

GrapheNovation – Commercialising High Value Nanotechnology Solutions to the Market

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Malaysia's first National Graphene Action Plan (NGAP) on Graphene commercialization was formed in 2014 spearheaded by NanoMalaysia Berhad through 11th Malaysia Plan. Considering the technology and market landscape of Malaysia manufacturing, the key areas of graphene commercialization was identified to be lithium-ion batteries, rubber additives, plastic additives, conductive inks and nanofluids.

Among the achievement through this programme includes deployment of graphene based nanofluids for cooling system which improves energy saving up to 29%, sago starch based graphene additives for oil drilling fluid loss which increases the life span of drill bit about 75% or 40% cheaper, reclaimed tyres improved with graphene to increase set compression and tensile strength by 10% together with 30 other products.

Aligning to the global fourth Industrial Revolution (4IR), graphene commercialization has also taken a pivotal paradigm shift. GrapheNovation is a programme under NanoMalaysia Berhad which focusses on enhancing Malaysian nanotechnology ecosystem using Graphene in Internet of Nano-Things (IoNT). Four main pillars for GrapheNovation includes energy storage, energy generation, sensor technology and advanced technology. These key areas are integral component of 10-10 Malaysian Science, Technology, Innovation and Economy Framework (MySTIE) and Malaysian Advanced Material Technology Roadmap, Industry4WRD.

As a summary, since the start of NanoMalaysia's commercialisation programmes in 2016, to-date more than 70 technologies, products and solutions has been developed with various industries resulting in more than 50 project Intellectual Properties developed for value creation; with more than 30,000 potential high value job opportunities and more than RM34 billion in potential GNI contribution over the next 5 years.

References

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