

Dr. Dilushan R. Jayasundara

Senior Lecturer

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Education

Post Doctoral Research, University of Dublin Trinity College, Dublin, Ireland, 2010-2013

Ph.D. in Physics, University of Houston, Houston, TX, December 2008

Dissertation: “Design and Construction of a Low Temperature Scanning Tunneling Microscope for Studying High Temperature Superconductivity”.

M.S. in Physics, University of Houston, Houston, TX, May 2003

B.S. in Physics with Honors, University of Peradeniya, Sri Lanka, February 1999

Certificate for Teaching in Higher Education, University of Colombo, accredited by Staff and Educational Development Association (SEDA), UK, June 2016.

Research Experience

DEPARTMENT OF PHYSICS, UNIVERSITY OF COLOMBO, SRI LANKA

Senior Lecturer, From Dec.2014

- Principal investigator in materials science and nanotechnology with special interest in surface and interface reactions at nanoscale. Research funded by National Research Council (NRC) Sri Lanka. **Grant number 15-004.**
- Principal investigator in fundamental and applied research on graphene and graphene derivatives. Research funded by the University of Colombo. **Grant number AP/3/2/2016/CG/29.** Research is done in collaboration with Prof. Paula E. Colavita’s group at Trinity College Dublin.
- Principal investigator, research into industrial effluent treatment using a novel concept based on “waste to treat waste” (**Patented**). Research was funded by a **commercialization grant from MAS Pvt. Ltd.** and carried out in collaboration with several local industries. **Licensed to MAS Pvt. Ltd.**
- Principal investigator, research into industrial effluent treatment using Graphene-composites (**Patent pending, PCT published**). **Commercialization discussions ongoing with Stretchline Pvt. Ltd.**
- Principal investigator in developing novel methods for product quality control. Research was funded by **Bodyline Pvt. Ltd.**
- Principal investigator in developing methodologies for in situ, real time monitoring of photocatalytic activity at nanoparticle surfaces. (Research Assistant funded by Department of Physics, University of Colombo)
- Principal investigator in novel technological applications of Mica, Research carried out in collaboration with **Damsila Pvt. Ltd.**
- Co-Investigator, Metal oxide nanocomposites supported on reduced graphene oxide for photocatalytic reduction reactions. Research funded by National Research Council (NRC) Sri Lanka. **Grant number 16-094.**

- Co-Investigator, Functional Alginate-TiO₂-Graphene Oxide Nanohybrids to Minimize the Post-harvest Loss of Fruits and Vegetables. Research funded by The World Academy of Sciences (TWAS) 19-237 RG/CHE/AS_G – FR3240310129.
- Co-Investigator, Development of a conductive graphene ink for manufacturing of flexible hybrid electronics. Research funded by The World Academy of Sciences (TWAS) 21-282 RG/PHYS/AS_G-FR3240319507.

SRI LANKA INSTITUTE OF NANO TECHNOLOGY (SLINTEC), BIYAGAMA, SRI LANKA

Senior Research Scientist, Jun.2013-Dec.2014

- Principal investigator, high value mineral processing of graphite, graphene oxide (GO)/reduced graphene oxide (rGO) and GO/rGO-based composites.
 - Developed a novel GO synthesis method (**Patent: US 20180029887, AU2017304275B2, JP2019523210A, CA3031731A1**). The method is used in commercial production of GO and rGO by **Ceylon Graphene Technologies Pvt. Ltd.**
 - Developed a novel GO-composite material for automobile industry, specifically for passenger transport vehicles. (Patentable process)
- Principal investigator, nanoporous/aerogel silica-based composites for superhydrophobic protective coatings (Patentable process)
- Industry funded research on nanotechnology applications.

SCHOOL OF CHEMISTRY, UNIVERSITY OF DUBLIN, TRINITY COLLEGE, DUBLIN, IRELAND

Postdoctoral Research Fellow, Mar. 2010-May. 2013

- Investigating structure and properties of covalently modified surfaces for understanding and controlling fundamental chemical processes at interface.
- Developing bio-functional surfaces and methodologies for immobilizing carbohydrates and sugars for sensor, antifouling, and medical applications.

Visiting Researcher, Jan. 2017-2019

- Collaborative research into carbon-based nanostructures.
- Initiating a researcher placement program to facilitate short term travel for postgraduate students to Trinity College Dublin for research.

TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON, HOUSTON, TEXAS, USA

Postdoctoral Internship, Materials Characterization Facility, Mar. 2009-Feb. 2010

- Research into electron microscopic characterization of HTS and other advanced materials.
 - Experienced in scanning electron microscopy imaging at the nanoscale.
 - Extensive work on wavelength-dispersive and energy-dispersive x-ray spectrometric analysis of inorganic materials.

Research Assistant, Scanning Probe Microscopy Laboratory, Jan. 2003- Dec. 2008

- Investigation of electronic and surface properties of advanced materials at atomic scale using Scanning Tunneling Microscopy and Spectroscopy.
- Design and Construction of the Cryogenic STM.

Research Review Activities

- Reviewer of journal articles for,
 - Materials Chemistry and Physics (Elsevier)
 - Journal of Nanostructure in Chemistry (Springer)

- Langmuir (American Chemical Society)
- RSC Advances (Royal Society of Chemistry)
- The Journal of Materials Engineering and Performance (Springer)
- Optics and Laser Technology (Elsevier)
- The European Physical Journal – Plus (Springer)
- Journal of Materials Science (Springer)
- Reviewer of research proposals from;
 - National Science Foundation (NSF) Sri Lanka
 - National Research Council (NRC) Sri Lanka
 - University of Sri Jayewardenepura
 - Ministry of Higher Education
- Review committee member/Reviewer of abstracts for conferences/symposia,
 - International Conference on Multidisciplinary Approaches in Science ICMAS 2021, University of Colombo
 - Young Scientists' Conference on Multidisciplinary Research 2021, National Institute of Fundamental Studies (NIFS), Sri Lanka
 - International Poster Presentation Competition (IPPC 2020), Organized by the National Young Academy of Bangladesh
 - Scientific Sessions of Sri Lanka Association for the Advancement of Science (SLAAS). 2017, 2019, 2020
 - SLIIT International Conference on Advancement of Sciences and Humanities [SICASH]
 - University of Colombo Annual Research Symposium.
 - 2018 Moratuwa Engineering Research Conference: 4th International Multidisciplinary Engineering Research Conference.
- Reviewer/Examiner of MPhil/PhD thesis';
 - PhD thesis titled “Study of electrical, magnetic and gas sensing properties of Fe₂O₃ thick films with different additives” by Mr. Deshmane Vikas; University of Pune.
 - PhD thesis titled “Design and Development of Dye-Sensitized Organic Semiconductor Based Photoelectric System Utilizing Nanotechnology for Low Cost and Efficient Conversion of Solar Energy To Electricity” by C.I.F Attanayaka; University of Moratuwa.
 - MPhil thesis titled” Nanomaterials from Sri Lankan Mica Minerals: Synthesis, Characterization, Properties, and Applications” by Ms. K. A. Senthilnathan; SLINTEC Academy.

Research Supervision

- Ms. Nimshi Fernando (University of Colombo), PhD 2021, Thesis title: Kinetic study of hydroxyapatite-organic hybrid system using the quartz crystal microbalance.
- Ms. Ruwandi Fernando (University of Colombo), MPhil. 2021, Thesis title: Non-destructive testing of adhesively bonded textile structures.
- Ms. Buddini Nissanka (University of Colombo), PhD 2023 (submitted), Thesis title: Structural investigation of graphene oxide and its application towards electrophoresis and hybrid material development.
- Ms. Piyumi Kodithuwakkua (University of Sri Jayewardenepura), MPhil 2022
- Mr. Jaliya Manuda (University of Colombo), PhD, ongoing
- Ms. Gimhani Wickramasing (University of Colombo), MPhil, ongoing
- Over 25 undergraduate research students.

Teaching Experience

UNIVERSITY OF COLOMBO, SRI LANKA

Seiner Lecturer, Department of Physics. From December 2014.

- Introduction of new degree program: BSc. Hons. Degree program in Materials Physics. Development of program objectives, and syllabuses. Currently this program has received the University of Colombo Council Approval. University Grant Commission application is in preparation.
- Development of course content for Polymer Science (PH 3060); A 3 credit lecture course, Materials Characterization Lab (PH 3029): A 3 credit laboratory course, Surface Science (PH 4004): A 3 credit lecture course and Physics of Minerals (PH 4006): A 3 credit lecture course. These courses will be offered under the Materials Science Degree program.
- Developed and introduce a new laboratory course on **Design and Machining** (PH 3035) for Engineering Physics degree program students in 2015. The course is offered in two modules that include mechanical design using CAD software and machining.
- Developed and introduce a new 2 credit lecture/activity course, **Nanoscience and Nanotechnology** (PH 2006) for second year undergraduates in 2022. The course is offered in two parts; 15 hours of lectures that discuss basic concepts related to theory, synthesis, structure and characterization in nanoscience and nanotechnology and guided group projects where the student will apply the concepts learned in part 1 in evaluating case studies of national importance.
- Introduced a new 1 credit course module on **Managing Innovation** to the course Industrial Management (PH 4007) offered to students in industry orient degree programs in the Department of Physics.
- Other lecture courses taught: **Solid State Physics** (PH 4001-3 credit), **Physics of Semiconductor Devices** (PH 2002-1 credit); laboratory courses supervised: General Physics Lab 1 (PH 1010- 2 credit), General Physics Lab 2 (PH 2020- 2 credit) and Electronic and Computing Lab 1 (PH 1020 – 2 credit)

Faculty of Science Career Guidance Unit (CGU)

- Member of the subcommittee to review and revise Science and Management degree program coordinated by CGU.
- Coordinator of the enhancement course **Enterprise Entrepreneurship and Innovation** (EC 2020) offered to 2nd year undergraduates of the Faculty of Science.
- Founder of **Entrepreneurship and Innovation (EI) Club** of University of Colombo, a student-centered club providing advice, conducting workshops and competitions in entrepreneurial and innovation related areas.

DEPARTMENT OF PHYSICS, LONE STAR COLLEGE, HOUSTON, TX

Adjunct Faculty, May 2009

- Lectured an undergraduate course in Physics: Topics include Mechanics, Fluids, waves and thermodynamics. Responsible for course management and laboratory.

DEPARTMENT OF PHYSICS, UNIVERSITY OF HOUSTON, TX

Teaching Assistant, Aug. 2001- Dec. 2003

- Taught undergraduate Physics laboratory: Class size-25 students, held office hours, graded lab reports and exams, assigned final grades.
- Head tutor, Physics Learning Center.

DEPARTMENT OF PHYSICS, UNIVERSITY OF PERADENIYA, SRI LANKA

Lecturer, Apr. 2001- Aug. 2001

- Lectured two undergraduate courses (3 credits each) on Properties of Materials and Alternating Current Theory. Class size~130 students, solely responsible for developing lesson plans and assignments.
- Taught second and third year undergraduate laboratory.

Teaching Assistant, Feb.1999- Oct. 1999

- Taught freshman Physics laboratory: assigned homework, graded lab reports.
- Led undergraduate tutorial discussions.

Administrative & Other Experience

UNIVERSITY OF COLOMBO

- Co-Director, Faculty of Science Career Guidance Unit (CGU) since May 2023.
- Director, Colombo Science and Technology Cell, The technology transfer office of Faculty of Science. 2019-2021.
- Postgraduate Advisor/Coordinator (MPhil and PhD), Department of Physics.
- Founding Executive Committee member and Co-Director, Centre for Transdisciplinary Biotechnology Research. From 2021.
- Founding Senior Treasurer, Entrepreneurship, and Innovation Club. From 2020.
- Member and Co-Chair of the University Annual Research Symposium organizing committees in 2016, 2017, 2018, 2020, 2021.
- Domain coordinator in teaching and learning for University of Colombo institutional review.
- Member representing Faculty of Science in the University of Colombo Art Council: Mandate of the Art Council is to organize and promote activities to develop students' aesthetic mind.
- Secretary, Department of Physics
- Student councilor.
- President, University of Colombo Science Teacher Association (UCSTA), 2018
- Member of the board of management - Center for Data Science (CDS), University of Colombo
- Faculty representative, University of Colombo Faculty Club

SRI LANKAN ACADEMY OF YOUNG SCIENTISTS (SLAYS)

- President, Sri Lankan Academy of Young Scientists (SLAYS), 2018
- Member of the Program Organizing Committee for the Worldwide Meeting of Young Academies (WWMYA), Vietnam 2019 organized by Global Young Academy (GYA)
- Member of the Co-writing group that drafted the “Declaration on the Guiding Principles of Young Academies” as part of GYA initiative to guide affiliated national young academies in their core activities.
- Initiated a research popularizing program with national television Rupavahini and Independent Television Network (ITN).

SRI LANKA ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (SLAAS)

- Elected Member, General Research Committee (GRC), a statutory body functioning within SLAAS.

NATIONAL RESEARCH COUNCIL (NRC) SRI LANKA

- Member of the research grant evaluation panel in Nanotechnology and Chemical Sciences.

GOVERNMENT OF SRI LANKA APPOINTMENTS

- Ministry of Water Supply: Member of the expert advisory panel appointed to implement the corporate plan for the ministry within the years 2020-2025. October 2020 to 2022.
- Foreign Ministry/State Ministry of Regional Cooperation: Member of the selected expert panel for formulating a concept paper for sustainable harnessing and value addition to Sri Lanka's natural resources. 2020-2021.

Professional Memberships Past and Present

- American Physical Society (APS), USA
- Royal Society of Chemistry (RSC), UK
- European Materials Research Society (EMRS)
- Sri Lanka Association for the Advancement of Science (SLAAS)
- Sri Lankan Academy of Young Scientists (SLAYS)
- Institute of Physics, Sri Lanka (IPSL)

Grants and Awards

- National Research Council (NRC) Sri Lanka Grant NRC 15-004
- University of Colombo research grant AP/3/2/2016/CG/29
- Research Commercialization Grant (2016) through Science and Technology Cell from MAS Pvt. Ltd.
- National Science Foundation (NSF) Sri Lanka OSTP Travel Award OSTP/2016/46
- University of Colombo Travel Award (2017)
- **Presidential award for scientific research 2019**
- University of Colombo/ Faculty Research Award (2018, 2019, 2021) in recognition of significant contribution to scientific research.
- University of Colombo/Senate Award for Research Excellence – Commendation 2018, 2019, 2021, 2022.

Patents and Technology Transfers

- “Method for the synthesis of graphene oxide”, Viraj C. Jayawardena, **Dilushan Rukmal Jayasundara**, Gehan Amaratunga, Vimukthi Jayaweera. **Patents US10336619B2, AU2017304275B2, JP2019523210A, CA3031731C and KR102268849B1**. Licensed to Ceylon Graphene Technologies.
- “Waste to treat waste”, a “Method of using solid waste from aluminum industry in apparel waste water treatment”, **Dilushan Rukmal Jayasundara**, Shalika Dilhani Kamel Meedin, Sashiprabha Vithanarachchi, Harsha Deraniyagala. Licensed to MAS Innovation (Private) Limited. **NIPO Patent 20634**.
- “Facile method of separating Graphene Oxide, reduced graphene oxide or functionalized graphene from solution using electrophoresis assisted sedimentation”, **Dilushan Rukmal Jayasundara**, Navoda Jayawardana, Buddini Nissanka. **NIPO Patent 21297**.
- “A composition for efficient removal of Rhodamine B from water”, **Dilushan Rukmal Jayasundara**, Buddini Nissanka. Patent pending, PCT filed through an AHEAD grant (WO/2023/057824). Scaling up discussions with **Stretchline Pvt. Ltd.**

- “Modified ilmenite nanohybrid materials for food packaging applications and a mechanochemical method of preparation thereof”. **NIPO patent 21845**.

International Journal Publications

- “Liberation of photogenerated radicals from a nano-titania surface at the solid–air interface” by KR Jaliya Manuda, Nimshi L Fernando, Buddini Nissanka, Aashani Tillekaratne, and **Dilushan R Jayasundara**, **Catalysis Science & Technology**, **2024**,
- “Nanocomposite of graphene oxide decorated Al-waste sludge for removal of rhodamine B from water” by B Nissanka, and **Dilushan R. Jayasundara**, **RSC advances**, **2022**, 12 (55), 35685-35694
- “A Review on Recent Developments in Structural Modification of TiO₂ For Food Packaging Applications” by Piyumi Kodithuwakku, **Dilushan Jayasundara**, Imalka Munaweera, Randika Jayasinghe, Tharanga Thoradeniya, Manjula Weerasekera, Pulickel M Ajayan, Nilwala Kottegoda, **Progress in Solid State Chemistry**, **2022**, 100369
- “Ethanol mediated photoinduced reversible adsorption of methylene blue on nano titanium dioxide” by K. R. Jaliya Manuda, Aashani Tillekaratne and **Dilushan R. Jayasundara**, **Research on Chemical Intermediates**, **2022**, 48 (8), 3359-3373
- “Protonation of graphene oxide electrolyte during electrophoresis and effects on deposited film properties” by Buddini Nissanka, Navoda Jayawardana, and **Dilushan R. Jayasundara**, **Materials Chemistry and Physics**, **2022**, 277, 125577.
- “Mechanistic Insights into Interactions at Urea–Hydroxyapatite Nanoparticle Interface” by Nimshi L. Fernando, Dhanusha T. N. Rathnayake, Nilwala Kottegoda, J. K. D. Sumedha Jayanetti, Veranja Karunaratne, and **Dilushan R. Jayasundara**, **Langmuir**, **2021**, 37(22), 6691-6701
- “Reduction-Induced Synthesis of Reduced Graphene Oxide-Wrapped Cu₂O/Cu Nanoparticles for Photodegradation of Methylene Blue” by KDRN Kalubowila, M Siyath Gunewardene, J Lakmini Kaushalya Jayasingha, Dhammike Dissanayake, Charith Jayathilaka, **JM Dilushan Jayasundara**, Yun Gao, JKD Sumedha Jayanetti, **ACS Applied Nano Materials**, **2021**, 4 (3), 2673-2681
- “Probing Structural Variations of Graphene Oxide and Reduced Graphene Oxide Using Methylene Blue Adsorption Method” by Buddini Nissanka, Nilwala Kottegoda and **Dilushan R. Jayasundara**. **Journal of Materials Science**, **2020**, Volume 55, Pages 1996–2005
- “In situ real time monitoring of hygroscopic properties of Graphene Oxide and Reduced Graphene Oxide” by Vimukthi V. Perera, Nimshi L. Fernando, Buddini Nissanka, and **Dilushan R. Jayasundara**. **Adsorption, Journal of the International Adsorption Society**, **2019**, Volume 25, Pages 1543-1552
- “Infrared thermography as a non-destructive testing method for adhesively bonded textile structures”, W.D. Ruwandi Fernando, D.A. Tantrigoda, S.R.D. Rosa, **Dilushan R. Jayasundara**. **Infrared Physics & Technology**, **2019**, Volume 98, Pages 89-93
- “Influence of carbon nanostructure and oxygen moieties on dopamine adsorption and charge transfer kinetics at glassy carbon surfaces”, James A. Behan, Filip Grajkowski, **Dilushan R. Jayasundara**,

Laia Vilella-Arribas, Max García-Melchor, Paula E. Colavita. **Electrochimica Acta**, **2019**, Volume 304, Pages 221-230

- “Effect of Bath pH on Electronic and Morphological Properties of Electrodeposited Cu₂O Thin Films” K. D. R. N. Kalubowila, K. M. D. C. Jayathileka, L. S. R. Kumara, K. Ohara, S. Kohara, O. Sakata, M. S. Gunewardene, **J. M. D. R. Jayasundara**, D. P. Dissanayake, and J. K. D. S. Jayanetti. **Journal of The Electrochemical Society**, **2019**, 166 (4) D113-D119.
- “Evolution of oxygen functionalities in graphene oxide and its impact on structure and exfoliation: An oxidation time based study”, Dinidu Perera, Avishi Abeywickrama, Federico Zen, Paula E. Colavita, **Dilushan R. Jayasundara**. **Materials Chemistry and Physics**, **2018**, 220, 417.
- “Stability of nano-hydroxyapatite thin coatings at liquid/solid interface”, Nimshi L. Fernando, Nilwala Kottegoda, Sumedha Jayanetti, Veranja Karunaratne, and **Dilushan R. Jayasundara**. **Surface and Coatings Technology** **2018**, 349, 24-31.
- “Laser-driven rapid functionalization of carbon surfaces and its application to the fabrication of fluorinated adsorbers”, Ronan J. Cullen, **Dilushan R. Jayasundara**, Robert J. Baker, Gearoid O’Connell, Tony Donnelly, Kyle E. Ballantine, James G. Lunneyb, and Paula E. Colavita. **RSC advances** **2016**, 6, 82924.
- “Carbohydrate Coatings via Aryldiazonium Chemistry for Surface Biomimetics”, **Dilushan R. Jayasundara**, Thomas Duff, M. Daniela Angione, Jean Bourke, Deirdre M. Murphy, Eoin M. Scanlan and Paula E. Colavita. **Chemistry of Materials** **2013**, 25, 4122.
- “In situ and real time characterization of spontaneous grafting of aryldiazonium salts at carbon surfaces”, **Dilushan R. Jayasundara**, Ronan J. Cullen and Paula E. Colavita. **Chemistry of Materials** **2013**, 25, 1144.
- “Heterogeneous charge transfer at the amorphous carbon/solution interface: effect on the spontaneous attachment of aryldiazonium salts”, M. Murphy, Ronan J. Cullen, **Dilushan R. Jayasundara**, Richard L. Doyle, Michael E. G. Lyons and Paula E. Colavita. **The Journal of Physical Chemistry C** **2013**, 117 (44), 22768–22777.
- “Study of the spontaneous attachment of polycyclic aryldiazonium salts onto amorphous carbon substrates”, Deirdre M. Murphy, Ronan J. Cullen, **Dilushan R. Jayasundara**, Eoin M. Scanlan and Paula E. Colavita. **RSC Adv.** **2012**, 2, 6527.
- “Spontaneous grafting of nitrophenyl groups on amorphous carbon thin films: A structure-reactivity investigation”, Ronan J. Cullen, **Dilushan R. Jayasundara**, Laura Soldi, Jayce J. Cheng, Gaelle Dufaure, and Paula E. Colavita. **Chemistry of Materials** **2012**, 24, 1031.
- “In situ studies of the adsorption kinetics of 4-nitrobenzenediazonium salt on gold”, **Dilushan R. Jayasundara**, Ronan J. Cullen, Laura Soldi, and Paula E. Colavita. **Langmuir**, **2011**, 27, 13029.
- “Photochemically triggered alkylthiol reactions on highly ordered pyrolytic graphite”, Laura Soldi, Ronan J. Cullen, **Dilushan Jayasundara**, Eoin M. Scanlan, Silvia Giordani, and Paula E. Colavita. **J. Phys. Chem. C** **2011**, 115, 10196.
- “Design and Construction of a Low Temperature Scanning Tunneling Microscope for Studying High Temperature Superconductivity”, **Dilushan Jayasundara**, **ProQuest/UMI publishers**, **2008**.

- “Surface Geometric and Electronic Structures of BaFe₂As₂ (001)”, V.B. Nascimento, Ang Li, **Dilushan R. Jayasundara**, Yi Xuan, Jared O’Neal, Shuheng Pan, T. Y. Chien, Biao Hu, X.B. He, Guorong Li, A. S. Sefat, M. A. McGuire, B.C. Sales, D. Mandrus, M.H. Pan, Jiandi Zhang, R. Jin, and E.W. Plummer. *Phys. Rev. Lett.* **2009**, 103, 076104.
- “Solid State cells with magnesium ion conducting polymer electrolyte based on polyacrylonitrile (PAN)”
M.A.K.L. Dissanayake, Kumudu Perera, **J.M.D.R. Jayasundara** and M.A. Careem. Solid State Ionic Devices : Science and Technology, Ed. S. Selladurai et al, *Allied Publishers Ltd, New Delhi*, (2000).
- “Graphene-Based Membranes Fabricated Using High Purity Natural Vein Graphite (NVG)”, A.R. Kumarasinghe, S. George, R.N. Wijesena, **D. Jayasundara**, K.M. Nalin de Silva and G.A.J. Amaratunga. *International Journal of Scientific Engineering and Technology*, Volume No.3 Issue No.11, pp: 1375-1379 (2014).

Conference Presentations/Abstracts

- “Efficient Removal of Microplastics Using Magnetic-Reduced Graphene Oxide (MrGO) as an Adsorbent Material”, Bulletin of the American Physical Society, March 2024.
- “Photocatalytic Degradation of Microplastics over Ilmenite-Graphene Oxide Nanohybrid”, Bulletin of the American Physical Society, March 2024.
- “A Method for Production of Binder-Free Graphite Thin Films on Polyimide for Flexible Electronics”, APS March Meeting 2023.
- “Innovations through University-Industry Collaborations”, Guest Speaker at CINEC Colloquium series, December 2022.
- “A Method for Production of Binder-Free Graphite Thin Films on Polyimide for Flexible Electronics”- American Physical Society (APS)- March Meeting, 2023. (Accepted Abstract for oral presentation)
- “Functional alginate-TiO-graphene oxide nanohybrids to minimize post-harvest loss of fruits and vegetables under visible light”- American Chemical Society (ACS)- Fall meeting, Virtual Session: Aug. 2022.
- “Effect of ethanol on photocatalytic activity of nano titania”- American Chemical Society (ACS)- Fall meeting, Virtual Session: Aug. 2022.
- “Electrochemical study of glassy carbon supported films of graphene oxide”- International Conference on Multidisciplinary Approaches in Science ICMAS 2021, University of Colombo, November 2021.
- “The study of electrophoretic deposition kinetics of graphene oxide using quartz crystal microbalance” - Annual Sessions of Sri Lanka Association for Advancement of Science (SLAAS), December 2021.

- “Fourier analysis to understand temperature distribution patterns in adhesively bonded textile structures” - 3rd Singapore International NDT Conference & Exhibition (SINCE 2019), December 2019.
- “Desorption kinetics of Urea from morphologically different Nano Hydroxyapatite thin films”- ACS Publications Symposium: Innovation in Materials Science and Technology, Singapore, November, 2019.
- “Mechanistic Insight to Water Adsorption on Graphene Oxide” – Peradeniya University International Research Sessions (*iPurse*), September 2019.
- “Measuring Interfacial Kinetics and Stability of Thin Films Using Quartz Crystal Microbalance”- Peradeniya University International Research Sessions (*iPurse*), September 2019.
- “Strategic activities of NYAs of relevance to the UN SDGs”- Worldwide Meeting of Young Academies (WWMYA), Vietnam, July 2019.
- “Symbiotic relationships between National Academies and Young Academies: The Sri Lankan Experience” - Worldwide Meeting of Young Academies (WWMYA), Vietnam, July 2019.
- “Science outreach and science education activities” - Worldwide Meeting of Young Academies (WWMYA), Vietnam, July 2019.
- “Urea Binding onto Morphologically Different Nano Hydroxyapatite Coatings”- European Materials Society (E-MRS) Spring meeting, Nice, France, May 2019.
- “Probing structural variations of graphene oxide and reduced graphene oxide using methylene blue adsorption method”- European Materials Society (E-MRS) Spring meeting, Nice, France, May 2019.
- “My (Toy) Box of research” – College of Chemical Sciences (IChem) Colloquium Series , December 2018.
- “Developing Functional Carbon Materials” – Invited talk, International Conference on Advances in Functional Materials, Nashik, India 2018.
- “Effect of interfacial properties on the stability of nano hydroxyapatite coatings”- University of Colombo Annual Research Symposium 2018.
- “Establishing a criteria to develop non-destructive testing methods for adhesively bonded textile structures using Fourier transforms” – Annual Sessions of Sri Lanka Association for Advancement of Science (SLAAS), December 2017.
- “Quartz crystal microbalance: a versatile experimental technique in the study of interfacial chemistry” – Invited talk, World Chemistry Conference and Exhibition, Rome, Italy Septmeber 2017.
- “Graphene oxide and graphene synthesized from vein type crystalline graphite under varying oxidation and reduction conditions” - European Materials Society (E-MRS) Fall meeting, Warsaw, Poland September 2017.

- “Stability of Nano-Hydroxiapatite Thin Films on Gold surfaces for Sensor Applications: A Study through Nano Gravimetry” - European Materials Society (E-MRS) Fall meeting, Warsaw, Poland September 2017.
- “Dissolution Resistant Hydroxyapatite Nano-Particle Coatings on Gold Surfaces: a Study through Nanogravimetric Method” – Annual Research Symposium, University of Colombo, October 2016.
- “Development of non-destructive testing methods for adhesively bonded textile structures” - Annual Research Symposium, University of Colombo, October 2016.
- “Graphene Oxide-based hybrid filter for water purification” - 16th Conference of the Science Council of Asia, Colombo, Sri Lanka May 2016.
- “Research related to hi-tech products based on graphene” – Invited talk, Roundtable discussion series on Value addition of graphite, organized by Coordinating Secretariat for Science Technology and Innovation (COSTI), Colombo, Sri Lanka, 2014.
- “Combined in situ and ex situ characterisation of diazonium salt chemisorptions at gold and carbon surfaces” – European Materials Society (E-MRS) Spring meeting, Strasburg, France 2012.
- “In situ and real time characterisation of the spontaneous grafting of aryldiazonium salts at gold and carbon surfaces” –Smart Surfaces: Solar and Biosensor Applications, Dublin 2012.
- “Real time characterisation of diazonium salt chemisorptions on gold surfaces” – AT_P160, Royal Chemical Society (RSC): International conference on materials chemistry, Manchester UK, 2011.
- “Electronic structure on (001) surface of Co-doped BaFe₂As₂ studied with scanning tunneling spectroscopy” – Abstract: H33.00013, American Physical Society (APS) March meeting, Denver, USA 2009.
- “Electronic Structure on (001) Surface of BaFe₂As₂ Parent Compound Studied with Scanning Tunneling Spectroscopy” – Abstract: D35.00007, American Physical Society (APS) March meeting, Denver, USA 2009.
- “STM Investigation of the (001) surfaces of the Parent and Co-doped BaFe₂As₂”- Abstract:D35.00006, American Physical Society (APS) March meeting, Denver, USA 2009.
- “Structural Investigation of the BaFe₂As₂(001) Surface Using LEED and STM”- Abstract:D35.00008, American Physical Society (APS) March meeting, Denver, USA 2009.