

# Kayambu Namitharan, PhD

SERB Faculty, Amity Institute of Click Chemistry and Studies  
Amity University, UP, Noida

## WORK EXPERIENCE

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SERB Faculty (DST-SRS) <b>Amity University, UP, Noida</b> <i>04/2021 – Present</i>	India
Assistant Professor (DST-INSPIRE) <b>SRM Institute of Science and Technology, Chennai</b> <i>10/2015 – 03/2021</i>	India
Postdoctoral Research Fellow <b>University College Cork, Cork</b> <i>07/2018 – 12/2018</i>	Ireland
Postdoctoral Research Fellow <b>The Ohio State University, Columbus</b> <i>09/2014 – 08/2015</i>	United States
Postdoctoral Research Fellow <b>Nanyang Technological University, Singapore</b> <i>05/2012 – 08/2014</i>	Singapore

## EDUCATION

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PhD <b>Madurai Kamaraj University, Madurai</b> <i>09/2007 – 02/2012</i>	India
MSc <b>Madurai Kamaraj University, Madurai</b> <i>09/2005 – 02/2007</i>	India

## PROJECTS/AWARDS

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- DST-INSPIRE Faculty Award (Aug. 2015)** – DST, Ministry of Science and Technology, Govt. of India.  
Total Budget: Rs. 105 lakhs                      Status: Completed                      Grade Obtained: Very Good
- SERB Research Scientist Scheme (March 2021)** – DST, Ministry of Science and Technology, Govt. of India.  
Total Budget: Rs. 46 lakhs                      Status: On-going                      Grade Obtained: N/A

## Academic Accomplishments as a DST-INSPIRE Faculty at SRMIST

### Teaching:

Gained more than five years of university level teaching experience at SRMIST. I have been teaching chemistry topics such as organic, inorganic, analytical, green and solid-state chemistry to both basic science and engineering students.

### Research:

Our research at SRMIST focuses broadly on three themes: 1) alkyne activation for new synthetic methodologies; 2) Transition-Metal-free methodologies for better organic synthesis; 3) developing heterogeneously catalytic conditions for industrially useful organic transformations. **Following are my key research outputs as an independent faculty at SRMIST.**

- Published **Two patents** (one Indian and one PCT) and **9 high-quality research articles** with a cumulative impact factor of **61.127** in internationally peer reviewed journals such as **ACS Catalysis** (I.F.: 12.35), **Organic Letters** (I.F.: 6.555), **Chemical Communications** (I.F.: 5.996), etc.
- Guiding PhD and Master students: **PhD Awarded – One. PhD Submitted – One.** In addition, more than 15 MSc students have completed their master's projects under my guidance during this period of 5 years.
- During this period, I have also got the opportunity to visit The University College Cork, Ireland for six months (Jul 2018 - Dec 2018) to carry out our research work with the financial assistance from **IRISH SCIENCE FOUNDATION (ISF)**.

**Details of Patents and Publications are as follows:**

### PATENTS

1. Method for Using Bulk and Porous N-Containing/N-Doped Carbon and Carbon Nitrides for Borrowing Hydrogen and Dehydrogenation Reactions. **WO Patent; Patent No. WO2020016908A1**; Completed; Filed (2019-07-18); Published (2020-01-23).
2. Method for Using Bulk and Porous N-Containing/N-Doped Carbon and Carbon Nitrides for Borrowing Hydrogen and Dehydrogenation Reactions. **Indian Patent; Patent No. IN201841026841A**; Completed; Filed 2018-07-18; Published (2020-01-24).

### PUBLICATIONS

1. Harnessing In Situ Radical Oxygenation: Copper-Catalyzed Interrupted Azirine–Alkyne Ring-Expansion Reaction for the Synthesis of Pyrrolones  
*C. Sujatha, N. Madhu and K. Namitharan\** **Org. Lett.** 2021, DOI: 10.1021/acs.orglett.1c01162; **(I.F.: 6.555)**.
2. Pyridine Mediated Transition-Metal-Free Direct Alkylation of Anilines Using Alcohols via Borrowing Hydrogen Conditions  
*R. Pothikumar, V. T Bhat\* and K. Namitharan\** **Chem. Commun.** 2020, 56, 13607 – 13610; **(I.F.: 5.996)**.
3. Development of an Imine Chaperone for Selective C-H Functionalization of Alcohols via Radical Relay  
*K. Nakafuku, R. Twumasi, A. Vanitcha, E. Wappes, K. Namitharan, M. Bekkaye, D Nagib\** **J. Org. Chem.** 2019, 84, 13065; **(I.F.: 4.805)**.

4. A nanoscale iron catalyst for heterogeneous direct N- and C-alkylations of anilines and ketones using alcohols via hydrogen autotransfer conditions  
*M. Nallagangula, C. Sujatha, V. T Bhat\* and K. Namitharan\** **Chem. Commun.** 2019, 55, 8490; (I.F.: 5.996).
5. Copper-Catalyzed Ring-Expansion Cascade of Azirines with Alkynes: Synthesis of Multisubstituted Pyridines at Room Temperature  
*C. Sujatha, C. S. Bhatt, M. K. Ravva, A. K. Suresh and K. Namitharan\** **Org. Lett.** 2018, 20, 3241; (I.F.: 6.555).
6. Transition-Metal-Free In Situ Generation of Terminal Alkenes: Synthesis of Multisubstituted Acrylamidines via Tandem sp<sup>3</sup> C–H Olefination/sp<sup>2</sup> C–H Arylation Reactions  
*R. Pothikumar, C. Sujatha and K. Namitharan\** **ACS Catal.** 2017, 7, 7783; (I.F.: 12.35).
7. Copper Catalyzed Sulfonyl Azide-Alkyne Cycloaddition Reactions: Simultaneous Generation and Trapping of Copper-Triazoles and –Ketenimines for the synthesis of Triazolopyrimidines  
*N. Madhu and K. Namitharan\** **Org. Lett.** 2017, 19, 3536; (I.F.: 6.555).
8. Anisotropic noble metal nanoparticles: Synthesis, surface functionalization and applications in biosensing, bioimaging, drug delivery and theranostics  
*P. Gokul, K. Namitharan, M. R. Arul, K. S. Ashok, S. Anandhakumar\** **Acta Biomaterialia** 2017, 49, 45; (I.F.: 6.319).
9. Copper(I)-Y zeolite catalyzed N-sulfonylketenimine mediated annulation of hydroxynaphthoquinones; syntheses of naphtho[2,1-b]furan-2,5-diones and benzo[de]chromene-2,6-diones  
*D. Ramanathan, K. Namitharan and K. Pitchumani\** **Chem. Commun.** 2016, 52, 8436; (I.F.: 5.996)

#### Publications before joining SRMIST

10. Metal and Carbene Organocatalytic Relay Activation of Alkynes for Stereoselective Reactions  
*K. Namitharan, T. Zhu, J. Cheng, P. Zheng, X. Li, S. Yang, B.-A. Song and Y.R. Chi\** **Nat. Commun.** 2014, 5, 3982; (I.F.: 12.121).
11. Copper(I) Catalyzed (3+2)/(4+2) Cycloaddition-Aromatization Cascade: An Unprecedented Chemo/Stereoselective Three Component Reaction of Sulfonyl Azides, Alkynes and N-arylidene-pyridin-2-amines to pyrido[1,2-a]pyrimidin-4-imines  
*K. Namitharan and K. Pitchumani\** **Adv. Synth. Catal.** 2013, 355, 93; (I.F.: 5.851).
12. Cascade Synthesis of bis-N-sulfonylcyclobutenes via Cu(I)/Lewis Acid-Catalyzed (3+2)/(2+2) Cycloadditions: Observation of Enhanced Emission from Restricted C=N Photoisomerization  
*K. Namitharan and K. Pitchumani\** **Org. Biomol. Chem.** 2012, 10, 2937; (I.F.: 3.412).
13. Copper(I)-Catalyzed Three Component Reaction of Sulfonyl Azide, Alkyne, and Nitrene Cycloaddition/Rearrangement Cascades: A Novel One-Step Synthesis of Imidazolidin-4-ones  
*K. Namitharan and K. Pitchumani\** **Org. Lett.** 2011, 13, 5728; (I.F.: 6.555).

14. Nickel-Catalyzed Solvent-Free Three Component Coupling of Aldehyde, Alkyne and Amine  
*K. Namitharan and K. Pitchumani\** *Eur. J. Org. Chem.* 2010, 411; (I.F.: 2.889).
15. Cu(II)-Hydrotalcite as an Efficient Heterogeneous Catalyst for Huisgen [3+2] Cycloaddition  
*K. Namitharan, M. Kumarraja and K. Pitchumani\** *Chem. Eur. J.* 2009, 15, 2755; (I.F.: 4.857).

Cumulative I.F.: 96.812    Average I.F.: 6.454    H-index: 11.0

#### Personal Details and Contact Information

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**DOB:** 25/08/1984

**Citizenship:** Indian

**Marital Status:** Married

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