

18th March 2024

Successful production of graphene oxide opens up new growth curve, including water filtration

Highlights

- **Graphene oxide successfully produced at Henderson facility using a modified version of existing graphene production process**
- **Sustainable and cost-effective process conducted with minimal waste streams**
- **High-quality graphene oxide opens up extensive new opportunities not previously considered, including water filtration**

First Graphene Limited (ASX: FGR; “First Graphene” or “the Company”) has successfully produced multi-kilogram quantities of graphene oxide at the Company’s Henderson facility in Western Australia.

Building on existing manufacturing expertise, First Graphene identified a new route to manufacturing graphene oxide materials using the Company’s existing capabilities, opening an expanded range of commercial opportunities.

The graphene oxide product was manufactured in a cost-effective, scalable, and repeatable process that produces a consistent product with minimal waste streams.

About Graphene Oxide

Graphene oxide is similar to graphene but has a high oxygen content which makes it readily dispersible in water. The material is strong, flexible and porous with a high surface area, which is suitable for filtration and supercapacitor applications.

First Graphene’s product will meet the needs of various industries, with strong demand already identified in water purification and desalination processes. The Company is currently in discussions with customers in these markets.

Graphene oxide’s characteristics make it suitable for use in polar thermoplastic polymers, such as PVC, polyesters and nylon, as well as aqueous coatings. The graphene oxide market presents a significant opportunity for the Company, poised to reach USD\$2.7 billion by 2033¹.

Graphene oxide can also be deployed in concrete applications, diversifying and enhancing First Graphene’s product offerings to cement and concrete clients around the world.

The Company is advancing work to supply this new product to multiple high demand industries, which will bolster First Graphene’s global commercialisation strategy and market opportunities.

¹ [Research Nester](#)

First Graphene Managing Director and CEO Michael Bell said:

“The successful production of graphene oxide marks a major milestone for First Graphene, as we have created a high-demand material without incurring additional costs to the business.

The opportunities to deliver this new product to a raft of markets will bolster the Company’s commercialisation strategy which is growing from strength to strength.

I look forward to providing further updates on our production of graphene oxide as it advances.”

This release has been approved for release by the Chairman.

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About First Graphene Ltd (ASX: FGR)

First Graphene Limited is focused on the development of advanced materials to help industry improve. The Company is a leading supplier of graphitic materials and product formulations with a specific commercial focus on large, high-growth global markets including cement and concrete; composites and plastics; coatings, adhesives, silicones and elastomers (CASE); and energy storage applications.

One of the key benefits of these advanced materials is the reduction of carbon dioxide emissions, whether directly through a reduction in output of these harmful greenhouse gases or lower energy usage requirements in manufacturing, or indirectly due to enhanced performance characteristics and extending the usable life of products.

First Graphene has a robust manufacturing platform based on captive and abundant supply of high-purity raw materials, and readily scalable technologies to meet growing market demand. As well as being the world’s leading supplier of its own high performance PureGRAPH® graphene product range, the Company works with multiple industry partners around the world as a supplier of graphitic materials and partner to research, develop, test and facilitate the commercial marketing of a wide range of sector-specific chemical solutions.

First Graphene Ltd is publicly listed in Australia (ASX:FGR) and has a primary manufacturing base in Henderson, near Perth, WA. The Company is incorporated in the UK as First Graphene (UK) Ltd and is a Tier 1 partner at the Graphene Engineering and Innovation Centre (GEIC), Manchester, UK, where it has a strong marketing and R&D capability.