Editorial Notes

Journal of Physical Science Vol. 28, Supp. 1 (2017) is a special issue resulting from the 4th Conference on Future Biorefineries 2016, organised on 12–15 March 2016 in Langkawi, Malaysia. The event was organised with the aim of bringing together researchers who are focusing on the technology developments that are essentially required for utilisation and conversion of lignocellulosic biomass (LCB) in the lignocellulosic biorefinery (LCBR). This special issue features 19 articles contributed by various researchers from 14 institutions and industries across Malaysia.

The selected articles cover the main aspects of the future lignocellulosic biorefinery system that includes the production, separation and purification of bio-based fine chemicals and products. Focuses are on the development of the state of the art technologies in the biorefinery system which covers: (1) the upstream thermochemical and biochemical conversion processes such as gasification, pyrolysis, enzymatic hydrolysis and microbial fermentation for the production of bio-based fine chemicals and products; and (2) the downstream separation and purification/upgrading of liquid and gaseous bio-based products utilising advance membrane separation technology. In this special issue, the technologies utilised are uniquely developed to tailor for local LCB, and definitely can serve for Malaysian future biorefinery. Additionally, the publication highlights the techno-economic assessment of the integration of these upstream and downstream biorefinery technologies with respect to the supply chain and distribution structure of the LCB feedstock itself, and its potential products and byproducts.

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Guest Editors