DULASIRI AMARASIRIWARDENA
School of Natural Science, Hampshire College
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A. Professional Preparation:
University of Ceylon, Colombo, Sri Lanka: B.Sc., 1975.
University of Sri Lanka, Colombo Campus, Sri Lanka: Chemistry, M. Phil., 1978.
North Carolina State University, Raleigh, NC, USA: Analytical Chemistry, Ph.D., 1987.

B. Appointments:
Emeritus Professor of Chemistry (From July 2021 to present)
Professor of Chemistry (From 1987 to present - Assistant to Full Professor and Retired in June 2021) School of Natural Science, Hampshire College, Amherst, MA 01002
Adjunct Professor – Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA (2015 to present)
Scientific Officer, Atomic Energy Authority of Sri Lanka, Colombo, Sri Lanka (1979-1981)

C. Research Interests:
Chemical speciation studies to investigate the fate and transport properties of trace metals and nanoparticles in soil and water systems. Characterization of trace metals complexed to humic acids by molecular spectroscopy methods, size exclusion chromatography, and ion chromatography coupled with ICP-MS. Trace metal analysis of environmental and biological materials (dental tissues, hair, rice grains, and shells) by inductively coupled plasma-atomic emission spectroscopy (ICP-AES) and mass spectrometry (ICP-MS). Development of novel elemental imaging methods for biological tissues using laser ablation (LA)-ICP-MS.

(i) Selected Relevant Recent Publications: (**denotes Hampshire undergraduate or graduate student author; over 80 papers and over 120 Oral and Poster Presentations*)

1. 2021-Daniel F. Andrade, Eduardo de Almeida, Hudson W. Pereira de Carvalho, Edenir R. Pereira-Filho, **Dulasiri Amarasiriwardena**, Chemical inspection and elemental analysis of electronic waste using data fusion - Application of complementary spectroanalytical techniques, *Talanta*, 225, 2021, 122025, https://doi.org/10.1016/j.talanta.2020.122025
2. 2020-David Blumenstiel*, Madison McDonald*, Bernardo Arriaza, and **Dulasiri Amarasiriwardena**, Exposure to geogenic lithium in ancient Andeans: Unraveling lithium in mummy hair using LA-ICP-MS, *Journal of Archaeological Science*, 113, January 2020, 105062, https://doi.org/10.1016/j.jas.2019.105062
3. 2021-Emma Zyskowski*, Fengchang Wu, **Dulasiri Amarasiriwardena**, Investigation of pollution history in XKS mining area in China using dendrochronology and LA-ICP-MS, *Environmental Pollution*, 269, 2021, 116107, https://doi.org/10.1016/j.envpol.2020.116107.
4. 2020-Daniel Fernandes* Andrade, Edenir Rodrigues Pereira-Filho & **Dulasiri Amarasiriwardena** Current trends in laser-induced breakdown spectroscopy: a tutorial review, *Applied Spectroscopy Reviews*, 56:2, 98-114, 2020, DOI: 10.1080/05704928.2020.1739063
5. 2014-Antimony adsorption by zero-valent iron nanoparticles (nZVI): Ion chromatography–inductively coupled plasma mass spectrometry (IC-ICP-MS) study, Pema Dorjee*, **Dulasiri Amarasiriwardena**, Baoshan Xing, *Microchemical Journal*, 2014, 116: 15–23.

(ii) Other Significant Recent Publications: (**denotes Hampshire undergraduate student author*)

1. 2024-Bernardo Arriaza and Dulasiri Amarasiriwardena, Yesterday's problems are here to stay: Invisible exposure to geogenic metal (loid)s of arsenic, boron, and lithium in the Atacama Desert, *Archaeometry,* Early view: 18 June 2024, https://doi.org/10.1111/arcm.12988
2. 2022-Daniel Fernandes Andrade, Jeyne Pricylla Castro, José Augusto Garcia, Raquel Cardoso Machado, Edenir Rodrigues Pereira-Filho, Dulasiri Amarasiriwardena, (2022) Analytical and reclamation technologies for identification and recycling of precious materials from waste computer

and mobile phones, *Chemosphere*, Volume 286(2), 2022,131739 https://doi.org/10.1016/j.chemosphere.2021.131739

3. 2021-Optical emission inductively coupled plasma in environmental analysis, M. Tatro and **D. Amarasiriwardena**, *Encyclopedia of Analytical Chemistry,* Environment: Water and Waste, R.A. Meyers (Ed.), John Wiley Sons, 2021 update, 1-12. 10.1002/9780470027318.a0848.pub4
4. 2013-Investigation of Gold Nano Particles Uptake and their Tissue Level Distribution in Rice Plants by Laser Ablation-Inductively Coupled-Mass Spectrometry, Jeremy Koelmel*, Thomas Leland*, Huanhua Wang, **Dulasiri Amarasiriwardena**, and Baoshan Xing, *Environmental Pollution*, 2013, 174: 222-228.
5. 2011-Antimony: Emerging toxic contaminant in the environment, *Special Issue Preface,* **Dulasiri Amarasiriwardena**, Fengchang Wu, ***Guest Editors***: **D. Amarasiriwardena** and F. Wu, *Microchemical Journal,* 2011, 97:1–2.

D. Synergistic Activities:

PI, NSF MRI Grant: Acquisition of an Inductively Coupled Plasma-Mass Spectrometer: A Hub for Fundamental Interdisciplinary Chemical Research, Applications, and Research Training (#1625004), 2016-2019

The Gruber Award for Excellence in Student Advising at Hampshire College -2014

Luce Initiative on Asian Studies and the Environment (LIASE) Grant – CoPI -2014

Member-Editorial Boards: *Microchemical Journal, Environmental Pollution, Applied Spectroscopy Practica*

Chair-Elect*: Society for Applied Spectroscopy - New England Section,* 2007-2008

Chair: *Society for Applied Spectroscopy - New England Section*, 2008-2009

Chair: Lester Strock Award Committee, *Society for Applied Spectroscopy,* 2016-2017

Member Awards Committee - *Society for Applied Spectroscopy* – 2011-2012

Chair: Poster Judging Committee*, Winter Conference on Plasma Spectrochemistry*, 2016-2024

Pittsburgh Conference Memorial National College Grant (PCMNCG) -1995, 2000, 2008, 2014

PI, NSF MRI-R2 Grant: Acquisition of a 213 nm UV Laser Ablation System to Advance Micro Spatial Trace Element Research and Research Training Across Fields (# 0959028) 2009-2012.

Fulbright Senior Specialists Awards: (2006, 2009, and 2016) - Taught two weeklong courses on *Chemistry Applied to Environmental Monitoring and Research at the University of Concepcion (2006) and the* University of Tarapaca (2009), Chile.

Pittcon Undergraduate Analytical Research Program Grant (UARP) Award: *The Society of Analytical Chemists of Pittsburgh***-** 2007 and 2011

Member/Workshop Instructor: Preparing Future Science and Mathematics Faculty Project (PFF) – Chemistry, UMASS 2001-2004.

NSF Panel Member for judging Major Research Instrumentation (MRI) Grants, 2010.

Organizing Committee: *– 20th Anniversary Conference - International Humic Substances Society*, July 21-26, 2002, Northeastern University, Boston, Massachusetts.

Panelist: 2002, 2000, 1998 - "***Teaching Analytical Atomic Spectroscopy: Re-Defining the Curriculum****? Winter Conference on Plasma Spectrochemistry.*

Organizer: Five College Chemistry Lecture Series, 1990, 1996, 2002, 2007, 2012 and 2017.

E. Recent Collaborators: Prof. Ramon M. Barnes, URIAC Amherst; Prof. B. Xing, University of Massachusetts, Amherst; Prof. Alan Goodman, Hampshire College; Dr. David Bellis and Prof. Patrick Parsons, Wadsworth Research Center (WRC), Albany, NY; Prof. Jorge Yanez, University of Concepcion, and Prof. Bernardo Arriaza, University of Tarapaca, Chile; Prof. F. Wu, Chinese Academy of Environmental Sciences, Beijing, China, Prof. Edenir R. Pereira-Filho, Universidade Federal de São Carlos, UFSCar, Brazil.

F. Undergraduate Students Supervised (Graduate Schools/Employment/Postgraduate Degrees):

Jana Farell (Trent U), Priyanka Basnet (Mount Sinai Medical School), Luke Bartkus (Veterinary School**,** OSU), Jeremy Koelmel (University of Florida), Pema Dorjee (Wagner College)**,** Jared Zia, Sam Byrne (SUNY-Albany), Basal Bandak (MS**),** Rachel Wallace, Gabriel Ceriotti (Rice University)**,** Sarah Steely(MS)**,** Kimberly Newton (PA Program in Northeastern U), Anahita Dua (Physician, WI), Dylan Oliver (Primaverity, LLC), Socheata Tauch (Charles River Laboratories), Jeremy Draper, Ellen Webb (MPH,

Colombia U)**,** Jonathan Bell, Daniel Kang (UC, Irvine), Kristin Angel**,** Mathew Trumbull, Catherine McIntyre (MS), Laura Shifley (MS), Sara Tunstall(MBA), Tom Anderson.

Past and current Ph.D. committees: Ding Guangwei (UMass), John Danku (UMass), Seunghun Kang (UMass), Pamela Kruger (WRC, Albany, NY), Meredith Praamsma (SUNY, Albany), Amy Steuerwald (SUNY, Albany), Joseph Jones (William and Mary College), H. Mashayeki (UMass), ***Current*****:** Charelle Trim ((SUNY, Albany).