



Lahiru Abeykoon

Research Scientist

Materials Technology Section

Qualifications	<ul style="list-style-type: none">• M.Phil. (Reading)(University of Peradeniya, Material science)• BSc.(Sabaragamuwa University, Applied Physics, 2015)• National certificate in engineering draughtsmanship (NCED) - Department of Technical Education & Training (2009)
Contacts	Tel: 0112379851 Email: lahiru@iti.lk
Research Experience	<ul style="list-style-type: none">• Research Scientist – Industrial Technology Institute (ITI)(2019–Present) Materials Technology Section http://www.iti.lk• Research Assistant - National Institute of Fundamental Studies (NIFS)(2016–2019) Energy and Advanced Material Chemistry Research Group https://www.nifs.ac.lk/• Development Officer – Sri Lanka Sustainable Energy Authority (SLSEA)(2015–2016) Solar Energy Park Hambantota http://www.energy.gov.lk/index.php/en/
Interest Areas	<p>Materials synthesis:Thin films deposition, Vacuum thermal evaporation, E-beam evaporation, Spin coating, Spray pyrolysis, Electrodeposition, nano material synthesis, graphene synthesis, 2D materials</p> <p>Characterization:XRD, SEM, FTIR, UV-Visible spectroscopy, Electrochemical analysis,PEC, IV characterization, IPCE</p> <p>Device fabrication:PEC device for water electrolysis, Thin films solar cells, photocatalyst, battery technology, Hydrogen production, super capacitors, sensors</p>
Publications	<p>SCI & Peer reviewed Journal Publications</p> <ul style="list-style-type: none">• Lahiru K. Abeykoon, Hongyi Tan, Changfeng Yan, Jayasundera Bandara, "Significant role of the initial precursor sulfur concentration in the photoelectrochemical hydrogen production of $\text{Cu}_2\text{ZnSnS}_4$ photocathode prepared by thermal evaporation," J. Nanophoton. 16(1) 016001 (5 January 2022)https://doi.org/10.1117/1.JNP.16.016001• Rushdi D. Senevirathne, Lahiru K. Abeykoon, Nuwan L. De Silva, Chang-Feng Yan, Jayasundera Bandara, "Sono-photocatalytic production of

	<p>hydrogen by interface modified metal oxide insulators”, Ultrasonics - Sonochemistry 45 (2018) 279–285. https://doi.org/10.1016/j.ultsonch.2018.03.016</p> <ul style="list-style-type: none"> • Hong-yi Tan, Liang Zhan, Chang-feng Yan, Lahiru. K. Abeykoon, Nuwan L. De Silva and J. Bandara, Enhancement of the conversion of mechanical energy into chemical energy by using piezoelectric KNbO_{3-x} with oxygen vacancies as a novel piezocatalyst, Nano Express. (2020).http://iopscience.iop.org/article/10.1088/2632-959X/abd290. • A.M.K.L. Abeykoon, R.C.L. De Silva, L.D.C. Nayanajith, and I.R.M. Kottegoda, Appropriate graphene synthesis methods for divers applications, Sri Lanka Journal of Physics (IPSL), accepted 2022 <p>Conference Proceedings</p> <ul style="list-style-type: none"> • A.M.K.L. Abeykoon, G.M.L.P. Aponsu, H.M.B.I. Gunathilaka, H.A. Vimal Nadeera, “Effect of Temperature on the Photovoltaic Characteristics of Polycrystalline Silicon Solar cells at Hambantota Solar Power Plant”, proceedings of Solar Asia 2018 Int. Conf., Institute of Fundamental Studies, Kandy, Sri Lanka (2018) 270-275. • A.M.K.L. Abeykoon, J. Bandara, "Determination of fundamental properties of czts semiconductor material deposited by the spray pyrolysis method", Proceedings of the Postgraduate Institute of Science Research Congress, University of Peradeniya, Sri Lanka (2018) 76 • A.M.K.L. Abeykoon, J. Bandara, “A Comparative Study of CZTS Thin Films Deposited by Different Non Vacuum Techniques”, proceedings of Advanced Materials for Clean Energy and Health Applications international conference, University of Jaffna, Sri Lanka (2019) 34. • A.M.K.L. Abeykoon, G.M.L.P. Aponsu, V.P.S. Perera, H.A. Vimal Nadeera and H.M.B.I. Gunathilaka, “Self-cleaning, hydrophobic, antifogging, TiO₂ coating for photovoltaics solar panels”, Proceedings of the 76th Annual Sessions- Sri Lanka Association for the Advancement of Science (SLAAS), Sri Lanka (2020) 150.
<p>Awards memberships, Scholarships & Recognition</p>	<ul style="list-style-type: none"> • President’s award for highly rated scientific research publication in 2018 • A Life time member of Sri Lanka Association for Advancement of science (SLAAS) • Best oral presenter final year annual research project presentation faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka. (2015)
<p>Major Projects Undertaken</p>	<ul style="list-style-type: none"> • Production process equipment and wastewater treatment plant for Graphene production process - Funded by Treasury Grants (TG) • Purification of graphite of Sri Lanka as a high value addition (NSF) • Designing and fabrication of a water ionizer (TG) • Demand driven automotive rechargeable cost efficient battery manufacturing Technology for SME startups (TG)
<p>Major Technology Transfers and Commercialization</p>	<ul style="list-style-type: none"> • Upgrading low grade Sri Lankan graphite into high grade graphite as a value addition • Purification of local graphite into high level as a value addition • Mass scale production of graphene and reduced graphene oxide (rGO) from Sri Lankan graphite as a high value addition

- Production of graphene oxide and graphite oxide (GO) as a high value addition