaction*" by N. Saravana Ganesan and P. Suresh in the DST-SERB sponsored two days "National Conference on Recent Trends in Chemistry on materials (NCRTCM-2019) held at Bannari Amman Institute of Technology, Sathyamangalam on October 11-12, 2019.
- Participated and presented a poster entitled "*Covalently Tailored Graphene Oxide-RhB composite: A Selective "AIE" Based Response towards Acetonitrile*" J. Belinda Asha, P. Suresh in International Conference on Materials for the Millennium (MATCON-2019) held at Cochin University of Science and Technology, Kochi, India on March 14-16, 2019.

2018

- Participated and presented a poster entitled "*Nickel nanoparticles on reduced graphite oxide as an active and selective catalysts for the C-C coupling reaction*" M. Karthik and P. Suresh, in "**National Conference on Challenges in Energy Conversion and Environmental Applications (NCCEA-2018)**" held at Bannari Amman Institute of Technology, Sathyamangalam on March 23-24, 2018. **(This poster had received Best Poster Award)**

- Participated and presented a poster entitled "*Fe(BTC) Metal-Organic Frameworks catalyzed desulphurization towards the synthesis of isothiocyanates: A sustainable approach for isothiocyanates synthesis*" M. Kanagaraj, P. Suresh, in **International Conference on Advancements and Challenges in Chemical Sciences** held at Pachaiyappa's College, Chennai, on February 2 & 3, 2018.
- Participated and presented a poster entitled "*Thiourea functionalized graphene oxide: A hydrogen-bond-donating carbocatalyst for Friedel-Crafts alkylation*" N. Saravana Ganesan, P. Suresh, in **International Conference on Recent Trends in Synthetic Methods and Materials Chemistry (RTSMC -2018)** held at Annamalai University, Chidambaram on February 2 & 3, 2018.

2017

- Participated and presented a poster entitled "*Iron (III) chloride catalyzed N-arylation of nitrogen nucleophiles with arylboronic acids: An iron age in Chan-Lam coupling*", N. Devarajan, M. Chellammal and P. Suresh, presented in **20th CRSI National Symposium in Chemistry** held at Gauhati University, Gauhati on February 3-5, 2017.
- Participated and presented a poster entitled "*Development of covalently tethered graphene oxide: Selective and sustainable detection of zirconium ions*, A. Belinda Asha and P. Suresh presented in **International Conference on Frontiers in Nanoscience and Nanotechnology** held at SASTRA University, Thanjavur on February. 27-28, 2017.
- Participated and presented a poster entitled "*Cinchonidine thiourea functionalized graphene oxide: Sustainable chiral nano-organocatalyst for Michael addition reactions*" N. Saravana Ganesan, M. Karthik and P. Suresh, presented in **International Conference on Frontiers in Nanoscience and Nanotechnology** held at SASTRA University, Thanjavur on February 27-28, 2017.
- Participated and presented a poster entitled "*Acid-base functionalized graphene oxide: A bifunctional heterogeneous co-operative catalyst for biofuel production*, M. Karthik and P. Suresh, presented in **International Conference on Frontiers in Nanoscience and Nanotechnology** held at SASTRA University, Thanjavur on February. 27-28, 2017.
- Participated and presented a poster entitled "*Cu(BTC) Metal Organic Frameworks as a sustainable heterogeneous catalyst for synthesis of N-aryl sulfonamides via Chan-Lam coupling*," M. Kanagaraj and P. Suresh, presented in **International conference on Advances in Biological, Chemical and Physical Sciences, (ABCSP'2017)** held at Anna University, BIT Campus, Tiruchirappalli on March 13-15, 2017.
- Participated and presented a poster entitled "*Development of simple methodology for ipso-hydroxylation of arylboronic acids to phenols using graphene oxide as green carbocatalyst*", M. Karthik and P. Suresh, presented in **International Conference on Frontier Areas in Chemical Technologies**, held at Alagappa University, Karaikudi on July 06-08, 2017.

- Participated and presented a poster entitled “*IRMOF-3 as an efficient heterogeneous solid base catalyst for the synthesis of 3-cyanoacetyl-indole-acrylonitriles*”, M. Kanagaraj and P. Suresh, presented in **International Conference on Frontier Areas in Chemical Technologies**, held at Alagappa University, Karaikudi on July 06-08, 2017.
- Participated and presented poster entitled “*MIL-53(Fe) as an efficient heterogeneous catalyst for the synthesis and characterization of substituted xanthenes and pyrans*”, G. Latha, N. Devarajan, and **P. Suresh**, presented in **International Conference on Frontier Areas in Chemical Technologies**, held at Alagappa University, Karaikudi on July 06-08, 2017.
- Participated and presented a poster entitled “*Fe(BTC) metal organic frameworks catalyzed synthesis of 2-aminobenzothiazoles and 2-aminobenzoxazoles: A greener and sustainable approach*” M. Kanagaraj and P. Suresh, presented in **International Conference on Advanced Materials Science and Technology (ICAMST - 2017)** held at Bannari Amman Institute of Technology, Sathyamangalam on August 17-19, 2017.

2016

- Participated and presented a poster entitled “*Sulfonated MOF as an Efficient and Reusable Catalyst for one-pot Synthesis of 1,4-dihydropyridines.*” N. Devarajan, and **P. Suresh**, in **18th CRSI National Symposium in Chemistry** held at Punjab University, Chandigarh on 5-7th February 2016
- Participated and presented a poster entitled “*Comparison of Catalytic Behaviors of Brønsted and Lewis Acidic MOFs in 2,4,5-Trisubstituted Imidazole Synthesis*” in N. Devarajan, and **P. Suresh**, CRSI National Seminar on “**Emerging Trends in Chemistry**” at Madurai Kamaraj University, Madurai on 18-20th February 2016
- Participated and presented a poster entitled “*Nitrogen doped graphene oxide as a green organocatalyst for Michael Addition Reactions*” in CRSI National Seminar on “**Emerging Trends in Chemistry**” N. Saravana Ganesan, **P. Suresh**, at Madurai Kamaraj University, Madurai on 18-20th February 2016.

2015

- Participated and presented a poster entitled “*Iron-MOF Catalyzed Domino Cyclization and Aromatization- Strategy for the Synthesis of 2,4-Diaryl Quinolines*” N. Devarajan, and P. Suresh in the **9th CRSI-RSC joint symposium** and **17th CRSI National Symposium in Chemistry** held at CSIR – National Chemical Laboratory, Pune on 5–8th February 2015 (**This poster had received Royal Society of Chemistry (RSC) fellowship award and cash Prize.**)
- Participated and presented a poster entitled “*Design and synthesis of chiral triazine analogues.*” G. Latha, P. Suresh, in the **10th Mid-Year CRSI Symposium in Chemistry** held at National Institute of Technology (NIT) – Trichy on 23–25th July 2015.

- Participated and presented a poster entitled “*IRMOF-3 as an efficient heterogeneous and sustainable catalyst for the synthesis of 2-iminocoumarins.*” M. Kanagaraj and **P. Suresh**, in the **10th Mid-Year CRSI Symposium in Chemistry** held at National Institute of Technology (NIT) – Trichy on 23–25th July 2015.
- Participated and presented a poster entitled “*Synthesis and characterization of covalently functionalized graphene oxide: A selective sensor for the detection of Pd²⁺ Ion.*” A. Belinda Asha and P. Suresh in the **10th Mid-Year CRSI Symposium in Chemistry** held at National Institute of Technology (NIT) – Trichy on 23–25th July 2015.

2014

- Participated and Presented a poster entitled “*Functional cyclodextrins as supramolecular host and catalyst: Per-6-amino- β -cyclodextrin promoted ruthenium(II) catalyzed asymmetric transfer hydrogenation of Aryl ketones*” P. Suresh and K. Pitchumani in **27th International Carbohydrate Symposium** held at Indian Institute of Science, Bangalore on January 12-17, 2014.
- Participated and presented a poster entitled “*Mild and Efficient Copper Terephthalate Metal Organic Framework Catalyzed C-N Cross Coupling of Arylboronic Acids and Imidazole*” N. Devarajan, and P. Suresh, in **16th CRSI National Symposium in Chemistry** held at Indian Institute of Technology-Bombay, India on February 7-9, 2014.
- Participated and presented a poster entitled on “*A facile and greener method to synthesis graphene-nickel nanocomposite: A sustainable hydrogenation catalyst for nitroaromatics*” M. Karthik, P. Suresh in **International Conference on Advances in New Materials** held at University of Madras, Chennai, India on June 20-21, 2014. **(This poster had received Best Poster Award)**

CONFERENCE/WORKSHOP/SEMINAR/TRAINING ORGANIZED

Type	Name	Date(s)	Place	Role Played	Funding Agency
Lecture workshop	<i>Recent Trends in Chemistry</i>	February 22 & 23, 2018	School of Chemistry, MKU	Coordinator	Three National Indian Academies (IAS, NASI, INSA)
One Day National Seminar	<i>Recent Trends in Chemistry</i>	September 11, 2015	School of Chemistry, MKU	Convener	DST-SERB, New Delhi
Three-day national seminar	<i>Emerging Trends in Chemistry</i>	February 18-20, 2016	School of Chemistry, MKU	Secretary	CRSI, India
One day national seminar	<i>Catalysis and Catalyzed Reactions</i>	March 28, 2014	School of Chemistry, MKU	Convener	UGC-SAP
Lecture Workshop	<i>Advances in Chemistry</i>	July 29-27, 2013	School of Chemistry, MKU	Organizing Committee Member	Three National Indian Academies
Lecture workshop	<i>Bioinorganic Chemistry and Applications</i>	September 28 - 30, 2012	School of Chemistry, MKU	Joint-Secretary	Three National Indian Academies

MEMBERSHIP IN ACADEMIC BODIES

- Member, Board of Studies, School of Chemistry, Madurai Kamaraj University
- Subject Expert, Board of Studies, TBAK College for women, Kilakarai
- Subject Expert, Board of Studies, Sara Tucker College, Tirunelveli

MEMBERSHIP IN PROFESSIONAL BODIES

- Member in American Chemical Society

ADMINISTRATIVE EXPERIENCE

Role Played	Responsibilities	Period (Month & Year)
Faculty representative for UGC -Student Induction Programme	Conducting Student Induction Program in Universities and colleges	April 2019 onwards
Member	Faculty in-charge for Scanning Electron Microscope (SEM) facility at Central Instrumentation centre, MKU	July 2019 onwards
Staff-in Charge	DST-FIST Sponsored LC-MS facility	August-2011 onwards
Member	RUSA committee, MKU	January, 2014
Member	Clean and Green Campus committee, MKU	March, 2014
Member	Faculty in-charge for spectroscopy facility at Central Instrumentation centre, MKU	From November, 2014- June 2019
Member	Development of major equipment facility at central instrumentation centre, MKU	From November, 2014- June 2019

CONTACT

Dr P. Suresh

Dept. of Natural Products Chemistry

School of Chemistry

+91 9790296673

suresh.chem@mkuniversity.ac.in

<https://sites.google.com/mkuniversity.ac.in/suresh>