

Imalka Munaweera, PhD

Department of Chemistry
Faculty of Applied Sciences
University of Sri Jayewardenepura
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<https://scholar.google.com/citations?user=HY3LPNEAAAAJ&hl=en>

HIGHLIGHTS

- Listed in “Asian Scientist 100” in Asian Scientist magazine 2022, 2024 editions.
- An international award recipient for 2021 OWSD-Elsevier Foundation Award for Early-Career Women Scientists and 2023 TWAS-Atta-ur-Rahman Award in Chemistry.
- 10+ years of teaching experience in nanotechnology, physical chemistry, inorganic chemistry, polymer chemistry, organic chemistry, advanced chemical synthesis and instrumental analysis
- 3 years of postdoctoral research experience in USA
- 15+ years of research experience in the field of nanotechnology, polymer chemistry, inorganic chemistry, and material sciences
- Inventor of US and Sri Lankan granted patents (licensed and commercialized)
- Recipient of TWAS research grants 2019 & 2020, Sri Lanka NRC-PPP grant 2019 & USA UTSW Center for Translational Medicine's (CTM) pilot grant 2017
- 15+ years of research experience in instrumentation, nanocharacterization and analytical techniques (FTIR, UV-Vis, mass spectrometry, chromatography, ion mobility PXRD, HPLC, GC-MS, Raman, TGA, DSC, DLS, SEM, TEM, AFM etc.)
- 50+ invited talks and presentations

EDUCATION

Postdoctoral Training Certificate UT Southwestern Medical Center, Dallas, Texas, USA	2015-2018
Doctor of Philosophy Degree (Ph.D.) in Chemistry The University of Texas at Dallas, Department of Chemistry and Biochemistry, Texas, USA	2011-2015
Master of Philosophy Research Degree in Chemical and Process Engineering University of Moratuwa, Sri Lanka	2009-2011
Bachelor of Science (Special Degree) in Chemistry University of Peradeniya, Sri Lanka	2003-2007

FELLOWSHIP OF A PROFESSIONAL BODY

Fellow - Institute of Chemistry Ceylon	since 2023
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EMPLOYMENT

<u>Professor in Chemistry</u> <i>University of Sri Jayewardenepura, Nugegoda, Sri Lanka</i>	2023- present
<u>Senior Lecturer in Chemistry</u> <i>University of Sri Jayewardenepura, Nugegoda, Sri Lanka</i>	2020- 2023
<u>Senior Lecturer (contract basis)</u> <i>University of Sri Jayewardenepura, Nugegoda, Sri Lanka</i>	2019- 2020
<u>Assistant Professor in Chemistry</u> <i>Prairie View A&M university, Texas, USA</i>	2018- 2019
<u>Postdoctoral Researcher</u> <i>Department of Radiology, UT Southwestern Medical Center, Dallas, Texas, USA</i>	2015-2018
<u>Graduate Research/Teaching Assistant</u> <i>Department of Chemistry, University of Texas at Dallas, Texas, USA</i>	2011-2015

<u>Scientist</u> Sri Lanka Institute of Nanotechnology, Sri Lanka	2009-2011
<u>Research and Development Chemist</u> Hayleys Dipped Products PLC, Sri Lanka	2008-2009

RESEARCH EXPERIENCE

Department of Chemistry, University of Sri Jayewardenepura, Nugegoda, Sri Lanka <ul style="list-style-type: none"> Develop visible light active photocatalytic nanomaterials/nanofiber composites for several applications Develop and antimicrobial assessment of metal doped silica nanoparticle hybrid nanofibrous membranes as a promising antimicrobial functional layer Develop amine functionalized mesoporous silica nanoparticles incorporated electrospun cellulose acetate nanofibers for effective removal of hardness in drinking water and kinetic studies Develop the anti-inflammatory molecules loaded layered double hydroxides and release studies Develop functional nanohybrids to minimize the post-harvest loss of fruits and vegetables 	2019-Present
Department of Chemistry, A&M University, Prairie View, Texas, USA <ul style="list-style-type: none"> Magnetic drug nanoparticles composites for drug delivery and other biological applications Develop novel temperature-sensitive antibiotic loaded nanoparticles to eradicate the biofilms infections 	2018-2019
Department of Radiology, UT Southwestern Medical Center, Dallas, Texas, USA Postdoctoral research <ul style="list-style-type: none"> Study the potential to use alternating magnetic fields (AMF) and novel temperature-sensitive antibiotic loaded lipid nanoparticles to eradicate the biofilms infections Study the delivery of nanoparticles to brain tumors using ultrasound opening of the blood–brain barrier (BBB) and low-density lipoprotein (LDL)-docosahexaenoic acid (DHA) nanoparticles 	2015-2018
Department of Chemistry, University of Texas at Dallas, Richardson, Texas, USA Ph.D. dissertation research Advisor: Prof. Kenneth J. Balkus Jr. <ul style="list-style-type: none"> Nanoparticles and nanofiber composites for drug delivery, cancer chemoradiotherapy and other biological applications Study the drug release kinetics from platinum drug loaded nanoparticles, nanocomposites and nanofibers. 	2011-2015
Department of Chemical Engineering, University of Moratuwa, Sri Lanka M.Phil. dissertation research <ul style="list-style-type: none"> Preparation and characterization of drug/nutrient nanoparticles/composites 	2009-2011
Department of Chemistry, University of Peradeniya, Sri Lanka Undergraduate research <ul style="list-style-type: none"> Preparation and characterization of formic acid modified iron oxide nanoparticles for biomedical applications 	2003-2007
Sri Lanka Institute of Nanotechnology, Sri Lanka Research scientist <ul style="list-style-type: none"> Synthesis and characterization of porous nanoparticles and nanocomposites to be used in agricultural applications. 	2009-2011
Hayleys Dipped Products PLC, Sri Lanka Research and development chemist <ul style="list-style-type: none"> Developed dipped gloves based on elastomeric nanocomposites for industrial applications 	2008-2009

TEACHING EXPERIENCE

University of Sri Jayewardenepura, Nugegoda, Sri Lanka Online and classroom teaching for, <ul style="list-style-type: none"> Concepts in inorganic chemistry I Concepts in inorganic chemistry II Chemical kinetics Applications of nanotechnology in industry 	March 2019-Present
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- Inorganic materials
- Solid state chemistry
- Inorganic reaction mechanisms
- Inorganic polymers
- Polymer nanotechnology
- Polymer characterization
- Polymer nanomedicine
- Advanced materials & technology (MSc)
- Characterization of nanomaterials (MSc)

Assistant Professor in Chemistry, A&M University, Prairie View, Texas, USA

2018-2019

- Physical and Inorganic chemistry
- General chemistry

Teaching Assistant, University of Texas at Dallas, Texas, USA

2011-2015

Led weekly lab sessions for,

- Instrumental analysis
- General chemistry
- Introductory organic chemistry laboratory I and II
- Advanced chemical synthesis

VISITING LECTURER

- 1) M.Sc./PG Diploma in Industrial Analytical Chemistry 2019/2020 to present - University of Sri Jayewardenepura
- 2) M.Sc./PG Diploma in Nanotechnology 2020/2021 - University of Moratuwa
- 3) M.Sc. in polymer Science and Technology 2020 - University of Sri Jayewardenepura
- 4) Bachelor of Biosystems Technology, CST 32012- Nanotechnology for Biosystems, 2021, Eastern University of Sri Lanka
- 5) M.Sc. in polymer Science and Technology 2018/2020 - University of Sri Jayewardenepura
- 6) B.Sc. (Honors) Degree - Concept in Inorganic Chemistry (FST 171 1.0), Department of Food Science and Technology - University of Sri Jayewardenepura
- 7) B.Sc. (Honors) Degree - Chemical Kinetics (FST 264 1.0), Department of Food Science and Technology - University of Sri Jayewardenepura
- 8) B.Sc. (Honors) Degree - Nanotechnology in Food Systems (FST 482 1.0), Department of Food Science and Technology - University of Sri Jayewardenepura

HONORS AND AWARDS

- 1) TWAS-Atta-ur-Rahman Award in Chemistry – 2023, The World Academy of Sciences
- 2) Ramakrishna Memorial Award– 2023, Institute of Chemistry Ceylon (ICChemC), Sri Lanka.
- 3) SUSRED awards– 2023, National Science Foundation, Sri Lanka.
- 4) USJP Research Award (Index Publications)– 2023, University of Sri Jayewardenepura, Sri Lanka.
- 5) USJP Research Award (Full Paper Publications in Refereed Journal)– 2023, University of Sri Jayewardenepura, Sri Lanka.
- 6) USJP Research Award (Google Scholar index>15)– 2023, University of Sri Jayewardenepura, Sri Lanka.
- 7) USJP Research Award (Obtaining Patents)– 2023, University of Sri Jayewardenepura, Sri Lanka.
- 8) USJP Research Award (Completion of PhD/MPhil degrees)– 2023, University of Sri Jayewardenepura, Sri Lanka.
- 9) USJP Research Award for Early Career Researcher– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 10) The young scientist award for technology – 2022, National Science and Technology Commission (NASTEC), Young Scientist Forum (YSF), Sri Lanka.
- 11) USJP Research Award (Index Publications)– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 12) USJP Research Award (Full Paper Publications in Refereed Journal)– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 13) USJP Research Award (Google Scholar index>15)– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 14) USJP Research Award (Obtaining Patents)– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 15) USJP Research Award (Completion of PhD/MPhil degrees)– 2022, University of Sri Jayewardenepura, Sri Lanka.
- 16) OWSD-Elsevier Foundation Awards for Early-Career Women Scientists in the Developing World-2021

- 17) USJP Research Award (Full Paper Publications in Refereed Journal)– 2021, University of Sri Jayewardenepura, Sri Lanka.
- 18) USJP Research Award (Index Publications)– 2021, University of Sri Jayewardenepura, Sri Lanka.
- 19) USJP Research Award (Google Scholar index>15)– 2021, University of Sri Jayewardenepura, Sri Lanka.
- 20) USJP Research Award (Obtaining Patents)– 2021, University of Sri Jayewardenepura, Sri Lanka.
- 21) USJP Research Award (Index Publications)– 2020, University of Sri Jayewardenepura, Sri Lanka.
- 22) Award for Translational Pilot Grant Program 2017-2018, UT Southwestern Center for Translational Medicine (CTM), USA, 2017.
- 23) Society for Thermal Medicine New Investigator Travel Award – 2017, (Jayne Koskinas Ted Giovanis Foundation), USA.
- 24) Research Day Award: Best Basic Science Poster Presentation – 2016
Radiology department, University of Texas Southwestern Medical Center, USA
Presentation: “Localized Delivery of Docosahexaenoic Acid Loaded Low-Density Lipoprotein Nanoparticles to the Rat Brain Using Focused Ultrasound”
- 25) Natural sciences and mathematics scholarship, 2011-2015
School of natural science and mathematics, University of Texas at Dallas, USA
- 26) 1st Place - American Chemical Society meeting in miniature graduate student competition, USA – 2015
Talk: “Nitric oxide and cisplatin releasing wrinkle amine mesoporous silica nanoparticles for treatment of non-small cell lung carcinoma”
- 27) Finalist – The Fiber society’s graduate student paper competition, USA – 2014
- 28) 2nd place – The Fiber society’s graduate student competition, USA – 2014
Talk: “Novel radiotherapeutic electrospun acrylonitrile-based fiber mats for the treatment of skin cancer”
- 29) 2nd Place - American Chemical Society meeting in miniature graduate student competition, USA – 2014
Talk: “Novel chemoradiotherapeutic magnetic nanoparticles for targeted treatment of non-small cell lung cancer”
- 30) Betty and Gifford Johnson graduate scholarship – 2013
School of natural science and mathematics, University of Texas at Dallas, USA
- 31) National science & technology award, Sri Lanka – 2010
Category - Innovative advanced technologies with commercial potential
(Awarded by the president of democratic socialist republic of Sri Lanka)

PUBLICATIONS

2025

- 1) Sisitha Rajapaksha, Piumika Yapa, **Imalka Munaweera**, Innovation management and nanotechnology: a PRISMA-based analysis and research implications, *International Journal of Innovation Science*, 2025.
- 2) Saranya Selvaraj, Monali Perera, Piumika Yapa, **Imalka Munaweera**, Inoka C Perera, Tharindu Senapathi, Laksiri Weerasinghe, *In vitro* Analysis of XLAsp-P2 Peptide Loaded Cellulose Acetate Nanofiber for Wound Healing, *Journal of Pharmaceutical Sciences*, 2025, 911-922.
- 3) Janitha Jayapamoda Mahanthe, L Karunanayake, **Imalka Munaweera**, DAS Amarasinghe, KAKEI Dharmapala, Hashma Imnizar, Investigating the aspect ratio and concentration of ZnO nanoparticles as a filler to improve the electrical, thermal and mechanical properties of rubber composites, *Journal of Rubber Research*, 2025, 1-17.
- 4) Sanduni Dabare, Sisitha Rajapaksha, **Imalka Munaweera**, Empowering innovative strategies: Utilizing polymer-based nanotechnology for the prevention, control, and detection of aflatoxins, ochratoxins, and fusarium toxins in food systems, *Grain & Oil Science and Technology*, 2025.
- 5) Piumika Yapa, Sisitha Rajapaksha, **Imalka Munaweera**, The integration of nanotechnology, nanomedicine, and artificial intelligence for advancements in healthcare: a Conceptual Review Based on PRISMA Method and Future Research Directions, *Next Research*, 100330, 2025.

2024

- 6) PN Yapa, **I Munaweera**, C Sandaruwan, L Weerasinghe, MM Weerasekera, Metal doped silica nanohybrids with extensive bacterial coverage for antibacterial applications exhibit synergistic activity, *Biomaterials Advances*, 2024, 157, 213753.
- 7) Piumika Yapa, **Imalka Munaweera**, Manjula M Weerasekera, Laksiri Weerasinghe, Synergistic antimicrobial nanofiber membranes based on metal incorporated silica nanoparticles as advanced antimicrobial layers, *RSC Adv*, 2024, 14, 33919-33940.
- 8) Maheshika Sethunga, Katugampalage Don Prasanna Priyantha Gunathilake, Kamburawala Kankanamge Don Somathilaka Ranaweera, **Imalka Munaweera**, Antimicrobial and antioxidative electrospun cellulose acetate-

essential oils nanofibrous membranes for active food packaging to extend the shelf life of perishable fruits, *Innovative Food Science & Emerging Technologies*, 2024, 103802 (97).

- 9) P Yapa, **I Munaweera**, MM Weerasekera, L Weerasinghe, C Sandaruwan, Potential antifungal applications of heterometallic silica nanohybrids: A synergistic activity, *Biomaterials Advances*, 2024 162, 213930.
- 10) PN Yapa, **I Munaweera**, MM Weerasekera, L Weerasinghe, Nanoarchitectonics for synergistic activity of multimetallic nanohybrids as a possible approach for antimicrobial resistance (AMR), *Journal of Biological Inorganic Chemistry*, 2024, 1-22.
- 11) Piyumi Kodithuwakku, Dilushan Jayasundara, **Imalka Munaweera**, Randika Jayasinghe, Tharanga Thoradeniya, Achala Bogahawatta, KR Jaliya Manuda, Manjula Weerasekera, Nilwala Kottegoda, Ilmenite-Grafted Graphene Oxide as an Antimicrobial Coating for Fruit Peels, *ACS Omega* 2024, 9, 24, 26568–26581.
- 12) Ineesha Piumali Madhushika, Piumika Yapa, **Imalka Munaweera**, Chanaka Sandaruwan, MM Weerasekera, The antimicrobial synergy of polymer based nanofiber mats reinforced with antioxidants intercalated layered double hydroxides as a potential active packaging material, *Nano Express*, 2024, 5 025018.
- 13) Kithmini Ranathunga, Piumika Yapa, **Imalka Munaweera**, MM Weerasekera, Chanaka Sandaruwan, Preparation and characterization of Fe–ZnO cellulose-based nanofiber mats with self-sterilizing photocatalytic activity to enhance antibacterial applications under visible light, *RSC Adv.*, 2024, 14, 18536-18552
- 14) Sehan Jayasinghe, **Imalka Munaweera**, Chandani Perera, Dumindu P Siriwardena, Nilwala Kottegoda, Low-Carbon-Footprint Plasma-Functionalized Coconut-Coir-Based Porous Carbon as an Efficient and Sustainable Adsorbent, *ChemistrySelect*, 2024, 9(13), e202305164.
- 15) Aseni S Pathiraja, Senuri Kumarage, **Imalka Munaweera**, Chanaka Sandaruwan, Amino Silica Nanohybrid Membranes for Enhanced Removal of Cu (II) Ion in Aqueous Solutions, *Water, Air, & Soil Pollution*, 2024, 235(4), 1-17.
- 16) Sachini D Deshapriya, **Imalka Munaweera**, Visible-Light-Active Electrospun Membranes Based on Cobalt-Doped ZnO Nanohybrids: Applications for Food Packaging, *ChemistrySelect*, 2024, 9(9), e202303830.
- 17) Aseni Sahasri Pathiraja, **Imalka Munaweera**, Innovative nanotechnology-based sustainable food packaging: A brief review, *JSFA Reports*, 2024, 4(1), 19-32.
- 18) S.M.M.C. Sethunga, K.K.D.S. Ranaweera, **I. Munaweera** and K.D.P.P. Gunathilake, In-Vitro Antioxidant Activity of Essential Oils and Oleoresins of Cinnamon, Clove bud, Ginger and their synergistic interactions, *Ceylon Journal of Science*, 2024, 53 (1), 5-13.

2023

- 19) Senuri Kumarage, **Imalka Munaweera**, Chanaka Sandaruwan, Laksiri Weerasinghe, Nilwala Kottegoda, Electrospun amine-functionalized silica nanoparticles–cellulose acetate nanofiber membranes for effective removal of hardness and heavy metals (As(v), Cd(II), Pb(II)) in drinking water sources, *Environ. Sci.: Water Res. Technol.*, 2023, 9, 2664-2679.
- 20) C Madhusha, T Jayasundara, **I Munaweera**, C Perera, G Wijesinghe, M Weerasekera, C Sandaruwan, A Meiyazhagan, FC Robles Hernandez, PM Ajayan, N Kottegoda, Synthesis and structural characterization of copper nanoparticles doped activated carbon derived from coconut coir for drinking water purification, *Materials Today Chemistry*, 2023, 27, 101312.
- 21) Manesha Fernando, **Imalka Munaweera**, Nilwala Kottegoda, Preparation and Characterization of a Plant-Nutrient-Loaded Cellulose Acetate Nanofiber Mat as a Potential Slow-Release Fertilizer, *Ind. Eng. Chem. Res. (ACS)*, 2023, 62, 51, 22149–22154.
- 22) Maheshika Sethunga, M.M.K.D. Ranasinghe, K.K.D.S. Ranaweera, **Imalka Munaweera**, K.D.P.P. Gunathilake, Synergistic antimicrobial activity of essential oils and oleoresins of cinnamon (*Cinnamomum zeylanicum*), clove bud (*Syzygium aromaticum*) and ginger (*Zingiber officinale*), *Biocatalysis and Agricultural Biotechnology*, 2023, 51, 102800.
- 23) Maheshika Sethunga, Kamburawala Kankanamge Don Somathilaka Ranaweera, **Imalka Munaweera**, Katugampalage Don Prasanna Priyantha Gunathilake, Optimization of enzyme-assisted extraction of essential oils of *Cinnamomum zeylanicum*, *Syzygium aromaticum*, and *Zingiber officinale*, by response surface methodology, *JSFA Reports*, 2023, 3(19), 19-29.
- 24) Chamalki Madhusha, Kavindya Weerasinghe, **Imalka Munaweera**, Chandani Perera, Gayan Wijesinghe, Manjula Weerasekera, Yugantha Idangodage, CS Kalpage, Nilwala Kottegoda, Phosphate functionalized activated carbon sachet filters for drinking water purification, *Environmental Science: Water Research & Technology*, 2023, 9, 193-210.
- 25) Kasun L Seneviratne, **Imalka Munaweera**, Sriyani E Peiris, Piyumi Kodithuwakku, Colin N Peiris, Nilwala Kottegoda, Visible Light Active Silver Decorated Iron Titanate/Titanium Dioxide Nanohybrid for Sterilization of Explants Grown by In Vitro Technique, *Advanced Materials Technologies*, 2023, 2201292.
- 26) Manesha Fernando, **Imalka Munaweera**, Nilwala Kottegoda, Potential Applications of Electrospun Nanofibers in Agriculture, *Current Scientia*, 1-23, 2023.

- 27) Sayani Nimanka, Nimshi Fernando, Madhavi de Silva, **Imalka Munaweera**, Nilwala Kottegoda, Climate Smart Agriculture: The Role of Fertilizer Innovations and Efficient Plant Nutrient Management, *Current Scientia*, 73-99, 2023.
- 28) Aseni Sahasri Pathiraja, **Imalka Munaweera**, Nilwala Kottegoda, Surface Functionalized Mesoporous Silica Nanoparticles for Enhanced Removal of Heavy Metals: A Review, *Current Scientia*, 24-44, 2023.
- 29) Peiris, S. E., Seneviratne, K. L., Shashikala, R. P. A., Peiris, Colin N., **Imalka, M.** & Piumika, Y. P. In Vitro Evaluation of Antibacterial Activity of Copper and Sulfur Nanoparticles for Controlling Bacterial Blight Caused by *Xanthomonas* sp. in *Anthurium andraeanum* Lind, *SLIIT J Hum & Sci.*, 46-55, 2023.

2022

- 30) Piyumi Kodithuwakku, Dilushan Jayasundara, **Imalka Munaweera**, Randika Jayasinghe, Tharanga Thoradeniya, Manjula Weerasekera, Pulickel M Ajayan, Nilwala Kottegoda, A review on recent developments in structural modification of TiO₂ for food packaging applications, *Progress in Solid State Chemistry*, 2022, 67, 100369.
- 31) Maheshi Sethunga, KKDS Ranaweera, KDPP Gunathilake, **Imalka Munaweera**, Recent advances in the extraction methods of essential oils and oleoresins from plant materials and its potential applications: A comprehensive review, *Journal of Food and Bioprocess Engineering*, 2022, 5(2), 151-167.
- 32) Prasad Disanayake, Chamalki Madhusa, **Imalka Munaweera**, Gayan Wijesinghe, Manjula Weerasekera, Samitha Deraniyagala, Nilwala Kottegoda, Microwave-Assisted Synthesis of Cobalt-Doped Rutile/Ilmenite Derived from Natural Sands as Visible-Light-Active Photocatalytic and Antimicrobial Agents, 2022, *ChemistrySelect*, 7(33), e202202598.
- 33) Chamalki Madhusa, Madhavi De Silva, **Imalka Munaweera**, Chandani Perera, Nilwala Kottegoda, The Quest for Sustainable Catalysis through Transition Metal Doped Carbonbased Single-Atom Catalysts, 2022, *Iranian Journal of Catalysis*, 12(3), 261-282.
- 34) Sehan Jayasinghe, Pasan Siriwardena, **Imalka Munaweera**, Chandani Perera, Nilwala Kottegoda, Sustainable Synthesis of Highly Functionalized Activated Carbon using Plasma Technology, *Chempluschem*, 2022, 87(10), e202200202.
- 35) Senuri Kumarage, Chamalki Madhusa, **Imalka Munaweera**, Nilwala Kottegoda, Application of Metal/Metal Oxide Doped Electrospun Nanofiber Membranes in Sustainable Catalysis, *Current Scientia*, 2022, 25(01), 26-42.
- 36) Senuri Kumarage, **Imalka Munaweera**, Nilwala Kottegoda, A comprehensive review on electrospun nanohybrid membranes for wastewater treatment, *Beilstein Journal of Nanotechnology*, 2022, 137-159.
- 37) Thilini Amarasinghe, Chamalki Madhusa, **Imalka Munaweera**, Nilwala Kottegoda, Review on Mechanisms of Phosphate Solubilization in Rock Phosphate Fertilizer, *Communications in Soil Science and Plant Analysis*, 2022, 944-960.
- 38) Senuri Kumarage, **Imalka Munaweera**, Nilwala Kottegoda, Contemporary, Multidisciplinary Roles of Mesoporous Silica Nanohybrids/Nanocomposites, *ChemistrySelect*, 2022, e202200574.

2021

- 39) Kasun L Seneviratne, **Imalka Munaweera**, Sriyani E Peiris, Colin N Peiris, Nilwala Kottegoda, Recent Progress in Visible-Light Active (VLA) TiO₂ Nano-Structures for Enhanced Photocatalytic Activity (PCA) and Antibacterial Properties: A Review, *Iranian Journal of Catalysis*, 2021, 11, 217-245.
- 40) Chamalki Madhusa, Kumudu Rajapaksha, **Imalka Munaweera**, Madhavi de Silva, Chandani Perera, Gayan Wijesinghe, Manjula Weerasekera, Dinesh Attygalle, Chanaka Sandaruwan, Nilwala Kottegoda, A Novel Green Approach to Synthesize Curcuminoid-Layered Double Hydroxide Nanohybrids: Adroit Biomaterials for Future Antimicrobial Applications, *ACS omega*, 2021, 6, 9600-9608.
- 41) Chamalki Madhusa, **Imalka Munaweera**, Nilwala Kottegoda, Functional nanomaterials as smart food packaging: A Brief, *African Journal of Agriculture and Food Science*, 2021, 3, 58-78.

2020

- 42) Chamalki Madhusa, **Imalka Munaweera**, Veranja Karunaratne, Nilwala Kottegoda, A Facile Mechanochemical Approach to Synthesizing Edible Food Preservation Coatings Based On Alginate/Ascorbic Acid-Layered Double Hydroxide Bio-Nanohybrids, *Journal of Agricultural and Food Chemistry*, 2020, 68, 8962-8975.

2018

- 43) Chenchen Bing, Yu Hong, Christopher Hernandez, Megan Rich, Bingbing Cheng, **Imalka Munaweera**, Debra Szczepanski, Yin Xi, Mark Bolding, Agata Exner, Rajiv Chopra, Characterization of different bubble formulations

for blood-brain barrier opening using a focused ultrasound system with acoustic feedback control, *Nature Scientific Reports*, 2018, 8, 7986.

- 44) **Imalka Munaweera**, Sumbul Shaikh, Danny Maples, Ashish Ranjan, David Greenberg, Rajiv Chopra, Temperature-Sensitive Liposomal Ciprofloxacin for the Treatment of Biofilm on Infected Metal Implants using Alternating Magnetic Fields, *International Journal of Hyperthermia*, 2018, 34, 189-200. (Special issue - Thermal Therapy and Infectious diseases).

2017

- 45) Rajiv Chopra, Sumbul Shaikh, Yonatan Chatzinoff, **Imalka Munaweera**, Bingbing Cheng, Seth M. Daly, Yin Xi, James J. Howard, Joris Nofiele, Chenchen Bing, Dennis Burns, David E Greenberg, Employing high-frequency alternating magnetic fields for the non-invasive treatment of prosthetic joint infections, *Nature Scientific Reports*, 2017, 7, 7520.
- 46) Nadeesh Madusanka, Chanaka Sandaruwan, Nilwala Kottegodaa, Dinaratne Sirisena, **Imalka Munaweera**, Ajith De Alwis, Veranja Karunaratne, Gehan A.J. Amaratung, Urea-hydroxyapatite-montmorillonite nanohybrid composites as slow release nitrogen compositions, *Applied Clay Science*, 2017, 150, 303–308.

2016

- 47) Rohit S Mulik, Chenchen Bing, Michelle Ladouceur-Wodzak, **Imalka Munaweera**, Rajiv Chopra, Ian R Corbin, Localized delivery of low-density lipoprotein docosaheptaenoic acid nanoparticles to the rat brain using focused ultrasound, *Biomaterials*, 2016, 83, 257-268.
- 48) **Imalka Munaweera**, Michael Trinh, Jessica Hong, and Kenneth J. Balkus Jr. Chemically Powered Nanomotor as a Delivery Vehicle for Biologically Relevant Payloads, *Journal of Nanoscience and Nanotechnology*, 2016, 16, 9063-9071.
- 49) Bhuvaneswari Koneru, Yi Shi, **Imalka Munaweera**, Mary Wight-Carter, Humam Kadara, Hong Yuan, Anthony J Di Pasqua, Kenneth J Balkus Jr. Radiotherapeutic bandage for the treatment of squamous cell carcinoma of the skin, *Nuclear medicine and biology*, 2016, 43, 333-338.

2015-2011

- 50) **Imalka Munaweera**, Shi Yi, Bhuvaneswari Koneru, Ruben Saez, Ali Aliev, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Chemoradiotherapeutic magnetic nanoparticles for targeted treatment of non-small cell lung cancer, *Mol. Pharmaceutics*, 2015, 12, 3588–3596.
- 51) **Imalka Munaweera**, Yi Shi, Bhuvaneswari Koneru, Amit Patel, Mai H. Dang, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Nitric oxide and cisplatin releasing wrinkle amine mesoporous silica nanoparticles for treatment of non-small cell lung carcinoma, *Journal of Inorganic Biochemistry*, 2015, 153, 23-31.
- 52) **Imalka Munaweera**, Ali Aliev, Kenneth J. Balkus, Jr. Electrospun cellulose acetate-garnet nanocomposite magnetic fibers for bioseparations, *ACS Applied Materials & Interfaces*, 2014, 6, 244–251.
- 53) **Imalka Munaweera**, Bhuvaneswari Koneru, Yi Shi, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Chemoradiotherapeutic wrinkled mesoporous silica nanoparticles for use in cancer therapy, *APL Materials*, 2014, 2, 113315 (Invited paper).
- 54) **Imalka Munaweera**, Daniel Levesque-Bishop, Shi Yi, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Radiotherapeutic bandage based on electrospun polyacrylonitrile containing holmium-166 iron garnet nanoparticles for the treatment of skin cancer. *ACS Applied Materials & Interfaces*, 2014, 6, 22250–22256.
- 55) **Imalka Munaweera**, Jessica Hong, Alicia D'Souza, Kenneth J. Balkus Jr. Novel wrinkled periodic mesoporous organosilica nanoparticles for hydrophobic anticancer drug delivery. *Journal of Porous Materials*, 2014, 22, 1-10.
- 56) G P Gunaratne, Nilwala Kottegodaa, Nadeesh Madusanka, **Imalka Munaweera**, Chanaka Sandaruwan, W M G I Priyadarshana, Asitha Siriwardhana, B A D Madhushanka, U A Rathnayake, Veranja Karunaratne, Two new plant nutrient nanocomposites based on urea coated hydroxyapatite: Efficacy and plant uptake, *Indian Journal of Agricultural Sciences*, 86, 494–9.
- 57) Nilwala Kottegodaa, **Imalka Munaweera**, Nadeesh Madusanka, Dinaratne Sirisena, Nimal Dissanayaka, Gihan A.J. Amaratunga and Veranja Karunaratne, The advent of nanotechnology in smart fertilizer, *World Agriculture*, 2012, 3, 27-31.
- 58) Nilwala Kottegodaa, **Imalka Munaweera**, Nadeesh Madusanka and Veranja Karunaratne, A green slow release fertilizer composition based on urea modified hydroxyapatite nanoparticles encapsulated wood, *Current Science*, 2011, 101, 73-78.

PATENTS - International

- 1) Iron garnet nanoparticles for cancer radiotherapy and chemotherapy, Anthony J. Di Pasqua, Kenneth J. Balkus Jr., **Imalka Munaweera**, Yi Shi, United States Patent US9808543, Nov. 7, 2017. (Granted & Licensed).
- 2) Iron garnet nanoparticles for cancer radiotherapy and chemotherapy, Anthony J. Di Pasqua, Kenneth J. Balkus Jr., **Imalka Munaweera**, Yi Shi, United States Patent and US10195297, Feb. 5, 2019. (Granted & Licensed).
- 3) Compositions for sustained release of agricultural macronutrients and process thereof, Nilwala Kottegoda, **Imalka Munaweera**, Nadeesh Madusanka and Veranja Karunaratne, United States Patent Publication: US8361185 B2, Jan. 29, 2013. (Granted & Commercialized)
- 4) A cellulose based sustained release macronutrient composition for fertilizer application, Nilwala Kottegoda, **Imalka Munaweera**, Nadeesh Madusanka, Sunanda Gunasekara, Lilantha Samaranayake, Ajith De Alwis and Veranja Karunaratne, United States Patent Publication: US8617284 B2, Dec. 13, 2013. (Granted & Commercialized).
- 5) A method of making silver-iron titanate nanoparticles and uses thereof, Kasun Laknath Seneviratne, **Imalka Munaweera**, Sriyani Edussuriya Peiris, Colin Nisantha Peiris, Nilwala Kottegoda, US20240051842A1, Feb.15, 2024.
- 6) Nilwala Kottegoda, Imalka Munaweera, Nadeesh Madusanka, Ajith De Alwis, Sunanda Gunasekara, Veranja Karunaratne, A Cellulose Based Sustained Release Macronutrient Composition for Fertilizer Application, MX336854B, 2016-01-05 (Mexico patent).
- 7) Nilwala Kottegoda, Imalka Munaweera, Nadeesh Madusanka, Ajith De Alwis, Sunanda Gunasekara, Veranja Karunaratne, A Cellulose Based Sustained Release Macronutrient Composition for Fertilizer Application, AP3633A, 2016-03-08 (ARIPO patent).
- 8) Nilwala Kottegoda, Imalka Munaweera, Nadeesh Madusanka, Ajith De Alwis, Sunanda Gunasekara, Veranja Karunaratne, A Cellulose Based Sustained Release Macronutrient Composition for Fertilizer Application, ZA201209065B, 2014-06-25 (South Africa patent).
- 9) Elastomeric polymer/spinel nanoparticles composites to introduce special properties to dipped articles, W.S.Fernando, L.P.Nethsinghe, N.S.Kottegoda and **M.T.I.S.Munaweera**, PCT/IB2009/051158, WO/2010/046789, April. 29, 2010.
- 10) Method of making a nano-fertilizer composition for sustained release of macronutrients, K.T.H. Piumi Ayesha Lakmini Peiris, Manikkuwadu Thilini Uthpala Amarasinghe, **M.T. Imalka Shanika Munaweera**, Nanayakkara Liyanage Veranja Vipul Karunaratne, Nilwala Svetlana Kottegoda, PCT/IB2022/051529, WO/2022/180504, Sep.01, 2022.
- 11) A method of making silver-iron titanate nanoparticles and uses thereof, Kasun Laknath Seneviratne, **Imalka Munaweera**, Sriyani Edussuriya Peiris, Colin Nisantha Peiris, Nilwala Kottegoda, PCT/IB2021/053178, WO/2022/219380, Oct.10, 2022.
- 12) Chamalki Madhusa, **Imalka Munaweera**, A.D.L. Chandani Perea, Kavindya Weerasinghe, Sehan Jayasinghe, Idangodage Yugantha Chathuranga Perera, Tissa Dodangoda, C.S. Kalpage, Nilwala Kottegoda, A process for manufacturing functionalized activated nanoporous carbon and use thereof, PCT/IB2022/051863, WO2023166331A1, July.09, 2023.

PATENTS – Local

- 13) Dipped gloves based on elastomeric nanocomposites, W.S.Fernando, L.P.Nethsinghe, N.S.Kottegoda and **M.T.I.S.Munaweera**, Sri Lanka Patent Application No: 15164, 2011.
- 14) Thilini Uthpala Amarasinghe, **Imalka Munaweera**, Veranja Karunaratne, Nilwala Kottegoda, A Composition and Method to Manufacture Nano-Rock Phosphate and Urea Modified Nano-Rock Phosphate for fertilizer applications, Sri Lanka patent application No: 21626, 2021.
- 15) Piyumi Kanchana, Imalka Munaweera, Dilushan Jayasundara, Randika Jayasinghe, Tharanga Thoradeniya, Nilwala Kottegoda, Modified ilmenite nanohybrid materials for food packaging applications and a mechanochemical method of preparation thereof, Sri Lanka patent application No: 21845, 2023.
- 16) Namal Arachchilage Kasun Laknath Seneviratne, **Imalka Munaweera**, Sriyani Edussuriya Peiris, Colin Nisantha Peiris, Nilwala Kottegoda, A method of making silver-iron titanate nanoparticles and uses thereof, Sri Lanka patent application No: 22180, 2023.
- 17) Chamalki Madhusa, Imalka Munaweera, A.D.L. Chandani Perea, Kavindya Weerasinghe, Sehan Jayasinghe, Idangodage Yugantha Chathuranga Perera, Tissa Dodangoda, C.S. Kalpage, Nilwala Kottegoda, A process for manufacturing functionalized activated nanoporous carbon and use thereof, Sri Lanka patent application No: 22195, 2022. (Status – Patent filed)
- 18) Chamalki Madhusa, Imalka Munaweera, Chandani Perera, Gayan Wijesinghe, Manjula Weerasekera, Nilwala Kottegoda, Electrospun activated carbon nanofibrous membrane as an efficient and multi-purpose smart nanomaterial for drinking water purification, Sri Lanka patent application No: 22287, 2022. (Status – Patent filed)

- 19) Senuri Hansika Kumarage, **Imalka Munaweera**, Chanaka Sandaruwan, Laksiri Weerasinghe, Nilwala Svetlana Kottegoda, A portable filter with incorporated amine functionalized silica nanoparticles in electrospun cellulose acetate nanofibers for effective removal of hardness and heavy metals in drinking water sources, Sri Lanka patent application No: 22661, 2023. (Status – Patent filed)
- (19) Yapa Mudiyansele Piumika Nisansala Yapa, **Imalka Munaweera**, Manjula Manoji Weerasekara, Rankothge Laksiri Prasanna Weerasinghe, An anti-microbial functional layer and the process of making thereof, Sri Lanka patent application No: 22761, 2023. (Status – Patent filed)
- (20) Sethunga Mudiyansele Maheshika Chathurangane Sethunga, **Imalka Munaweera**, Kamburawala Kankanamge Don Somathilake Ranaweera, Katugampalage Don Prasanna Priyantha Gunathilake, Active food packaging membrane for shelf-life enhancement and the method of preparation, Sri Lanka patent application No: 22762, 2023. (Status – Patent filed)

*Patents 3 and 4 above have been extended to China, Mexico, Brazil, Australia, Canada, ARIPO, European Union, India, Vietnam, Philippines, Indonesia, Malaysia, South Africa, and Nigeria.

INNOVATIONS LEADING TO SALE OF TECHNOLOGY

Two patents (1 and 2 above) were licensed to DB Therapeutics pharmaceutical startup company, USA.
Two patents (3 and 4 above) were purchased by Nagarjuna Fertilizer Ltd., India.

BOOKS

- 1) Characterization Techniques for Nanomaterials, CRC Press, 2023
Imalka Munaweera, M.L. Chamalki Madhusa
ISBN: 9781032406619 (hbk)
ISBN: 9781032406640 (pbk)
ISBN: 9781003354185 (ebk)
DOI: 10.1201/9781003354185
- 2) Smart Nanomaterials, CRC Press, 2023
Imalka Munaweera, M.L. Chamalki Madhusa
ISBN: 9781032416175 (hbk)
ISBN: 9781032432243 (pbk)
ISBN: 9781003366270 (ebk)
DOI: 10.1201/9781003366270
- 3) Principles and Applications of Nanotherapeutics, CRC Press, 2024
Imalka Munaweera, Piyumika Yapa
ISBN: 978-1-032-53875-4 (hbk)
ISBN: 978-1-032-58034-0 (pbk)
ISBN: 978-1-003-44220-2 (ebk)
DOI: 10.1201/9781003442202
- 4) Nanotechnology in Drug Discovery, Bentham Books, 2024
Laksiri Weerasinghe, **Imalka Munaweera**, Senuri Kumarage
ISBN: 978-981-5238-82-2 (Print)
ISBN: 978-981-5238-81-5 (Online)
Year of Publication: 2024
DOI: 10.2174/97898152388151240101

BOOK CHAPTERS

- 1) Susanthi Jayasinghe, **Imalka Munaweera**, Disni Dedunupitiya, Chamalki Madhusa, Nilwala Kottegoda and Veranja Karunaratne, Recent Patents and Commercially Available Nanotherapeutics on Hepatocellular Carcinoma, Nanotherapeutics for the Treatment of Hepatocellular Carcinoma, 2022, 449-490, Book: Nanotherapeutics for the Treatment of Hepatocellular Carcinoma, Bentham Science Publisher. ISBN: 978-981-5039-76-4.
- 2) **Imalka Munaweera**, Susanthi Jayasinghe, Dimanthi Uduwela, Chamalki Madhusa, D. Nedra Karunaratne, Veranja Karunaratne, Nanotheranostics and Cancer Prognosis, Diagnosis and Therapy, Book: Novel Molecular Oncotargets and Nano-Oncotherapeutics, 2023, 285-350, Cambridge Scholars Publishing. ISBN (13): 978-1-5275-0713-5.
- 3) Senuri Kumarage, Laksiri Weerasinghe, **Imalka Munaweera**, Advanced mass spectrometry for organic contaminants detection, Book: Applications of Modern Mass Spectrometry, 2023, Vol. 2, 1-54, Bentham Science Publisher. ISBN: 978-981-5050-07-3.
- 4) Wathsala Dissanayake, Madhavi de Silva, **Imalka Munaweera**, Veranja Karunaratne, Nilwala Kottegoda, Nanotechnology-based urea delivery systems as climate-smart fertilizers: Current status and beyond, Book: Nanofertilizer Delivery, Effects and Application Methods. 2024, 483-496, Elsevier Publisher. ISBN: 9780443133329.
- 5) Senuri Kumarage, **Imalka Munaweera**, Graphene-Based Hybrid Photocatalysts for Environmental Remediation, 2024, Vol. 2, 1-54, Springer Publisher. ISBN: 978-3-031-68464-7.

NEWS PAPER ARTICLE

Imalka Munaweera, Chamalki Madhusa, Insights of nanotechnology in Covid-19: Therapy, detection, and prevention, The Morning, Friday, July 9, 2021, Page 5-6.

RESEARCH GRANTS

- (1) TWAS research grant 2020
20-102 RG/CHE/AS_I – FR3240314134
Role: PI, University of Sri Jayewardenepura
Amount: USD 14200
Duration: Two-years
Project: Electrospun membranes for multi-purpose nano-water filters
- (2) National Research Council Private Public Partnership Grant 2019
NRC PPP-2019
Role: Co-PI, University of Sri Jayewardenepura
Amount: Rs. 42 M
Duration: Three-years
Project: Waste coconut coir based multi-purpose nano-water filters
- (3) TWAS research grant 2019
19-237 RG/CHE/AS_G – FR3240310129
Role: Co-PI, University of Sri Jayewardenepura
Amount: USD 35,980
Duration: Two-years
Project: Functional Alginate-TiO₂-graphene oxide nanohybrids to minimize the post-harvest loss of fruits and vegetables
- (4) USJP research grant 2022
ASP/01/RE/SCI/2022/15
Role: PI, University of Sri Jayewardenepura
Amount: LKR 2,977,053
Duration: Two-years
Project: Hybrid nanofibrous membranes as a promising antibacterial functional layer for personal protection equipment: development and antibacterial assessments

- (5) USJP research grant 2021
ASP/01/RE/SCI/2021/23
Role: PI, University of Sri Jayewardenepura
Amount: LKR 2,846,157
Duration: Two-years
Project: Development of low-cost nanotechnology-based water filter using bio-based material to remove the heavy metals (Cd, Pb, and As) in contaminated water and to effectively remove hardness in domestic drinking water.
- (6) USJP research grant 2021
ASP/01/RE/SCI/2021/24
Role: Co-PI, University of Sri Jayewardenepura
Amount: LKR 2,534,000
Duration: Two-years
Project: A novel plasma assisted synthesis of coir based activated carbon for toxic gas adsorption.
- (7) USJP research grant 2021
ASP/01/RE/SCI/2021/12
Role: Co-PI, University of Sri Jayewardenepura
Amount: LKR 2,998,834.85
Duration: Three-years
Project: Nanoencapsulation of Optimized volatile, Non-Volatile extracts and bioactive compounds in selected spices.
- (8) USJP research grant 2022
ASP/01/RE/SCI/2022/90
Role: Co-PI, University of Sri Jayewardenepura
Amount: LKR 2,997,000
Duration: Two-years
Project: Study to assess the crystalline biofilm formation of *P. mirabillis* on in situ silicon foley catheter material and evaluation of biofilm suppression by selected medicinal plant extracts.
- (9) UTSW Translational Pilot Program 2017-2018 Funding-Approved
The University of Texas Southwestern Medical School, USA
Role: PI
Amount: \$35000
Duration: one-year
Project: Non-invasive treatment of prosthetic joint infections using alternating magnetic fields

JOURNAL REVIEW

ChemistrySelect, JSFA, International Journal of Materials Science and Applications, American Journal of Nanoscience and Nanotechnology, American Journal of Health Research and SOP Transaction on Analytical Chemistry, Groundwater for Sustainable Development, Journal of Hazardous Materials, Kalyani Journal-UOK, Rjarata University Journal, Ceylon Journal of Science-UOP, RRISL journal (Rubber Research Institute), Vidyodaya Journal of Science.

RESOURCE PERSON:

- 1) Diploma in Quality Management at Sri Lanka Standards Institution -2023
Lecture Topic: Introduction to Nanotechnology and It's Applications.
- 2) "The Sri Lankan women and IP: right brain for national development" organized by National Innovation Agency celebrating World Intellectual Property Day - 2023
- 3) Diploma in Quality Management - Sri Lanka Standards Institution - 2022
Lecture Topic: Introduction to Nanotechnology and It's Applications
- 4) Smart Materials and Technology for the CSA Part I and Part II – City School of Architecture- 2022
Lecture Topic: Smart Materials/ Nanotechnology
- 5) 3rd conference of college of Biochemists of Sri Lanka 2021-Natural Products and Microbes for Health and Sustainability - College of Biochemists of Sri Lanka (CBSL)

- 6) Introduction to Nanomedicine - College of Biochemists of Sri Lanka (CBSL)
- 7) Smart Materials and Technology for the CSA Part I and Part II – City School of Architecture- 2021
Lecture Topic: Smart Materials/ Nanotechnology
- 8) Workshop in laboratory techniques, good laboratory practices, measurements and safety in laboratory, University of Sri Jayewardenepura, 2021
- 9) Workshop on Advanced Scientific Instruments, University of Sri Jayewardenepura/Sri Lanka Association for the Advancement of Science, 2019
- 10) Delivering a lecture on the topic “Application of a simultaneous TGA-DSC thermal analysis system, University of Sri Jayewardenepura/Sri Lanka Association for the Advancement of Science, 2019.

PROFESSIONAL ACTIVITIES:

- 1) Editorial review panel member for Nanotechnology– “Vidya E-News”, Research and Innovation Division, Ministry of education - skills developments, vocational education, research and innovation division. 2021 – present.
- 2) Reviewer
 - Technical Sessions, Institute of Chemistry Ceylon- 2023
 - 9th Annual Research Congress “RESCON 2022” - Postgraduate Institute of Science, University of Peradeniya.
 - International Conference on Applied and Pure Sciences, ICAPS 2022- University of Kelaniya.
 - International Conference on Multidisciplinary Approaches (ICMA 2022) – FGS - University of Sri Jayewardenepura.
 - International Research Conference in Health Sciences 2022 (IRCHS 2022) - University of Sri Jayewardenepura.
 - PGIS Research Congress 2021- University of Peradeniya
 - SICASH2020 conference- Sri Lanka Institute of Information Technology (SLIIT)
 - International Conference on Applied and Pure Sciences, ICAPS 2021- University of Kelaniya.
 - University research grant 2020, Research Council - University of Sri Jayewardenepura.
 - University research grant 2020, Faculty of Allied Health Sciences - University of Sri Jayewardenepura.
 - Engineering Research Conference 2019 - University of Moratuwa
 - PGIS Research Congress 2019 - University of Peradeniya
 - Undergraduate Research Symposium 2019 - Rajarata University
 - Engineering Research Conference 2018 - University of Moratuwa
- 3) Evaluator
 - Member of the grant evaluation panel for the research area of “Nanotechnology and Chemical Sciences”- National Research Council, 2022
 - Investigator Driven Grant evaluator- National Research Council, 2022
 - International Conference on Innovation and Emerging Technologies 2022 (ICIET 2022), Faculty of Technology, University of Sri Jayewardenepura.
 - Young Innovators Award in Health Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, 2022
 - Research Grant Proposals - National Science Foundation, 2020
 - Research Grant Proposals - Research Council, University of Sri Jayewardenepura
 - PhD, MSC thesis examiner-University of Peradeniya, University of Sri Jayewardenepura, University of Moratuwa 2019-Present.
- 4) Guest Talk-
 - A Lecture on “Application of a Simultaneous TGA-DSC Thermal Analysis System” organized by SLAAS E2.
 - A seminar on “Nanotechnology applications” for grade 9 students in Lalith Athilathmudali College, Mount Lavinia, 2019.
- 5) Curriculum development
 - Advanced Inorganic Polymers (PCH 462 1.0), USJP
 - Polymers in Medicinal/Biotechnology Applications (PCH 366 1.0), USJP
 - Applied Polymer Sciences II (PSC 407 3.0), USJP
 - Bachelor of Science Honors in Human Biology- direct intake program, USJP
HIC 1101 – Inorganic Chemistry
HCP 1131 – Chemistry Practical

- 6) Main coordinator/organizer for workshop in laboratory techniques, good laboratory practices, measurements and safety in laboratory, University of Sri Jayewardenepura, 2021.
- 7) Committee member- SLASS, 2021-Present
- 8) National Chair- International Chemical Biology Society, 2021-Present
- 9) Rapporteur SLASS Section E2 – 2022
- 10) In organizing committee for 2nd Global Experts Meet on Applied Science, Engineering and Technology, Paris, France, 2022.
- 11) Secretary SLASS Section E2 – 2023
- 12) Coordinator – Department of Chemistry, B.Sc.(Honours) Degree in Applied Sciences, University of Sri Jayewardenepura, 2022-present.
- 13) Quality Assurance Coordinator - Department of Chemistry, University of Sri Jayewardenepura, 2020-present.

POST GRADUATE AND UNDERGRADUATE RESEARCH STUDENTS SUPERVISED:

- (1) Ms. Chamalki Madhusa - MPhil Student (Supervisor)
University of Sri Jayewardenepura, 2022 (Graduated)
Project: Synthesis of Metal doped Activated Carbon Nanohybrid and Its Potential Application as an Electrocatalyst
- (2) Ms. Piyumi Kanchana - MPhil Student (Supervisor)
University of Sri Jayewardenepura, 2022 (Graduated)
Project: Functional Alginate-TiO₂-Graphene Oxide Nanohybrids to Minimize the Post-harvest Loss of Fruits and Vegetables
- (3) Ms. Senuri Kumarage - MPhil Student (Supervisor)
University of Sri Jayewardenepura, 2023 (Graduated)
Project: Development of low-cost nanotechnology-based water filter using bio-based material to remove the hardness and heavy metals in domestic drinking water.
- (4) Ms. Maheshika Sethunga- PhD Student (Co-Supervisor)
University of Sri Jayewardenepura, 2023 (Graduated)
Project: Nanoencapsulation of optimized volatile, non-volatile extracts and bioactive compounds in selected spices
- (5) Ms. Kumudu Rajapaksha - MSc Student (Co-Supervisor)
University of Sri Jayewardenepura, 2023 (Graduated)
Project: Development of curcumin encapsulated layered double hydroxides (LDHs) nanocomposites to use in skin formulations
- (6) Mr. Sehan Jayasinghe - MPhil Student (Co-Supervisor)
University of Sri Jayewardenepura, 2020-Present
Project: A novel plasma assisted synthesis of coir based activated carbon for toxic gas adsorption.
- (7) Ms. Piyumika Yapa - PhD Student (Supervisor)
University of Sri Jayewardenepura, 2022-Present
Project: Electrospun hybrid nanofibrous membranes as a promising antimicrobial functional layer with the potential to use in personal protection equipment: development and antimicrobial assessments.
- (8) Ms. W.M.B.S. Bandara- PhD Student (Co-Supervisor)
RMIT Australia/University of Moratuwa, 2023-Present
Project: Development of CO₂ absorbing nanofiber functionalized textile material
- (9) Ms. Saduni Dabare- MPhil Student (Co-Supervisor)
University of Sri Jayewardenepura, 2024-Present
Project: Enhanced the solubilization of rock phosphate via nanotechnology

CONFERENCE PAPERS - FULL PAPER PUBLICATIONS

- (1) MMD Samintha, DRC Thalayarathna, JJ Mahanthe, D Attygalle, **Imalka Munaweera**, DAS Amarasinghe, L Karunanayake, VSC Weragoda, Room Temperature Signal Enhancement of ZnO Nanoparticle Gas Sensor through Photoexcitation, 2024 Moratuwa Engineering Research Conference (MERCon), IEEE, 406-411, 2024.
- (2) Pathiraja A.S., Kumarage S.H. and **Munaweera I**, Enhanced Removal of Cu(II) Ion in Aqueous Solution Using Amino Mesoporous Silica Nanoparticles, 2nd International Symposium on Advanced Functional Materials (ISAFM), Monash University Malaysia, 2023 Malaysia.

- (3) Kumarage S.H, **Munaweera I**, Sandaruwan C, Weerasinghe L, and Kottegoda N, Development and characterization of electrospun cellulose acetate nanofibers incorporated with amine functionalized silica for effective removal of hardness in drinking water sources, 2nd International Symposium on Advanced Functional Materials (ISAFM), Monash University Malaysia, 2023 Malaysia.
- (4) Eranga Warsakoon, Nuwan Gunawardene, Hasitha Kalahe, **Imalka Munaweera**, Nadeesh Madusanka, Nilwala Kottegoda, Deflourination of Drinking Water using Layered Double Hydroxide, 63-68, Volume 3. International Conference on Sustainable Built Environment. 2010, Kandy, Sri Lanka.
- (5) N Kottegoda, **I Munaweera**, N Madusanka, C Sandaruwan, D Sirisena, N Disanayake, M Ismail, A De Alwis, V Karunaratne, Plant nutrient nanoparticles encapsulated cellulose matrix for slow and sustained release of nitrogen Cellulose Based Slow Release Nano-Fertiliser, Conference and workshops organized by NSF, 2012, Mt. Lavana, Sri Lanka.
- (6) Chenchen Bing, Debra Szczepanski, **Imalka Munaweera**, Yu Hong, Ian Corbin, Rajiv Chopra, Acoustic emissions during blood-brain barrier disruption with focused ultrasound and real-time feedback control under infusion administration of microbubbles–feasibility study in rodent model, The International Society for Therapeutic Ultrasound (ISTU)- The 17th International Symposium, Nanjing, China, 2017, Journal of Therapeutic Ultrasound, 2018.

CONFERENCE PROCEEDINGS/ ABSTRACTS

- (1) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, M.M. Weerasekera, Multimetallic Silica/Polymer Nanohybrids for Self-Sterilizing Synergistic Antifungal Applications, International Conference on Innovation and Emerging Technologies (ICIET), University of Sri Jayewardenepura, Sri Lanka: November 21-22, 2024.
- (2) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, M.M. Weerasekera, Multimetallic Silica Nanohybrids Incorporated Nanofiber Membrane for Potential Synergistic Antibacterial Applications, Frontiers in Chemical Technology – 2, Institute of Chemistry Ceylon, June 21, 2024.
- (3) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, M.M. Weerasekera, Synergistic Activity of Heterometallic Silica Nanohybrids as Potential Antifungal Agents, 2nd International Research Symposium on Multidisciplinary Approaches in Indigenous Knowledge Systems, Gampaha Wickramarachchi University of Indigenous Medicine, March 01, 2024.
- (4) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, M.M. Weerasekera, Preparation and Characterization of Multimetallic Nanohybrids Reinforced Broad Spectrum Antibacterial Nanofibrous Membrane with Synergistic Self-Sterilizing Activity, International Conference "TASME 2024", University of Toronto, Canada, July 07, 2024.
- (5) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, M.M. Weerasekera, Synergism of Multimetallic Nanohybrids as Promising Antimicrobial Agents with an Expansive Coverage of Microbes, World Forum Women in Science 2024, Rome, Italy, April 16, 2024.
- (6) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, C. Sandaruwan, N.M.C. Nissanka, M.M. Weerasekera, Synthesis, Characterization and Comparison of Metal Doped Silica Nanoparticles for Antibacterial Applications, International Conference on Innovation and Emerging Technologies (ICIET), University of Sri Jayewardenepura, Sri Lanka: November 24-25, 2023.
- (7) P.N. Yapa, **I. Munaweera**, L. Weerasinghe, C. Sandaruwan, M.M. Weerasekera, Multimetallic Nanohybrids as Potential Antimicrobial Agents with Extensive Microbe Coverage to be Used in Personal Care Products, 4th Commonwealth Chemistry Posters, Royal Society of Chemistry, UK, October 04-05, 2023.
- (8) K. Ranathunga, P.N. Yapa, **I. Munaweera**, L. Weerasinghe, Synthesis and Characterization of Visible Light Active Fe Doped ZnO Nanohybrids for Self-Sterilizing Applications, Frontiers in Chemical Technology – 2, Institute of Chemistry Ceylon, June 21, 2024.
- (9) I.P. Madhishika, P.N. Yapa, **I. Munaweera**, L. Weerasinghe, Development of Antimicrobial Agents Intercalated Layered Double Hydroxides Incorporated Nanofiber Based Active Packaging Material, Frontiers in Chemical Technology – 2, Institute of Chemistry Ceylon, June 21, 2024.
- (10) K. Ranathunga, P.N. Yapa, **I. Munaweera**, L. Weerasinghe, Preparation and Characterization of Fe Doped ZnO Nanohybrids as a Potential Self-Sterilizing Photocatalytic Material, 2nd International Research Symposium on Multidisciplinary Approaches in Indigenous Knowledge Systems, Gampaha Wickramarachchi University of Indigenous Medicine, March 01, 2024.
- (11) I.P. Madhishika, P.N. Yapa, **I. Munaweera**, L. Weerasinghe, Synergistic Activity of Antioxidants Intercalated Layered Double Hydroxides as a Potential Active Packaging Material, 2nd International Research Symposium on Multidisciplinary Approaches in Indigenous Knowledge Systems, Gampaha Wickramarachchi University of Indigenous Medicine, March 01, 2024.
- (12) Sachini Deshapriya, **Imalka Munaweera**, Photocatalytic visible light active Co doped ZnO/cellulose acetate nanofiber membranes for functional food packaging, American Chemical Society Spring 2024.

- (13)Thanuka Ranathunga, **Imalka Munaweera**, Dilushan Jayasundara, Nilwala Kottegoda, Graphene oxide/natural ilmenite nanocomposites as coatings for preserving perishable fruits, American Chemical Society Spring 2024.
- (14)Sehan Jayasinghe, **Imalka Munaweera**, Chandani Perera, Dumindu Siriwardena, Nilwala Kottegoda, Preparation and characterization of plasma activated, multifunctional, pyrolyzed, coconut coir adsorbent for the removal of pollutants from aqueous and gaseous phases, American Chemical Society Spring 2024.
- (15)Koshila Maduwanthi, **Imalka Munaweera**, Pamoda Perera, Preparation and characterization of sodium alginate-carboxymethyl cellulose based essential nutrient slow release nanohybrids, American Chemical Society Spring 2024.
- (16)De Alwis B, Rathnayake I., **Munaweera I.**, Perera A. D. L. C., Jayasinghe S, Comparative desorption efficiency of Cd(II) and Pb(II) from used plasma-functionalized coconut coir biochar, International Conference on Applied and Pure Sciences, 2024, Faculty of Science, University of Kelaniya, Sri Lanka.
- (17)P.N. Yapa, **I. Munaweera**, L. Weerasinghe, C. Sandaruwan, N.M.C. Nissanka, M.M. Weerasekera, Synthesis, Characterization and Comparison of Metal-doped Silica Nanoparticles for Antibacterial Applications, International Conference on Innovation and Emerging Technologies 2023, Faculty of Technology, University of Sri Jayewardenepura, November 23-24, 2023.
- (18)Koshila Maduwanthi, **I. Munaweera**, W.P.T.D. Perera, Preparation and Characterization of Micronutrient Loaded Hydrogel Nano-hybrids as a Slow Release Fertilizer, International Conference on Innovation and Emerging Technologies 2023, Faculty of Technology, University of Sri Jayewardenepura, November 23-24, 2023.
- (19)Sayani Nimanka, Nilwala Kottegoda **Imalka Munaweera**, Nimshi Fernando, Nitrogen-fortified humic acid-modified rock phosphate hybrids as precision release nitrogen and phosphorous plant nutrient formulation, American Chemical Society National Meeting Spring 2023, Virtual presentation.
- (20)S.D. Deshapriya, **I. Munaweera**, Visible light active photocatalytic cellulose acetate/Co-ZnO nanofiber membranes for active food packaging, Sri Lanka Association for the Advancement of Science, Proceedings of the 79th Annual Sessions, 2022.
- (21)Senuri Kumaraage, Imalka Munaweera, Laksiri Weerasinghe, Chanaka Sandaruwan, Nilwala Kottegoda, Amine-modified silica-cellulose acetate nanofiber membranes for effective removal of hardness and heavy metals in drinking water, 4th Commonwealth Chemistry Posters (/cwcp2023/), October 4 - 5, 2023, Online, United Kingdom.
- (22)Manesha Fernando, **Imalka Munaweera**, Nilwala Kottegoda, Preparation and characterization of a NPK nutrient loaded biodegradable cellulose acetate electrospun nanofiber mat to be used as a slow release fertilizer, American Chemical Society National Meeting Spring 2023, Virtual presentation.
- (23)P.N. Yapa, **I. Munaweera**, L. Weerasinghe, C. Sandaruwan, M.M. Weerasekera, Multimetallic nanohybrids as potential antimicrobial agents with extensive microbe coverage to be used in personal care products, 4th Commonwealth Chemistry Posters (/cwcp2023/), October 4 - 5, 2023, Online, United Kingdom.
- (24)S.D. Deshapriya, **I. Munaweera**, Visible light active photocatalytic cellulose acetate/Co-ZnO nanofiber membranes for active food packaging, 4th Commonwealth Chemistry Posters (/cwcp2023/), October 4 - 5, 2023, Online, United Kingdom.
- (25)Koshila Maduwanthi, **I. Munaweera**, W.P.T.D. Perera, Magnesium, zinc, and copper nutrient nanoparticles infused sodium alginate-carboxymethyl cellulose-based nano-hybrids as an efficient slow-release fertilizer, 4th Commonwealth Chemistry Posters (/cwcp2023/), October 4 - 5, 2023, Online, United Kingdom.
- (26)Fernando W.A.M.B, **Munaweera I**, Kottegoda N, Preparation and Characterization of NPK Nutrient Loaded Electrospun Cellulose Acetate Nanofiber Mat to be used as a Slow-release Fertilizer, 27th International Forestry and Environment Symposium 2023, University of Sri Jayewardenepura, 2023.
- (27)Fernando W.A.M.B, **Munaweera I**, Fabrication and characterization of N, P, K nutrient-loaded electrospun cellulose acetate nanofiber mats to be used as a slow-release fertilizer, Sri Lanka Association for the Advancement of Science, Proceedings of the 78th Annual Sessions, 2022.
- (28)Senuri Kumaraage, **Imalka Munaweera**, Chanaka Sandaruwan, Nilwala Kottegoda, Electrospun cellulose acetate/amine-functionalized mesoporous silica nanofibers for efficient removal of calcium ions in drinking water, American Chemical Society National Meeting Fall 2022.
- (29)Piyumi K. Kodithuwakku, Dilushan Jayasundara, **Imalka Munaweera**, Randika Jayasinghe, Tharanga Thoradeniya, Manjula Weerasekara, Achala Bogahawatta, Nilwala Kottegoda, American Chemical Society National Meeting Fall 2022.
- (30)Chamalki Madhusa, **Imalka Munaweera**, Chandani Perera, Chanaka Sandaruwan, Nilwala Kottegoda, Preparation and characterization of polycaprolactone nanofibrous membrane embedded copper doped activated carbon nanoparticles for water filtration, American Chemical Society National Meeting Fall 2022.
- (31)S.M.M.C. Sethunga, K.K.D.S. Ranaweera, **I. Munaweera**, K.D.P.P. Gunathilake, Enzyme assisted extraction of ginger (*zingiber officinale*) oil and the effect of enzyme pre-treatment on extraction yield and α -zingiberene CONTENT, International Conference on Food Research Development and Applications 2022, University of Sri Jayewardenepura.

- (32) S.H. Kumarage and **I. Munaweera**, Amine functionalized mesoporous silica nanoparticles incorporated electrospun cellulose acetate nanofibers for effective removal of CaCO_3 in drinking water, Sri Lanka Association for the Advancement of Science, Proceedings of the 78th Annual Sessions, 2022.
- (33) A. Pathiraja, S.H. Kumarage and **I. Munaweera**, Enhanced removal of heavy metals in wastewater using amino mesoporous silica nanoparticles, Sri Lanka Association for the Advancement of Science, Proceedings of the 78th Annual Sessions, 2022.
- (34) M.L.C. Madhusa, G.K.M. Rajapaksha and **I. Munaweera**, A facile greener approach to synthesize curcuminoids incorporated layered double hydroxides, Sri Lanka Association for the Advancement of Science, Proceedings of the 77th Annual Sessions, 2021.
- (35) Chamalki Madhusa, Thushani Jayasundara, **Imalka Munaweera**, Chandani Perera, Gayan Wijesinghe, Manjula Weerasekera, Chanaka Sandaruwan, Nilwala Kottegoda, Preparation and Characterization of Antibacterial Copper Doped Activated Carbon from Coconut Coir and its Application in Removal of Hardness and Fluoride in Drinking Water, American Chemical Society Fall 2021.
- (36) Dulanjalee Gajasinghe, Chamalki Madhusa, **Imalka Munaweera**, Nilwala Kottegoda, Mechanochemical preparation and characterization of citric acid intercalated Layered Double Hydroxides (CA-LDH) /montmorillonite clay (CA-MMT) nanohybrids, American Chemical Society Fall 2021.
- (37) Prasad Dissanayake, Chamalki Madhusa, **Imalka Munaweera**, Nilwala Kottegoda, Samitha Deraniyagala, Gayan Wijesinghe, Manjula Weerasekera, Facile Approach to Synthesize and Characterization of Cobalt Doped Titanium Dioxide from Natural Ilmenite to be Used as a Photocatalytic/Antibacterial Agent Under Visible Irradiation, American Chemical Society Fall 2021.
- (38) Maheshika Sethunga, K. K. D. S. Ranaweera, K. D. P. P. Gunathilake, **Imalka Munaweera**, Evaluation of the Antioxidant Activity in Cinnamon, Clovebud and Ginger Essential Oils and Oleoresins, International Conference on Multidisciplinary Approaches in Science 2021, Track: B, Faculty of Science, University of Colombo, 2021.
- (39) S. M. M. C. Sethunga, K. K. D. S. Ranaweera, **I. Munaweera**, and K. D. P. P. Gunathilake, Enzyme-assisted extraction of cinnamon (*Cinnamomum zeylanicum*) bark oil and its effect on extraction yield and quality, International Conference on Applied and Pure Sciences, Faculty of Science, University of Kelaniya, 2021.
- (40) S. M. M. C. Sethunga, K. K. D. S. Ranaweera, **I. Munaweera**, and K. D. P. P. Gunathilake, Enzyme-assisted extraction of oleoresin from cinnamon (*Cinnamomum zeylanicum*) and its effect on trans-cinnamaldehyde content and yield, Proceedings of the Young Scientists' Conference on Multidisciplinary Research-2021, Young Scientists' Association, National Institute of Fundamental Studies, 2021.
- (41) S.M.M.C. Sethunga, K.K.D.S. Ranaweera, **I. Munaweera**, K.D.P.P. Gunathilake, Enzyme-assisted extraction of oleoresin from ginger (*Zingiber officinale*) and its effect on extraction yield and gingerol and shogaol content, Proceedings of the Young Scientists' Conference on Multidisciplinary Research-2022, Young Scientists' Association, National Institute of Fundamental Studies, Sri Lanka, 2022.
- (42) Sethunga SMMC, Ranaweera KKDS, Gunathilake KDPP, **Munaweera I**, Comparative evaluation of essential oil and oleoresin extraction from *Cinnamomum zeylanicum*, *Zingiber officinale*, *Syzygium aromaticum*, 9th International Conference on Multidisciplinary Approaches 2022, Faculty of Graduate Studies, University of Sri Jayewardenepura, 2022.
- (43) Jacques Lux, **Imalka Munaweera**, Christopher Malone, Jonathan Minnig, Robert Mattrey, Detection of Pathophysiologic Levels of Hydrogen Peroxide With Ultrasound Imaging Using Enzyme-Containing Nanoparticles, AIUM, Florida, 2017.
- (44) Yi Shi, **Imalka Munaweera**, Bhuvaneswari Koneru, Amit Patel, Mai H Dang, Kenneth J Balkus Jr, Anthony J Di Pasqua, Nitric oxide- and cisplatin-releasing amine-modified mesoporous silica nanoparticles for the treatment of non-small cell lung cancer, Research appreciation day, University of North Texas Health Science Center, Fort Worth, April 15, 2016.
- (45) Bhuvaneswari Koneru, Yi Shi, **Imalka Munaweera**, Emily Zangla, Kenneth J Balkus Jr, Anthony Di Pasqua, Radiotherapeutic Bandage for the Treatment of Skin Cancer, Research appreciation day, University of North Texas Health Science Center, Fort Worth, April 15, 2016.
- (46) Yi Shi, **Imalka Munaweera**, Daniel Levesque-Bishop, Ali Aliev, Ruben Saez, Kenneth Balkus, Jr., Anthony Di Pasqua. Neutron-activatable holmium-containing nanoparticles for the treatment of non-small cell lung and skin cancers, Research appreciation day, University of North Texas Health Science Center, Fort Worth, April 17, 2015.
- (47) **Imalka Munaweera**, Novel radiotherapeutic electrospun acrylonitrile-based fiber mats for the treatment of skin cancer, The Fiber Society 2014 Fall Meeting and Technical Conference, Chemical Heritage Foundation, Drexel University, Philadelphia, Pennsylvania, October 22–24, 2014.

- (48) **Imalka Munaweera**, Yi Shi, Bhuvaneshwari Koneru, Ruben Saez, Russell Coyle, Ali Aliev, Anthony J. Pasqua and Kenneth J. Balkus. Novel chemoradiotherapeutic magnetic nanoparticles for targeted treatment of non-small cell lung cancer, 14AIChE Annual meeting, Atlanta, GA, November 16-21, 2014;
- (49) Zijie Wang, **Imalka Munaweera**, Kenneth J. Balkus, Jr., Synthesis of titanium containing porous silica nanospheres with flower-type morphology, 70th Southwest Regional Meeting of the American Chemical Society, Fort Worth, TX, United States, November 19-22, 2014;
- (50) Wijayantha A. Perera, **Imalka Munaweera**, Michael Trinh, Yuchi Gao, John P. Ferraris, Yves J. Chabal, Kenneth J. Balkus, Jr. Binder free graphene-sodium niobate nanotubes/ nanorods composite electrodes for supercapacitors, 70th Southwest Regional Meeting of the American Chemical Society, Fort Worth, TX, United States, November 19-22, 2014.
- (51) Michael N. Trinh, **Imalka Munaweera**, Kenneth J. Balkus Jr., Synthesis of holmium metal-organic cubes for enhanced cancer radiotherapy, 70th Southwest Regional Meeting of the American Chemical Society, Fort Worth, TX, United States, November 19-22, 2014.
- (52) Yi Shi, **Imalka Munaweera**, Daniel Levesque-Bishop, Ali Aliev, Ruben Saez, Kenneth Balkus, Jr., Anthony Di Pasqua. Holmium nanoparticles for the treatment of non-small cell lung and skin cancers, 2014 AAPS Annual Meeting and Exposition, San Diego, November 2-6, 2014.
- (53) **Imalka Munaweera**, Yi Shi, Bhuvaneshwari Koneru, Ruben Saez, Ali Aliev, W. Russell Coyle, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Novel chemoradiotherapeutic magnetic nanoparticles for targeted treatment of non-small cell lung cancer, 248th ACS National Meeting & Exposition, 2014, San Francisco, CA, USA, August 10-14, 2014.
- (54) **Imalka Munaweera**, Yi Shi, Bhuvaneshwari Koneru, Ruben Saez, Ali Aliev, W. Russell Coyle, Anthony J. Di Pasqua, Kenneth J. Balkus Jr. Novel chemoradiotherapeutic magnetic nanoparticles for targeted treatment of non-small cell lung cancer, 47th American Chemical Society Meeting in Miniature, Dallas, TX, USA, April 26, 2014.
- (55) **Imalka Munaweera**, Daniel Levesque-Bishop, Yi Shi, Anthony J Di Pasqua, Kenneth J. Balkus, Jr. Holmium iron garnet containing acrylonitrile-based electrospun bandages for skin tumour therapy, 247th ACS National Meeting & Exposition, Dallas, TX, USA, March 16-20, 2014.
- (56) **Imalka Munaweera**, Yi Shi, Anthony J Di Pasqua, Kenneth J. Balkus, Jr. Platinum drug loaded holmium iron garnet nanoparticles enhance combination chemotherapy and radiation therapy, 247th ACS National Meeting & Exposition, Dallas, TX, USA, March 16-20, 2014.
- (57) Daniel S Bishop, **Imalka Munaweera**, Yi Shi, Anthony J Di Pasqua, Kenneth J. Balkus, Jr. Electrospun holmium iron garnet/poly acrylonitrile bandages for skin tumor therapy, 69th Southwest Regional Meeting of the American Chemical Society, Waco, TX, United States, November 16-19, 2013.
- (58) Kenneth J. Balkus, Jr., **Imalka Munaweera**, Yi Shi, Anthony J Di Pasqua, Synthesis and characterization of holmium and dysprosium containing garnet nanoparticles for radiotherapy, 65th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA, United States, November 13-16, 2013.
- (59) **Imalka Munaweera**, Jessica Hong, Michael Trinh, K. J. Balkus, Jr. Chemically powered nanomotor. 246th ACS National Meeting & Exposition, Indianapolis, IN, USA, September 8-12, 2013.
- (60) **Imalka Munaweera**, K. J. Balkus, Jr. Electrospun cellulose acetate: Garnet nanocomposite fibers with magnetic properties. 245th ACS National Meeting & Exposition, New Orleans, LA, USA, April 7-11, 2013.

MEMBER OF NATIONAL / INTERNATIONAL COMMITTEES

- National Chair for International Chemical Biology Society, 2021- Present for outreach and services committee.
- Member of Olympiad Committee 2022
- Member of Committee for Training Seminar/Workshop, Institute of Chemistry Ceylon 2022
- Member of Continuous Professional Development (CPD) and Recognition Committee, Institute of Chemistry Ceylon 2022
- Member of Quality Assurance Committee, Institute of Chemistry Ceylon 2022
- Member of Sri Lanka Association for the Advancement of Science for 2021, 2022, 2023, 2024.

PROFESSIONAL TRAINING

- Writing grant applications, University of Texas Southwestern Medical Center, USA 2017
- Laboratory biohazards materials, chemicals and radioactive materials handling training,
 - University of Texas Southwestern Medical Center, USA 2015
 - University of North Texas Health Science Center, USA 2014

- Malvern Zetasizer training, India, 2010
- Internal auditing of laboratory management systems (ISO/IEC 17025:2005), 2009
- Exploring opportunities in nanoscience and nanotechnology (Nanotech-2008), 2008

PROFESSIONAL MEMBERSHIPS

- | | |
|---|-------------------|
| • American Chemical Society (ACS) | 02/2011 - Present |
| • Golden Key International Honour Society | 06/2014 - Present |
| • Royal Society of Chemistry (RSC) | 06/2015 - Present |
| • The National Postdoctoral Association (NPA) | 07/2015 - Present |
| • The Organization for Women in Science for the Developing World (OWSD) | 01/2021 - Present |
| • The International Chemical Biology Society (ICBS) | 10/2021 - Present |
| • Sri Lanka Association for the Advancement of Science (SLASS) | 10/2020 - Present |
| • The Sri Lankan Academy of Young Scientists (SLAYS) | 09/2021 - Present |
| • Institute of Chemistry | 12/2021 - Present |