



M.H.T. Dulaj

Assistant Research Technologist

Material Technology Section

Qualifications

MSc in Industrial and Environmental Chemistry (University of Kelaniya – Pending)

BSc (Special) in Environmental Science and Natural Resource Management (Sabaragamuwa University of Sri Lanka)

Contacts

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Specialized Fields

Nano material synthesis, Graphene synthesis, Ceramic, Environmental Remediation.

Interest Areas

- Materials synthesis.
- Characterization: XRD, FTIR, UV-Visible spectroscopy, Dilatometer, Particle Size Analysis.
- New products development, product improvements in quality & cost basis & Trouble shooting activities for local & international market in material science.

Publications

1. **Dulaj, M.H.T.**, Gunatilake, S.K., Gunatileke, D.N.D.S. and Gunathilaka, P.A.G., [2019]. CO₂ Biofixation of Wastewater from stabilization ponds using micro algae and potential for biofuel production.
2. Sooriyaarachchi, P.H., Dulaj, M.H.T., Dharmathilaka, J.A.D.M., Gunathilaka, H.M.B.I., et al., [2022]. Further Enhancement of Physical Properties of Unglazed Traditional Cookware.
3. Prematunga, C., Dulaj, M.H.T., Jayalath, M., wijekoon, N., et al., [2018]. The Livelihood of People Related to the UMA-OYA Multipurpose Development Project (UOMDP) in UDAPERUWA GN Division, Bandarawela.
4. Chaturanga, D.N.P.I., Gamage, N.G.S.S., Dulaj, M.H.T., Abeykoon, A.M.K.L., et al., [2022]. Electrical and Mechanical Properties of RGO-Rubber Nanocomposite.
5. **M.H.T. Dulaj***, H.M.B.I. Gunathilaka, R.C.W. Arachchige, D.R. Pandithavidana and I.R.M.Kottegoda., [2023]. Enhancement of physical

properties of red clay based superior quality cookware.

6. Chathuranga, D.N.P.I., Dulaj, M.H.T., Abeykoon, A.M.K.L., et al., [2023]. Effects of rGO Concentration on Electrical and Mechanical Properties of rGO Natural Rubber Nanocomposite.
7. Chathuranga, D.N.P.I., Gamage, N.G.S.S., Dulaj, M.H.T., Abeykoon, A.M.K.L., et al., [2023]. Synthesis and Characterization of composite with reduced graphene oxide and rubber: A value addition to Sri Lankan natural vein-graphite and rubber industries.
8. S.D.M. Lakshani,* D.B.H.I. Bandara, T.N. Senapathi, R.C.L De Silva, M.H.T. Dulaj, et al., [2023]. XRD, FTIR and SEM characterization of graphite oxide synthesized using Sri Lankan vein graphite.
9. D.B.H.I. Bandara*, S.D.M. Lakshani, A. D. K. I. Weeraratne, R.C.L De Silva, M.H.T. Dulaj, et al., [2023]. Purification and characterization of Sri Lankan vein graphite obtained by acid leaching method
10. S. D. M. Lakshani, D. B. H. I. Bandara, A. M. K. L. Abeykoon, M. H. T. Dulaj, et al., [2023]. Mass scale production and purification of graphite oxide from Sri Lankan vein graphite and spectroscopic characterization.

Major Projects Undertaken

- Further development of red clay based superior cookware.
- Design of production process equipment and wastewater treatment plant for graphene production process.
- Technology transfer of modified coir pith base material
- RGO and GO preparation for research purpose.
- Further purification of 99% graphite project.
- Environmental remediation with activated carbon.
- Application of anaerobic digestion for the treatment of poultry processing wastewater.
- Determination of CH₄ and CO₂ emission factors of poultry processing wastewater.
- Enhancement in physical properties of red clay based superior quality cookware.