means of solid waste management. Biochar produced at 300 °C using Lasia Spinosa (kohila) showed the highest capacity in a methylene blue adsorption study. The capacity was seen to further enhance by more than five times after a nitric acid premodification due to pore widening. A novel digestion method was optimized for nine different BCs where the desired dissolution of the solid matrix and matrix interference was obtained by using fuming nitric acid (98%).

Dr. Sameera R Gunatilake *graduated from the Institute of Chemistry Ceylon in 2007 and obtained his Ph.D. in Analytical Chemistry from the Mississippi State University in 2014. He is currently serving as a senior lecturer at the College of Chemical Sciences and is the Honorary Editor of the Institute. He is also a council member at the Sri Lanka Academy of Young Scientist (SLAYS). His research interests encompass the development of an engineered low-cost adsorbent for water remediation and as an agricultural soil amendment.*

Conference Proceedings

Organic Synthesis on Graphene and other carbonaceous Materials

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Carbon is widely available inexpensive material. Graphene is a two-dimensional crystalline carbon allotrope that has fascinated researchers worldwide and has extended the interest in carbon structures such as fullerenes and nanotubes Carbon-based-materials have been utilized for a variety of applications including organic synthesis and heterogeneous catalysis. Various carbonaceous materials have been used as alternatives for transition metal based catalysts. These carbon based materials have shown their potential for development of green and sustainable approaches to heterogeneous catalysis. In this presentation, the utilization of carbon-based materials as supports for heterogeneous catalysts, especially in organic transformations will be discussed. Predominantly on four categories of carbonaceous supports, namely graphene (including, graphene oxide (GO) and reduced graphene oxide (rGO), graphitic carbon nitride (GCN), carbon nanotubes (CNT) and activated carbon (AC) for various organic reactions will be discussed. Several approaches for the synthesis of these materials along with their application as heterogeneous catalysts for organic reactions will be elaborated in detail. In addition, different aspects of organic synthesis, including hydrogenation, oxidation, reduction, condensation, and multi-component reactions, catalyzed by these materials will also be discussed along with the organic transformations leading to the sustainable synthesis of valuable products from biomass. The future perspectives of this very interesting class of materials will also be provided.

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Cover Page

The picture illustrating the theme "**Advances in Electrochemical Technology**" was adapted from the "To boost Lithium – Ion Battery Capacity by up to 70%, Add Silicon" article by David Schneider which appeared in the IEEE Spectrum website on 6th January 2019 which discusses about Silicon rich anodes will let batteries hold more energy. This article can be found using this URL https://spectrum.ieee.org/energy/renewables/to-boost-lithiumion-battery-capacity-by-up-to-70-add-silicon