Chandima J. Narangoda
Department of Chemistry,
University of Sri Jayewardenepura,
Nugegoda, Sri Lanka
narangoda@sjp.ac.lk

As a highly accomplished researcher and educator in chemistry, I bring a unique blend of skills, experience, and vision to a job or postdoctoral position. My academic background includes a Ph.D. from Clemson University, multiple publications, and two U.S. patents, demonstrating my ability to conduct innovative and impactful research. My expertise spans organic synthesis, methodology development, and materials science, with a proven track record of leading research projects, mentoring students, collaborating with industry partners, and consulting in the textile, rubber, latex, polymer, paint and coatings, car care formulations, and shoe industries. As the Director of the Center for Advanced Material Research and a Senior Lecturer, I have demonstrated leadership abilities and commitment to advancing scientific knowledge, making me a valuable asset to any research and industrial team.

EDUCATION

2015 May – 2020 December
Ph.D. in Chemistry
Clemson University – Department of Chemistry
Clemson, SC
Dissertation Title: Electron-rich alkynes and azodicarboxylates chemistry towards vicinal diamine motif containing small molecules and N-heterocycles.

2009 – 2013 **B.Sc. in Chemistry (First Class)**
University of Sri Jayewardenepura,
Sri Lanka.

RESEARCH EXPERIENCE

2021 Feb – Present
Senior Lecturer (Grade II): *2022 Feb to Present*
Senior Lecturer (On Contract): *2021 Feb to 2022 Feb*
University of Sri Jayewardenepura, Sri Lanka.

2023 April-Present
Director, Center for Advanced Material Research (CAMR),
Faculty of Applied Sciences, University of Sri Jayewardenepura.

- Research projects related to new innovations and industry-based research and problem solving.

2015 – 2020 **Graduate Student and Research Assistant**
Advisor: Dr. Daniel C. Whitehead
Clemson University at Clemson, SC

2013 – 2014 **Undergraduate Research Assistant**
Advisor: Prof. Laleen Karunanayake
University of Sri Jayewardenepura,
Sri Lanka.
Dissertation Title: Investigation of Mechanical Properties and Interfacial Interactions of Nylon-6 Doped with Surface Modified Silica

2012 – 2014 **Industry Internship Experience**
Elastomeric Engineering Co., Ltd., Horana, Sri Lanka.

AWARDS

2023 University Research Awards
2022 University Research Awards
2019 **Outstanding Graduate Researcher Award in Chemistry** from the Department of Chemistry at Clemson University.
2019 **Professional Enrichment Grants (PEGs)** from the Chemistry Graduate Student Organization at Clemson University.
2017 **Professional Enrichment Grants (PEGs)** from the Chemistry Graduate Student Organization at Clemson University.
2014 **Award for Best Performance in Organic Chemistry** from the Department of Chemistry at University of Sri Jayewardenepura, Sri Lanka.
2014 **L.A.C.Alles Memorial Award** from the Department of Chemistry at University of Sri Jayewardenepura, Sri Lanka.
2012 **Chemical Industries Colombo (CIC) Award** from the Department of Chemistry at University of Sri Jayewardenepura, Sri Lanka.

PATENTS

US PATENTS

1. **Narangoda, C. J.**; Morris, J. C.; Whitehead, D. C. Diazacyclobutene Derivatives and Methods of Synthesis Thereof. US Patent 10,875,869 B1, December 29, 2020.
2. **Narangoda, C. J.**; Morris, J. C.; Whitehead, D. C. Novel Diazacyclobutene Derivatives as Anti-Parasitic Drug Substances. US Patent 11510906 B1, November 29, 2022.

SRI LANKAN PATENTS

1. Nayanajith, M. H.; Narangoda, C. J.; Karunanayake, L.; Pathmalal, M. M.; Alles, R A Transdermal Material and a Manufacturing Method. **LK/ P/ 1/ 23051, filed in National Intellectual Property Office** Sri Lanka on March 2024.

PUBLICATIONS

1. **Narangoda, C. J.**; Lex, T. R.; Moore, M. A.; McMillen, C. D.; Kitaygorodskiy, A.; Jackson, J. E.; Whitehead, D. C. *Org. Lett.* **2018**, *20*, 8009– 8013.
2. **Narangoda, C. J.**; Kakeshpour, T.; Lex, T. R.; Redden, B. K.; Moore, M. A.; Frank, E. M.; McMillen, C. D.; Wiskur, S. L.; Kitaygorodskiy, A.; Jackson**,** J. E.; Whitehead, D. C. *J. Org. Chem.* **2019**, *84,* 9734-9743.
3. Swasy, M. I.; Brummel, B. R.; **Narangoda, C. J.**; Attia, M. F.; Hawk, J. M.; Alexis, F.; Whitehead, D. C. *RSC Adv.* **2020**, *10*, 44312-44322.
4. Brummel, B. R.; **Narangoda, C. J.**; Attia, M. F.; Swasy, M. I.; Smith, J.; Alexis, F.; Whitehead, D. C. *Polymers* **2021**, *13*, 3060.
5. Miller, B. A.; **Narangoda, C. J**.; Johnson, T. L.; Barata, R. D.; Belue, F.; Solomon, E. E.; Bragg, A. A.; Whitehead, D. C. *J. Org. Chem.* **2022**, *87*, 7494–7500.
6. Miller, B. A.; **Narangoda, C. J.**; Kwain, S.; Bridges, W. T.; Noori, M.; Solomon, E. E.; Bragg, A. A.; Sung, A. T.; Iwai, Y.; Ulisse, L.; Schmidt, W. H.; McMillen, C. D.; Dominy, B. N.; Whitehead, D. C. *J. Org. Chem.* **2024**, *89*, 4990–4999.

7. Dinujaya, N.; **Narangoda, C.**; Karunanayake, L.; Panawala, P. S. S.; Tissera, I.; Samarasekara, A. M. P. B.; Amarasinghe, D. A. S. in *2023 Moratuwa Engineering Research Conference (MERCon)*, **2023**, pp. 562–567.
8. Panawala, P. S. S.; Tissera, I.; Dinujaya, N.; Amarasinghe, D. A. S.; **Narangoda, C.**; Karunanayake, L.; Attygalle, D.; Weragoda, V. S. C.; Samarasekara, A. M. P. B. in *2023 Moratuwa Engineering Research Conference (MERCon)*, **2023**, pp. 468–472.
9. Miller, B. A.; **Narangoda, C. J.**; Kwain, S.; Bridges, W. T.; Noori, M.; Solomon, E. E.; Bragg, A. A.; Sung, A. T.; Iwai, Y.; Ulisse, L.; Schmidt, W. H.; McMillen, C. D.; Dominy, B. N.; Whitehead, D. C. *J. Org. Chem.* **2024**, *89*, 4990–4999.
10. Nayanajith, M. H.; **Narangoda, C. J.**; Ratnayake, A. I.; Karunanayake, L.; Amarasinghe, D. A. S. *Mater. Today Commun.* **2024**, *41*, 110873.
11. Kwain, S.; **Narangoda, C. J.**; Miller, B. A.; DeSnoo, W.; Noori, M.; Morris, J. W. D.; Ulisse, L.; Stevenson III, R. L.; McMillen, C. D.; Sachdeva, R.; Tantillo, D. J.; Whitehead, D. C. Diazacyclobutenes as reactive intermediates: the cascade cyclization of thiolated ene-ynes and azodicarboxylates to provide tetrahydroindoles. *Angewandte. Chemie.* **2024** December (Submitted, Manuscript under review)

SELECTED PRESENTATIONS

1. "Fascinating dynamic behavior of rare diazacyclobutenes", *258th American Chemical Society National Meeting & Exposition, San Diego, CA, United States,* August 2019 – Oral Presentation.

2. "Direct Synthesis of Vicinal Diamine Motif Containing Products: Diazacyclobutene, 2-iminoimidates", *4th Annual Chemistry Research Symposium*, Clemson, SC, March 2019 – Poster.

3. "Convenient Synthesis Of Δ^3-1,2-Diazetines, Diimines and Oxadiazinone Derivatives", *Gordon Conference, Newport, RI, United States*, June 2018 – Poster.

4. "Synthesis of Δ^3-1,2-diazetine derivatives using 4-phenyl-1,2,4-triazoline-3,5-dione (PTAD) and electron rich acetylenes", *69th Southeastern Regional Meeting of the American Chemical Society, Charlotte, NC, United States*, Nov 2017 – Oral Presentation.

SELECTED ONGOING PROJECTS

1. Synthesis of natural product based biologically significance therapeutics
2. Improve mechanical and novel properties of NR latex and rubber-based products
3. Cellulose and chitosan materials-based projects in novel composite preparations, drug incorporated thin films and multifunctional textile coatings
4. Conductive polymer-based sensor projects for early diagnosis of diseases and rapid bacteria detection in packaging materials
5. Lethal cyanotoxin detection in water using nanochemistry

INTERNATIONAL COLLABORATIONS

2021 Feb – Present
Dr. Whitehead Lab**,**
Clemson University, Clemson, SC. USA
Project: Electron-rich alkynes and azodicarboxylates chemistry

2024 October – Present
Dr. Dr. Nirmal Mazumder**,**
Department of Biophysics,

Manipal School of Life Sciences, MAHE
Madhav Nagar, Manipal, Karnataka 576104
India
Project: Biodegradable and antimicrobial packaging films

TEACHING EXPERIENCE

2021 Feb – Present

Senior Lecturer (Grade II)/Senior Lecturer (On Contract)
University of Sri Jayewardenepura, Sri Lanka.

- CHE 108 1.0 Organic Chemistry I
- CHE 336 1.0 Polymer Science & Technology
- CHE 345 1.0 Industrial Organic Chemistry
- ICH 372 2.0 Industrial Biochemistry and Biotechnology
- CHE 484 1.0/ ICH 461 1.0 Polymer Coatings and Paint Industry
- CHE 464 1.0 Polymer Technology
- ICH 480 2.0 Industrial Organic Chemistry
- CHE 107 2.0 Chemistry Practicals (Semester I and II)
- CHE 209 2.0 Chemistry Practicals (Semester I and II)
- CHE 315 2.0 Chemistry Practicals (Semester I and II)

2021 Feb – Present

Visiting Lecturer
Department of Food Science, University of Sri Jayewardenepura, Sri Lanka.

- FST 160 1.0 Principles of Organic Chemistry I
- FST 197 1.0 Chemistry practicals

2023 Feb – Present

Visiting Lecturer
Department of Nano Science Technology, Faculty of Technology,
Wayamba University, Sri Lanka.

- Nano 2252 Nano Composites

2015 August – 2018 August
2020 August – 2020 December

Graduate Teaching Assistant
(Chemistry 2270, 2020 and 2280 Courses - Organic Chemistry I and II,
Chemistry 1011 Course - General Chemistry I)
Clemson University,
Clemson, SC.

2014 October – 2015 June

Temporary Lecturer
(Organic Teaching Lab/Chemistry Q/A Sessions)
University of Sri Jayewardenepura, Sri Lanka.

2014 April – 2014 July

Visiting Demonstrator
(for M.Sc./Post Graduate Diploma in Industrial Analytical Chemistry)
University of Sri Jayewardenepura, Sri Lanka.

2014 February – 2014 September

Temporary Demonstrator
(Organic Teaching Lab)
University of Sri Jayewardenepura, Sri Lanka.

CONSULTATION EXPERIENCE

2023 Aug – Present

MAS Innovation (Pvt) Ltd.
- Research and innovations, providing solutions to ongoing issues in textiles
- Working on future materials, electrostatic flocking, antifade projects, antipilling, antiwrinkle, antimicrobial properties
- Work on easy care products, functional coatings, and dust to value products

2024 Dec – Present

DSL Lanka (Pvt) Ltd.
Providing solutions to overcome product defects as well as pigment color variations, dust build up and fungal attacks

2023 Dec – Present

JAT Holdings PLC
Formulate an anticorrosive paint/coating

2023 Dec – 2024 Dec

Methmina Distributors
Formulate car care products

2024 Jan – 2024 Nov

Sri Lanka Institute of Biotechnology (SLIBTECH)
Oil purification project

2023 May – 2023 August

Midas Safety Lanka (Pvt) Ltd.
Remove contaminants from gloves

MENTORING EXPERIENCE

2018 - 2019 **REU (Research Experiences for Undergraduates) Student Mentor**
Dr. Whitehead Lab
Clemson University, Clemson, SC
Project: "*Synthesis of 4-substituted triazolinediones as a precursor to make diazacyclobutenes"*

LEADERSHIP POSITIONS AND PROFESSIONAL DEVELOPMENT

2023 April-Present

Director, Center for Advanced Material Research (CAMR),
Faculty of Applied Sciences, University of Sri Jayewardenepura.

2024 Oct – Present

Treasurer
Alumni Association, Department of Chemistry, Faculty of Applied Sciences,

University of Sri Jayewardenepura, Sri Lanka.

2018 - 2019 **President**
Sri Lanka Student Association,
Clemson University,
Clemson, SC, USA.

2017 - 2018 **Vice President**
Sri Lanka Student Association,
Clemson University,
Clemson, SC, USA.

2011 – 2012 **Treasurer**
Chemical Society, University of Sri Jayewardenepura, Sri Lanka.

REFERENCES THAT WILL BE SUBMITTING LETTERS OF REFERNCE

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Prof. William T. Pennington
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Dr. Collin McMillen
Director, Molecular Structure Center,
Department of Chemistry
Clemson University
cmcmill@g.clemson.edu

ADDITIONAL REFERENCES IF NEEDED

Prof. Laleen Karunanayake
Professor,
Faculty of Applied Sciences,
University of Sri Jayewardenepura
laleen@sjp.ac.lk

Links:

Linkedin: https://www.linkedin.com/in/chandima-narangoda-ph-d-ab4083166/
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