

Carbon Nanotubes: Road from Science to Commercialization

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Abstract

Nanotechnology can be defined as the study and application of extremely small thing, having a size about 1 to 100 nanometers (nm). Due to their small sizes, nanomaterials exhibit novel and improved physical, chemical and biological properties that allows them to be used in various science fields. Prof. Ir. Dr. Abdul Rahman was one of the pioneers in Malaysia and has achieved numerous achievements in the production of Carbon Nanotubes (CNTs) and graphene. CNTs have emerged as one of the most important components of the nanotechnology due to their extraordinary properties and their enormous potential applications in electronics, chemistry, optics and biology. His responsiveness in commercializing CNT production technology has encouraged Prof. Ir. Dr. Abdul Rahman and his group developed a single-step production of CNT by adopting a simple catalytic decomposition process using natural gas as feedstock. This technology applies low cost process with specially tailor designed catalyst as enhancement agent to decompose natural gas into CNT and hydrogen. This technology is easy to scale up at for large-scale CNT production.