



M. D. Yoga Milani

Research Scientist

Materials Technology Section

Qualifications

- **Msc.** (University of Moratuwa, Polymer Technology, 2010)
- **BSc.** (University of Colombo, Chemistry Honors, 2004)

Contacts

Tel: 94 011 2379800 Ext: 463

Email:

Research Experience

Eighteen years R&D experience in product development, product improvement and testing in the field of material science

Interest Areas

- New products development, product improvements in quality & cost basis & Trouble shooting activities for local & international market in materials science
- Handling quality management system and quality auditing with complying to the regulatory requirements of ISO 9001, ISO 17025 & ISO 13485
- Searching and writing patents

Publications

Publications

1. De Costa, M.D.R., De Silva, R.C.L., Nayanajith, L.D.C., Colombage, H.C.D.P., **Milani, M.D.Y.**, Rosa, S.R.D., and Kottegoda, I.R.M., (2021). Electrochemical performance and material characterization of reduced graphene oxide (rGO)/titanium dioxide (TiO₂) composite as electrodes for supercapacitors. Sri Lankan journal of physics, 22(2): 1-12
2. Samarawickrama D.S., **Milani M.D.Y.**, Perera P.S.D., Weeratunge H.D., Wijeratnam R.S.W., Dissanayake D.P., Hewajulige I.G.N., Lim L.T., Paliyath G., Subramanian J.A., (2018). Hexanal incorporated composite material (HICM) made of banana fiber and polymers extend storage life of mango fruit, Journal of Tropical Agriculture, 95 (1), 111-119
3. **Milani M.D.Y.**, Samarawickrama D.S., Dharmasiri G.P.C.A., Kottegoda I.R.M., (2016). Study the structure, morphology and thermal behavior of banana fiber and its charcoal derivative from selected banana varieties. Journal of Natural Fibers. 13:3, 332- 342
4. Silva D.A.D., Hettiarachchi B.U., Nayanajith L.C.D., **Milani M.D.Y.**, Motha J.T.S. (2011). Development of a PVP / kappa carrageenan / PEG Hydrogel dressing for wound healing applications in Sri Lanka. Journal of National Science Foundation Sri Lanka .39(1):25-33

Communications

1. **Milani M.D.Y.**, Nayanajith L.D.C., Arachchige R.C.W., (2020). Study the structure and morphology of "Bagasse" fibre produces from Sri Lankan sugarcane. 76th Annual Session of SLAAS
2. Vithanage M.P., Manage T.R.T, De Silva R.C.L, Nayanajith L.D.C, **Milani M.Y.D.**, Kottegoda I.R.M. (2019). XRD, FTIR and SEM Analysis of Natural Rubber/ Graphite Composite, 75th Annual Session of SLAAS, 512/E1

3. Bhagya P. V. G. S., **Milani M. D. Y.**, Arachchige R. C. W. and R. C. L. D. Silva, (2019). The effect of enhanced self-microbe population, clay and controlled elevated temperature to accelerate the composting of food and garden waste, 75th Annual Session of SLAAS.
4. Attapattu A.M.M.H., Perera T.S.N., **Milani M.D.Y.**, Arachchige R.C.W., (2019). Molecular characterization of thermophilic bacteria present in solid-waste composting, ITI 4th Biennial research symposium.
5. Nayanajith L.D.C., **Milani M.D.Y.**, De Silva R.C.L., Kottegoda I.R.M., (2019). Evaluation of the effect of graphite content on thermal conductivity and mechanical properties of natural rubber latex-graphite composites, ITI 4th Biennial research symposium.
6. Jayawardana M. D. S. B., **Milani M.D.Y.**, De Silva R.C.L., Wijesinghe S., (2018). Investigation of the Impact of Clay as a Bulking Agent for Food Waste Composting at a Controlled Raised-up Temperature, 3rd International Conference on Advances in Computing and Technology, ICACT
7. Jayawardana M. D. S. B., **Milani M.D.Y.**, De Silva R.C.L., (2018). Study the effect of clay, sawdust and half-composted garden waste as bulking agents in food waste composting at a controlled elevated temperature, 74th Annual Session of SLAAS
8. **Milani M.D.Y.**, Samarawickrama D.S., Perera P.S.D., Wijeratnam R.S.W., Hewajulige I.G.N., (2017). Production and commercialization of ecofriendly packaging material for transportation of fruits and vegetable. IV International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions
9. Samarawickrama D. S., Weeratunge H. D., Gunasekara M. M. N. P., **Milani M.D.Y.**, Hewajulige I.G.N., Wilson Wijeratnam R.S., Dissanayaka D.P., (2017). Headspace characterization of hexanal incorporated composite material (HICM) for postharvest application on mango fruits, 3rd Biennial Research Symposium ITI
10. **Milani M.D.Y.**, Samarawickrama D.S., Dharmasiri G.P.C.A., (2015). Characterization of banana fiber extracted from common banana varieties in Sri Lanka. Annual research symposium, Industrial Technology Institute
11. Divisekera D.M.W., Nayanajith L.D.C., Manorathne C.H, **Milani M.D.Y.**, (2013). A simple in vitro method for the detection of antimicrobial activity of titanium dioxide coated materials against Escherichia coli and Staphylococcus aureus. 69th SLAAS Annual sessions
12. **Milani M.D.Y.**, Samarawickrama D.S., Hettiarachchi B.U, Gunasekara H.D.D.P, (2013). Comparison study of absorbent properties in banana pseudostem fibers with commercial wood pulp for using in personal care products, Annual research symposium, Industrial Technology Institute
13. **Milani M.D.Y.**, Motha J.T.S, Samarawickrama D.S, Senaratne M.D, (2012). Potential for using banana pseudostem as an absorbent material for personal hygiene products, International symposium on polymer science and technology, University of Sri Jayawardanapura
14. **Milani M.D.Y.**, Premachandra J.K, Amarasinghe A.D.U.S, Prashantha M.A.B, (2009). Synthesizing and characterization of alkyd resins using blend of Nahar seed oil and Karawila seed oil, 15th ERU symposium, University of Moratuwa
15. **Milani M.D.Y.**, Nilmini R., Dissanayake D.P, (2003). Carbon black – natural rubber latex masterbatches using a novel dispersing agent, 59th Annual Session of SLAAS

Patents

- **M.D.Y. Milani**, R.Nilmini, D.P. Dissanayake, Novel dispersing agent with high retention of carbon black manufacture of latex/carbon black master batches, The Registry of Patents and Trade Marks, Sri Lanka, Patent No.10822
- **M.D.Y. Milani**, D.S Samarawickrama, B.U.Hettiarachchi, Processing technology for banana fibers as an absorbent material suitable for using in personal care products., The Registry of Patents and Trade Marks, Sri Lanka, Patent No. 16653

	<ul style="list-style-type: none"> • M.D.Y. Milani, D.S. Samarawickrama, G.P.C.A Dharmasiri, R.S.W Wijeratnam, Processing technology of papers/boards from banana fiber for sorption and slow release applications, The Registry of Patents and Trade Marks, Sri Lanka, Patent No. 17575 • M.D.Y. Milani, D.S. Samarawickrama, S.W. Wijerathnam, Processing technology of banana fiber-polymer composite board for slow releasing applications of trapped active compounds, The Registry of Patents and Trade Marks, Sri Lanka, Patent No. 18029M.D.Y. • Milani, R.C.W. Arachchige, A. Sooriarachchi, R.C.L. De Silva, S.K. Sandaruwan, A domestic apparatus for converting biodegradable food waste into compost within 24 hours and method of converting thereof, The Registry of Patents and Trade Marks, Sri Lanka, Application No: 20948
Awards memberships, Scholarships & Recognition	<ul style="list-style-type: none"> • Achievement award for the best innovative project 2020 during 5th ITI biennial research symposium 2021 • NASTA award 2018 for category in excellence of international collaboration -IDRC project • SLCARP award for excellence in Agriculture research 2019 – 1st price in non-plantation sector- IDRC project • Achievement award for the best project with nationally significant outputs 2018/2019 during 4th ITI biennial research symposium 2019 - IDRC project • Appreciation award in consideration of NASTA award 2018 and SLCARP award 2019 during 4th ITI biennial research symposium 201 <p>Memberships: SLAAS Life membership</p>
Major Projects Undertaken	<ul style="list-style-type: none"> • Water purification & drinking water having health benefits • Starch based biodegradable polymers • Management of bio degradable food waste • Fiber based fruit packaging materials with slow releasing ability • Absorbent material from clean renewable agro waste • Absorbent material from hydrogel • Self-cleaning coatings