

Nuwan D. De Silva

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Education

Mississippi State University, Starkville, MS

Ph.D. in Chemistry, May 2013

Dissertation Title: *Development of Silica Gel Supported Bimetallic Oxidation Catalysts*

University of Colombo, Colombo, Sri Lanka

B.Sc. in Chemistry, May 2005

Professional Experience

Mar 2013- Present

Sri Lanka Institute of Nanotechnology (SLINTEC)

Postdoctoral Research Scientist

- Developed novel carbon fiber reinforced thermoplastic composites.
- Developed novel ceramic tiles for heat shielding.
- Gained experience in Scanning Electron Microscopy, Atomic Force Microscopy, Thermal Gravimetric Analysis, Differential Scanning Calorimetry and solid state NMR instruments.

Aug 2007– Mar 2013

Mississippi State University, Department of Chemistry

Graduate Researcher in Dr. William P. Henry's Laboratory

- Developed dicopper(II) heterogeneous catalyst for oxidation reactions.
- Synthesized, purified and characterized new organic molecules.
- Prepared new dinuclear copper complexes from triketone ligands.
- Gained experience in UV-Vis spectroscopy, DRIFTS spectroscopy, atomic absorption spectroscopy, IR spectroscopy, NMR spectroscopy (1D and 2D), ESR spectroscopy, GC-MS spectroscopy, LC-MS spectroscopy instruments.

Graduate Teaching Assistant

- Taught CH 1211 (Chemistry I laboratory), CH 1221 (Chemistry II laboratory) and CH 4511 (Organic Chemistry I laboratory).
 - Presented 15-20 minutes lecture on the theory, procedure and safety of the experiment.
 - Supervised 18-22 students during the experiment to ensure the students performed the experiment effectively and followed safety procedures.
 - Graded lab reports.
- Tutored students, individually and in group.

July 2006-July 2007 **Open University of Sri Lanka**, Colombo, Sri Lanka.
Assistant Lecturer

- Taught general chemistry and calculus at day school classes.
- Instructed organic chemistry laboratories.
- Graded mathematics and general chemistry exams.

May 2005-July 2006 **University of Colombo, Department of Chemistry**
Teaching Assistant

- Taught analytical chemistry and general chemistry laboratories.
- Conducted tutorial classes for chemistry major students.

May 2005-Aug 2005 **Dipped Products Private Co.**, Colombo, Sri Lanka.
Lab technician, Dipped Products Laboratory

- Analyzed chemical mixtures associated with rubber synthesis.
- Gained experience in steam distillation and titration methods.

May 2004-Apr 2005 **University of Colombo**
Undergraduate Researcher, Analytical Chemistry Laboratory

- Designed a Water Quality Index for Bolgoda Lake, Sri Lanka.
- Determined pH, temperature, chemical oxygen demand, biological oxygen demand, phosphates, sulphates, nitrates and nitrites, dissolved oxygen, fluorides, alkalinity, heavy metals and water hardness parameters in the lake.

**Oral
Presentations`**

Development of silica gel supported bimetallic oxidation catalysts. Southeast Regional Meeting of American Chemical Society (SERMACS), Richmond, VA, 2011.
Development of silica gel supported bimetallic oxidation catalysts. Chemistry graduate symposium at Chemistry department, Mississippi State University, 2011.

**Poster
Presentations**

Development of silica gel supported bimetallic oxidation catalysts. Southeast Regional Meeting of American Chemical Society (SERMACS), New Orleans, LA, 2010.
Development of bimetallic catalysts for oxidation catalysts. Southeast Regional Meeting of American Chemical Society (SERMACS), Nashville, TN, 2008.

Publications

Mature leaf concentrate of Sri Lankan wild type *Carica papaya* Linn. modulates nonfunctional and functional immune responses of rats, Chanika D Jayasinghe; Dinara S Gunasekara; Nuwan De Silva; Kithmini K. Jayawardena; Preethi V. Udagama, BMC Complementary and Alternative Medicine, BCAM-D-16-00665R1.

S. P. Ratnayaka, T.M. Premalal, N. D. De Silva, T. Weerasekara, M. S. Yapa, V. Karunaratne and G. A. J. Amaratunga; Oxidation protection of carbon fiber by sol-gel derived Boron doped Yttria- stabilized zirconia coatings, Applied Surface Science, *manuscript completed*.

Henry, W. P.; De Silva, N. D., Efficient n-TBAF mediated direct benzylation of triketones, *manuscript in progress*.

Henry, W. P.; De Silva, N .D., Bimetallic complexes of copper(II) with benzylated triketones, *manuscript in progress*.

Activities

Mississippi State University

- Member of Chemistry Graduate Student Association (2007-present)
- Member of Sri Lankan Student Association (2007-2012), President (2011)
- Member of MSU Softball Cricket Club (2009-2012), Club Captain(2011)

University of Colombo

- Member of, Chemical Society (2002-2005), Vice-President (2005-2006)