

New Technology Developments In Palm Oil Industry

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Graphene is the new wonder material. It is a single layer of carbon with exceptional qualities. Used as an additive, it enhances properties of natural fibers, plastics and fluids by orders of magnitude. Commercial production is still very expensive for the conventional processes. For almost two years, a multiple ton capacity low cost graphene facility has been operating in Malaysia, using biogas as the feedstock. The proven applications will be launched in 2014, when the construction of the world's largest facility to produce 250 tons per year is completed. Successful pilots have confirmed methods to monetize the value of waste products produced by Malaysian palm oil industry by graphene enhancement. This presentation discusses the projects related to the utilization of waste from the palm oil industry by enhancing their qualities for commercial use.

- Biogas from palm oil mill effluents is sequestered to produce zero carbon footprint graphene and hydrogen.
- EFB fibers and Kenaf fibers are crosslinked with graphene and used as additives for composites used in aerospace and automobile industry.
- Mill oil processing waste (sludge oil) is being converted to high value oilfield drilling fluids and high temperature lubricants.