

Chandima J. Narangoda
Department of Chemistry,
University of Sri Jayewardenepura,
Nugegoda, Sri Lanka
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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

2015 – 2020

Graduate Student and Research Assistant

Advisor: Dr. Daniel C. Whitehead
Clemson University at Clemson, SC

- Methodology development in organic synthesis, designing new synthetic strategies to access vicinal diamine motif containing small molecules and biologically significant 4-, 5-, 6-membered N-heterocycles.
- Synthesis, characterization and modifying cellulose nanocrystal materials in the use of remediation of volatile organic compounds, pesticides remediation in water, and antibacterial water treatment.
- Proficient in organic synthesis, methodology development, purification techniques, NMR, 2D-NMR, Decoupled NMR, Variable Temperature NMR, Dynamic NMR, GC, GC-MS, HPLC, FTIR, UV-Vis, DLS, TGA, DSC, TEM, SEM, EDX, PXRD.
- Mentored and designed research projects for 10 undergraduate students.
- Experienced in UNIX commands, DFT calculations (Geometry optimization, energy calculations, and transition state analysis), Gaussian 09, ChemDraw, ChemSketch as well as Adobe Photoshop, CorelDraw, Microsoft Word, PowerPoint and Excel.

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.

- Worked in the Research and Development Laboratory to improve physical properties of Nylon-6 and Polypropylene with surface modified fillers while Identifying and resolving problems related to rubber and plastic based products.

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.

PUBLICATIONS AND PATENTS

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. **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.
4. 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.
5. Brummel, B. R.; **Narangoda, C. J.**; Attia, M. F.; Swasy, M. I.; Smith, J.; Alexis, F.; Whitehead, D. C. *Polymers* **2021**, 13, 3060.
6. D. C. Whitehead, J. C. Morris, C. J. Narangoda, *Diazacyclobutene Derivatives as Anti-Parasitic Drug Substances - Google Patents*, **2022**, US11510906B1
7. B. A. Miller, C. J. Narangoda, T. L. Johnson, R. D. Barata, F. Belue, E. E. Solomon, A. A. Bragg, D. C. Whitehead, *J. Org. Chem.* **2022**, 87, 7494–7500

SELECTED PRESENTATIONS AND CONFERENCE PROCEEDINGS

1. Dinujaya, N.; Karunanayake, L.; Narangoda, C.J.; Panawala, P. S. S.; Tissera I.; Samarasekara, A. M. P. B.; Amarasinghe, D. A. S.; " New Strategy for Synthesizing Catalyst-free HCl-doped Polyaniline," 2023 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka, 2023, Accepted at Aug 25th 2023 and publication proceedings are ongoing in IEEEExplore journal.
2. Panawala, P. S. S.; Tissera I.; Dinujaya, N.; Karunanayake, L.; Narangoda, C.J.; Samarasekara, A. M. P. B.; Amarasinghe, D. A. S.; Attygalle, D.; Weragoda, V.S.C.; " Polyaniline Film-Based Interdigitated Capacitive Sensor for Ammonia Gas Detection," 2023 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka, 2023, Accepted at Aug 25th 2023 and publication proceedings are ongoing IEEEExplore journal.
3. "Fascinating dynamic behavior of rare diazacyclobutenes", *258th American Chemical Society National Meeting & Exposition, San Diego, CA, United States*, August 2019 – Oral Presentation.
4. "Direct Synthesis of Vicinal Diamine Motif Containing Products: Diazacyclobutene, 2-iminoimidates", *4th Annual Chemistry Research Symposium*, Clemson, SC, March 2019 – Poster.
5. "Convenient Synthesis Of Δ^3 -1,2-Diazetines, Diimines and Oxadiazinone Derivatives", *Gordon Conference, Newport, RI, United States*, June 2018 – Poster.

6. "Synthesis of Δ^3 -1,2-diazetidine 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 ABSTRACTS

1. Pandithage K. S.; Narangoda C.J.; Removal of commercial dyes using biochar prepared from industrial effluent sludge, Sri Lanka Institute of Textile and Apparel 1st Research Symposium on Textile and Apparel, 2023
2. Pandithage K. S.; Narangoda C.J.; Separation of Rhodamine B from dye effluent via adsorption to biochar derived out of the textile sludge, Proceedings of the 9th Undergraduate Research Symposium, 2023
3. De Saram, L.P.R.K.; Ratnayake, A.I.; Lakruwan, P. R. R.; Padumadasa, C.; Gunasekara, T.D.C.P.; Siriwardhene, M.A.; Narangoda, C.J.; Evaluation of antimicrobial activity of saponins extracted from *Sapindus emarginatus*, Sri Lanka Association of the Advancement of Science Proceedings of the 79th Annual Sessions – Part I, 2023
4. Karunarathna, W. D. M. H.; Narangoda, C. J.; Peiris, L. D. C.; Karunanayake, L.; Development of a Hydrophobic Antibacterial Cotton Substrate Using Bio Based Fatty Acids, Sri Lanka Association for the Advancement of Science Proceedings of the 79th Annual Sessions – Part I, 2023
5. Nayanthara, H. H. D.; Karunarathne, P. K. D. M. C.; Narangoda, C. J.; Surface Modification of Montmorillonite Clay towards the Fabrication of Nanocomposites for Engineering Applications, 28th International Forestry and Environmental Symposium (Abstract accepted)

TEACHING EXPERIENCE

2021 Feb – Present

Senior Lecturer

University of Sri Jayewardenepura, Sri Lanka.

- CHE 108 1.0 Organic Chemistry I
- CHE 484 1.0/ ICH 461 1.0 Polymer Coatings and Paint Industry
- ICH 372 2.0 Industrial Biochemistry and Biotechnology
- CHE 107 2.0 Chemistry Practicals (Semester I and II)
- CHE 315 2.0 Chemistry Practicals (Semester I and II)
- Research Supervisor/Co-Supervisor for 08 Students in 4 projects
- Moderation of papers and setting up final exam papers
- Grant writing and administrative works
- Fundraising for the construction of a new undergraduate research laboratory
- Academic team member for the construction of a new undergraduate research lab
- Academic team member for the new entrepreneurship college

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.

MENTORING EXPERIENCE

2018 - 2019

REU (Research Experiences for Undergraduates) Student Mentor

Dr. Whitehead Lab
Clemson University,
Clemson, SC

Project: *"Synthesis of 4-substituted triazolinones as a precursor to make diazacyclobutenes"*

LEADERSHIP, ADMINISTRATIVE POSITIONS AND PROFESSIONAL DEVELOPMENT

2023 April – Present

Director, Center for Advanced Materials Research (CAMR)

Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka.

2018 - 2019

President

Sri Lanka Student Association,
Clemson University,
Clemson, SC, USA.

- Organized meetings to discuss student events and student issues.
- Organized Cultural Food Festivals, New Year Festivals, Music Nights, Karaoke Nights.
- Organized picnics and semester/year end gatherings.
- Supervised new graduate students to establish in Clemson, SC.

2017 - 2018

Vice President

Sri Lanka Student Association,
Clemson University,
Clemson, SC, USA.

2011 – 2012

Treasurer

Chemical Society, University of Sri Jayewardenepura, Sri Lanka.

- Managed finances in the organization.
- Managed the finances and related activities of the International Symposium of Polymer Science and Technology in 2012.
- Organized annual general meetings, annual cricket match, annual trip, Vesak lantern competition, seminars, and fundraising events

REFERENCES THAT WILL BE SUBMITTING LETTERS OF REFERENCE

Dr. Daniel C. Whitehead

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Undergraduate Program Coordinator
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Prof. S. P. Deraniyagala

Emeritus Professor
Former Senior Professor (Chair)
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