Curriculum vitae

A.D. M. Damayanthi, Cchem, B.Sc., MSc., MBA

Research Scientist cum Science Group Leader, Sri Lanka Institute of Nanotechnology

1) Personal Information

Full name: Alahakoon Dahanayake Malini Damayanthi

Address

Office:
Sri Lanka Institute of Nanotechnology (Pvt) Ltd,
Science and nanotechnology Park,
Mahenwatta, Pitipana, Homagama, Sri Lanka.

Home:
46/3, Samanala Mawatha
Athurugiriya

Phone (office) : +94114650538
Mobile - +94776371394
E mail address: damayanthid@slintec.lk
Citizenship: Sri Lanka

2) Academic Qualifications

Currently reading for **PhD** registered to PGIS, University of Peradeniya on " Study of 2D materials using advanced electron microscopy" (2015 to date)

Name of Degree	Institution	Length of Program	Completion year	Overall Degree Grade or Grade Point Average
Master of Business Management (Commonwealth MBA)	Open University of Sri Lanka	Two years	2013	
Master of Science (Analytical Chemistry)	University of Colombo	Two years	2009	GPA-3.37

Graduateship in Chemistry (Chemistry special)	Institute of Chemistry	Four years	2005	Second class lower division
Bachelor of Science (Chemistry, Botany, Computer science)	Open University of Sri Lanka	Three years	2010	Second class lower division

3) Research and relevant Professional experience

- Organization – Sri Lanka Institute of Nanotechnology [SLINTEC]
  Time period – 10th May 2010 to date

I joined SLINTEC as the Analytical Services Executive and handled all the analytical samples and report preparation. Trained for all the high tech instruments and got a foreign training for scanning electron microscope operation. In 2012 I joined to the 'slow releasing nano fertilizer' research project under the supervision of Dr. Nilwala Kottegoda and Prof. Veranja Karunaratne at SLINTEC. Here I was interested on morphology of nanohydroxyapatite (HA) with different experimental conditions and the stability of the nanoHA dispersion with different dispersing agents. While working with the project I handled all the SEM and EDX samples for SLINTEC projects, commercial samples and university samples. In November 2012 several locations in the North Central province of Sri Lanka were subject to showers of red colour rain. As general public was in panic of health issues due to red rain contamination with drinking water, the issue was taken as a national requirement to understand the root cause for red rain. Samples of the red rain were subject to detailed analysis and findings were presented in the Astrobiology conference in 2013. In 2014 SLINTEC established a fully-fledged microscopy unit with a Transmission electron microscope (TEM), with electron energy loss spectroscopy (EELS) and energy dispersive x-ray spectroscopy (EDX) facility. I am working in this TEM in the capacity of overall instrument in charge and operator.

- Organization- Sri Lanka Tea Board
  Time period- 2005 to 2010

I joined the Analytical laboratory of Sri Lanka Tea Board (SLTB) as a technical assistant and worked for five years. ISO testing for tea and pesticide residue analysis in tea were the main areas which I took part. I got a special training on the pesticide residue inspection method for tea using GC, GC/MS, LC/MS/MS from the Eastern laboratory for Imported foods and Infectious Diseases

in Yokohama, Japan in 2008. While working at SLTB I completed my MSc in Analytical chemistry from University of Colombo. For the Masters research studied on **'Assessment of heavy metals in black tea in different agro-ecological regions of Sri Lanka'** under the supervision of Dr. Thissa Amarakoon and Prof. K.R. R. Mahanama.

- Organization- Tea Research Institute, Talawakelle
  Time period – 2001 to 2005 (four years)

I worked as a technical assistant at the Bio chemistry division of Tea research Institute for four years. I carried out the project under the supervision of Dr.Sarath Abeysinghe and familiarized for the chromatography techniques such as High performance Liquid Chromatography (HPLC), Gas Chromatography mass spectrometry (GCMS), High Speed counter current Chromatography (HSCCC). I did a project on shot hole borer attraction to tea and analysed the tea volatiles in tea bark which attracts the shot hole borer and the volatiles of resist tea cultivars through steam distillation, GCMS analysis and olfactometry study. Blister blight fungal attack on tea leaf was another study with the extraction of proanthocyanins(PA) from tea leaf and the effect of PA on growth of blister blight fungus.

4) Conference Presentations

Annual research symposium, University of Colombo, proceedings, 2012 : "Assessment of heavy metals in black tea produced in different agro-ecological regions of Sri Lanka" , A.D.M.Damayanthi, A.M.T.Amarakoon, K.R.R. Mahanama

Conference proceedings, 2013 : "Red Rain in Sri Lanka" presented at Astrobiology conference in USA D. Dhanayake, S. Katugampala, S. Gunasekera, K. Wickrmarathne, D. De Silva, K. N. De Silva, V. Karaunaratne , and G. A. J. Amaratunga

Conference proceedings, 2015: "POLONNARUWA AND ANURADHAPURA METEORITES AND THE RED RAIN OF SRI LANKA" A.D.M. Damayanthi, Nalin Silva, Milton Wainwright, Jamie Wallis, Keerthi Wickramaratne and Chandra Wickramasinghe Astrobiology Research Conference, International Research Centre University of Peradeniya 21-23 August, 2015

Conference proceedings, 2016: " Advanced electron microscopy study on nanohydroxyl apatite-urea system" Damayanthi Dahanayake, Sunanda Gunasekara, N. Kottegoda and

V.Karunaratne General Sir John Kotelawala Defence University, Sri Lanka *9th International Research Conference 8th -9th September 2016*

Conference proceedings, 2016: "Preparation, characterization and in vitro release study of iron loaded alginate nanoparticles" Nuwanthi P Katuwawila, A.D.L.C. Perera, **Damayanthi Dahanayake**, D. Nedra Karunarathne,Gehan A. Amarathunga.R General Sir John Kotelawala Defence University, Sri Lanka *9th International Research Conference 8th -9th September 2016*

Conference proceedings, 2016: "Advanced electron microscopic study on few layered black phosphorus" Damayanthi Dahanayake, Sunanda Gunasekara, V.Karunaratne, Gehan A. J. Amarathunga 3rd International Conference on Nanoscience and Nanotechnology 15 – 16, December 2016, Colombo, Sri Lanka

Conference proceedings, 2016: "Carbon quantum dots adsorbed zirconia nanoparticles as efficient photocatalyst" Samantha Rathnayake, Prasanga Gayanath Mantilaka, Damayanthi Dahanayake Gehan Amaratunga 3rd International Conference on Nanoscience and Nanotechnology 15 – 16, December 2016, Colombo, Sri Lanka

5) Publications

A.D.M. Damayathi, N.C.Wickramasinghe, K.Wickramaratna "A meteorite in the Anuradhapura district of Sri Lanka: Evidence of putative biological structures and the relevance to panspermia" *Journal of Cosmology* 2014 Vol 23, No.17,pp 11197-11205

Kanatiwela-de Silva, C.; **Damayanthi, M**.; Silva, R. de; Dickinson, M.; Silva, N. de; Udagama, P. Molecular and scanning electron microscopic proof of phytoplasma associated with areca palm yellow leaf disease in Sri Lanka *Plant Disease* 99(11) pp. 1642 May 2015 DOI no. 10.1094/PDIS-01-15-0072-PDN

Preethi Udagama Chamini Kanatiwela- de Silva, PhD; **Malini Damayanthi**, MSc; Nalin de Silva, PhD; Rohana Wijesekara, PhD; Matthew Dickinson, PhD "A novel approach to the diagnosis and characterisation of Weligama Coconut Leaf Wilt Disease in Sri Lanka: Scanning Electron microscopic and molecular evidence" *Molecular & Cellular Probes* (submitted and pending)

Nuwanthi P Katuwawila, A.D.L.C. Perera, **Damayanthi Dahanayake**, D. Nedra Karunarathne,Gehan A. Amarathunga. "Alginate nanoparticles protect ferrous from oxidation: Potential iron delivery system", International Journal of Pharmaceutics, Article · Sep 2016 ·

Nilwala Kottegoda, Chanaka Sandaruwan, Gayan Priyadarshana, Asitha Siriwardhana, Upendra A. Rathnayake, Danushka Madushanka Berugoda Arachchige, Asurusinghe R. Kumarasinghe, **Damayanthi Dahanayake**, Veranja Karunaratne, Gehan A. J. Amaratunga, "Urea-Hydroxyapatite Nanohybrids for Slow Release of Nitrogen", ACS Nano (In press)

6) Patents

"Composition and method for sustained release of agricultural macronutrients", filed on 2012-12-07 and granted on 2014-04-15, Kottegoda Nilwala, Priyadarshana Gayan, Chanaka Sandaruwan, Damayanthi Dahanayake, Gunasekara Sunanda, Amaratunga Gehan, Karunaratne Veranja

"COMPOSITIONS AND METHODS FOR SUSTAINED RELEASE OF AGRICULTURAL MACRONUTRIENTS" filed on filed on 2014-02-20 and granted on 2014-06-19, Nilwala Kottegoda, D.A.S. Siriwardhana, W.M.G.I. Priyadarshana, Chanaka Sandaruwan, D.A.D. Madushanka, U.A. Rathnayake, Sunanda Gunasekara, Damayanthi Dahanayake, Ajith DeAlwis, Asurusinghe Kumarasinghe, Veranja Karunaratne, Gehan Amaratunga (Ref 20140165683)

7) Awards

Buckyball award for Excellence in Chemistry-for the course unit: Physical chemistry II, 2006/2007

8) Laboratory and instrumental skills

- Wet chemistry skills and chromatography techniques
- Instrumentation (nano characterization) and Thermal Analysis

Sound knowledge and experience in using electron microscopy instruments: Scanning Electron Microscope (SEM), Energy Dispersive spectroscope (EDX), Transmission electron microscope (TEM) with EDX, EELS, EFTEM, STEM.

Familiar with X-Ray Diffraction (XRD), FTIR spectrometer, Raman, Atomic absorption spectrophotometer (AAS), UV-Vis spectrophotometer, Fluorometer, Particle Size Analyzer, TGA, and DSC.

Capable of handling all the chromatography techniques such as TLC, HPLC, GC, GCMS, GPC, LCMS.

8) Special overseas training obtained

- Pesticide analysis using LCMS, GCMS techniques

Plant Quarantine Centre, Yokohama, Japan 2008

- Scanning electron microscope user training

Hitachi Training Centre, Ibaraki, Japan 2010

- Training on Electron Energy Loss Spectroscopy (EELS)

Gatan Inc, California, USA, 2015

- Training on Transmission Electron Microscopy

Jeol Pvt Ltd, Tokyo, Japan, 2015