

Grafoid: Collaboration Is the Key to Graphene's Commercialization

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Abstract

Bilateral co-operation in the low carbon economy offers opportunities for graphene producers. In the coming years, strong bilateral relationships for the commercialization of graphene will flourish. These relationships will bring together mine-to-market industry players, joint venture partners and governments to propel application development to meet market demand.

Grafoid is poised to take advantage of the change. As a graphene research, development and investment company, it has positioned itself for collaborative commercial alliances in graphene application development. Based on an investment in a patented one-step process to produce an affordable suite of graphene products, the company develops applications with joint venture partners at Grafoid's Global Technology Centre (GGTC), in Kingston, Canada.

In this collaborative era, Grafoid recently joined a seven-company three-country EUROGIA consortium to develop a next generation UAV battery technology. Known as AIRGRAF, the 3.5M € project is a graphene energy storage project to develop a new graphene-lithium-polymer battery technology with higher energy density per kilogram and safer packaging.

The commercialization opportunity is significant. By 2027, IDTechEx Research projects the total available market for electric UAVs will reach \$6.2 billion, up

from \$2.5 billion in 2017, with revenues from all UAV services generating \$8.7 billion annually by 2025. A significant commercial opportunity exists for new battery development through a joint venture company among the consortium partners for production of next generation graphene-enhanced battery cells and packs for UAVs.

No one company can do it alone. Commercialization of graphene will only successfully happen when we work together in collaboration, fitting all the necessary pieces together – the science, material and innovation – and matching it with financial resources and industry's products and ideas. This requires cooperation, education and outreach on our part.