

19<sup>th</sup> January 2022

## **Innovate UK funding secured for further supercapacitor research**

### **HIGHLIGHTS**

- **Funding secured from Innovate UK EDGE to develop proof-of-concept pouch cell supercapacitors**
- **Aim to develop and test high-energy, high-power density commercial scale supercapacitor cell**

First Graphene Limited (ASX:FGR; "First Graphene" or "the Company") is pleased to announce it has been awarded funding from Innovate UK EDGE to progress development work on its supercapacitor graphene hybrid materials with a Research and Technology Organisation (RTO) based in the United Kingdom.

The Innovate EDGE fund is intended to support high-growth small to medium enterprises (SMEs) to scale up and innovate, working alongside the UK's "RTO and Catapult Network". The Company will engage with world-leading experts at the Energy Innovation Centre based at Warwick Manufacturing Group (WMG) – part of the Catapult Network.

The £15,000 funding from Innovate UK will be matched with approximately AU\$100,000 in-kind funding from First Graphene's internal resources to advance the technology, which is an important milestone towards the commercialisation of the Company's supercapacitor technology.

The funding will be used to progress the development of novel supercapacitors using First Graphene's unique hybrid-graphene materials and optimised protic ionic liquid electrolytes. These high performing cells will have high capacitance and the ability to operate at high voltages - a key milestone towards achieving the "10-plus-10" target of power density above 10kW/L and energy density above 10Wh/L. Proof-of-concept pouch cell supercapacitors will be produced to validate performance in a commercially relevant cell format.

Pouch cells are a specific battery format that do not have a rigid enclosure, instead using a sealed flexible foil. This reduces the weight compared to other battery formats and allows greater flexibility to fit them into various products.

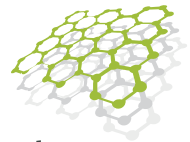
The supercapacitor device market is projected to grow from US\$409 million in 2020 to US\$720 million by 2025 at an expected CAGR of 12.0 per cent. The growth of the market is driven by increasing demand in energy harvesting applications and rising use of supercapacitors in trains and aircraft. Moreover, the increasing global demand for electric vehicles is likely to fuel the growth of the market.<sup>1</sup>

The project will run over January and February 2022, and it is well aligned with plans to release a proof-of-concept cell within the next 12 to 18 months.

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<sup>1</sup> [https://www.marketsandmarkets.com/Market-Reports/supercapacitor-market-37140453.html?gclid=EAIaIQobChMIibiU3cGq4wIVxrHtCh1UYwleEAAYAiAAEgLqIPD\\_BwE](https://www.marketsandmarkets.com/Market-Reports/supercapacitor-market-37140453.html?gclid=EAIaIQobChMIibiU3cGq4wIVxrHtCh1UYwleEAAYAiAAEgLqIPD_BwE)

# ASX ANNOUNCEMENT



**first graphene**

The world's leading graphene company

First Graphene Managing Director and CEO Michael Bell said: "We are grateful for the ongoing support from Innovate UK EDGE which will allow us to maintain momentum on progress towards game-changing supercapacitor technology. We look forward to engaging with and developing this novel supercapacitor technology alongside the experts at WMG."

Mark Copley, Associate Professor of WMG said: "We are looking forward to continuing our collaboration with First Graphene as the Company continues its scale-up journey with the novel graphene hybrid materials."

Dr Dilruk Yahathugoda, Senior Innovation and Growth Specialist at Innovate UK EDGE, said: "We are pleased to be able to support First Graphene. A successful outcome will help the Company make a step change in its novel energy storage technology."

## Investors

### Michael Bell

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## About First Graphene Ltd (ASX: FGR)

First Graphene Ltd. is the leading supplier of high-performing, graphene products. The company has a robust manufacturing platform based upon captive supply of high-purity raw materials and an established 100 tonne/year graphene production capacity. Commercial applications are now being progressed in composites, elastomers, fire retardancy, construction and energy storage.

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.

## PureGRAPH® Range of Products

**PureGRAPH®** graphene powders and **PureGRAPH® AQUA** pastes with lateral platelet sizes of 50µm, 20µm, 10µm and 5µm, as well as a range of **PureGRAPH® Masterbatch** and **Admixture** products are available in tonnage volumes. The products are high performing additives, characterised by their high quality and ease of use.

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## Directors:

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## Trading Symbols

**Australia:** FGR

**Frankfurt:** FSE:M11

**USA OTCQB:** FGPHF

With authority of the board, this announcement has been authorised for release by Aditya Asthana, Chief Financial Officer and Company Secretary.