

28th July 2021

June Quarterly Activities Report

Advanced materials company First Graphene Limited (ASX: FGR, "First Graphene" or "the Company") is pleased to provide this update on its financial and operational performance for the quarter ended 30 June 2021.

HIGHLIGHTS

- **Commercial momentum builds** with forecastable production demand from early-stage customers, underpinning commercial revenue for FY22.
- **Commercial capability** boosted with appointment of industry experts in key verticals
- **New products** launched to enable ease of dispersion and addition in various materials and standard production lines
- **Continued innovation** sees major advances in functionalising graphene, thermoplastic applications, hydrogen fuel cell catalysts and novel process to convert petroleum to graphite and green hydrogen.
- **Financials strengthened** with placement from US-based institutional investor, investors exercising options, listing on the OTCQB to enable more US trading, and cost control initiatives implemented
- **Letter from Managing Director & CEO** (on Page 7)

Gaining Commercial Momentum

First repeat production orders fulfilled

In line with the commercialisation progress and product launches from Aquatic Leisure Technologies, Steel Blue, Ascent Shipwrights, newGen Group and Katana Surf, First Graphene confirms the processing of production orders from these early-adopter foundation customers, in turn giving the Company the ability to forecast demand for the first time.



Aquatic Leisure Technologies Pty Ltd (ALT)

ALT has launched its new range of pools, under well-known Australia brand Aqua Technics, that utilise a **PureGRAPH®** enhanced laminate system. The resulting Graphene Nano-Tech Pool range provides significant strength improvement, weight saving and improved blister resistance due to ground water ingress compared to traditional pools.

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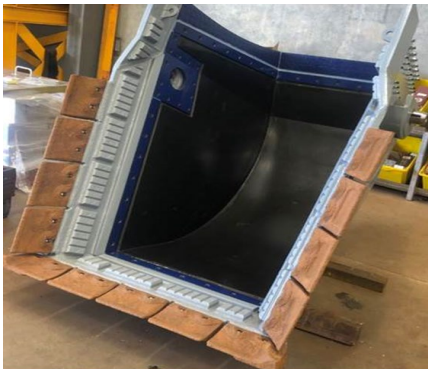
Steel Blue Boots

Steel Blue has completed its first production run of **PureGRAPH®** enhanced safety boots, launched into the Australian safety footwear market in June 2021. The first range of boots under the product name GraphTEC™, features a **PureGRAPH®** enhanced outsole and scuff cap, providing significant improvements in tear strength and abrasion resistance.



Ascent Shipwrights Pty Ltd

Ascent Shipwrights has delivered its first **PureGRAPH®** enhanced Glass Reinforced Plastic (GRP) pleasure boat. The 23ft centre console is the first of Ascent Shipwrights' new builds to include **PureGRAPH®** to improve strength, reduce weight and create greater resistance to water absorption.



newGen Group Pty Ltd

newGen Group has launched its ArmourGRAPH™ range of **PureGRAPH®** enhanced polyurethane wear liners. Trials comparing the PureGRAPH® enhanced liners to standard polyurethane liners demonstrated up to six times reduction in wear rates in hard rock bulk material handling applications.



Katana Surf

Katana Surf, a Western Australian company specialising in custom surfboard shaping, has completed a collaboration with First Graphene developing the first **PureGRAPH®** enhanced surfboard line aimed at boosting the durability of its boards.

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MoU with Advanced Material Development Ltd

First Graphene entered into a binding Memorandum of Understanding with Advanced Material Development Ltd (AMD) to collaborate in the ongoing development of AMD's portfolio of conductive inks and the inclusion of **PureGRAPH®**. This presents an ideal opportunity to leverage **PureGRAPH®**'s unique feature set and work with AMD to deliver the Company's exciting portfolio of high performing, graphene enabled inks and coatings. This is a clear indication of the evolving go-to-market strategy of First Graphene, and of being able and willing to partner with specialist formulators to bring **PureGRAPH®** to global industries.

Exclusive New Zealand Concrete Distribution Agreement with GtM Action

First Graphene signed an exclusive distribution agreement with GtM Action Ltd (GtM) to provide representation and distribution into the New Zealand concrete market for its **PureGRAPH®** product line. GtM is an Auckland-based company that specialises in bringing cutting-edge technologies to market and is focused on applications for graphene technology across multiple sectors. GtM specialises in creating a step change for its clientele in terms of productivity, cost reduction and to increase market opportunities. The new distribution agreement gives GtM exclusive rights to develop commercial opportunities for graphene technology within the concrete industry in New Zealand and in addition, non-exclusive rights to sell graphene into other sectors within the New Zealand market. This is a significant milestone in FGR's strategy of promoting a wider adoption of graphene enhanced products.

Building Commercial Capability

In Line with the Company's strategy to grow volumes within its five primary strategic verticals, First Graphene has appointed two industry experts.



Todd McGurgan

Commercial Manager – Cement & Concrete

- More than 25 years' experience in the global cement industry
- Held leadership positions at Holcim Australia & NZ
- Previous roles include working with BASF, Cement Australia, Sunstate Cement and Readymix



Matt Curthoys

Commercial Manager – Marine Composites & Windfarms

- More than 25 years' experience in the Marine industry
- Chartered Naval Architect in Europe and Asia
- Expertise designing, engineering and producing composite structures for America's Cup yachts and other boats

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New Products Launched

First Graphene Limited added two new products to its **PureGRAPH®** range.



PureGRAPH® 50 is a jumbo platelet size with a very high aspect ratio (lateral size/thickness) designed to enhance performance in concrete strengthening and polymer reinforcement applications. Research has shown major benefits of graphene in terms of enhanced strength and reduced water permeability. Also, the potential reduction in material usage and carbon footprint caused by cement-based products means that 'greener' concrete structures and precast elements are now possible.

PureGRAPH® MB-LDPE is a graphene-loaded low-density polyethylene (LDPE) masterbatch. The LDPE masterbatch has been developed to provide customers with an off-the-shelf, pre-dispersed graphene/polymer carrier that is easy to mix with other polymer chips using standard equipment and will readily fit into existing plastic processing lines. It is the first of a series of masterbatch products that are being created to better disperse into materials which will accelerate the testing and qualification of **PureGRAPH®** and reduce the sales cycle time.

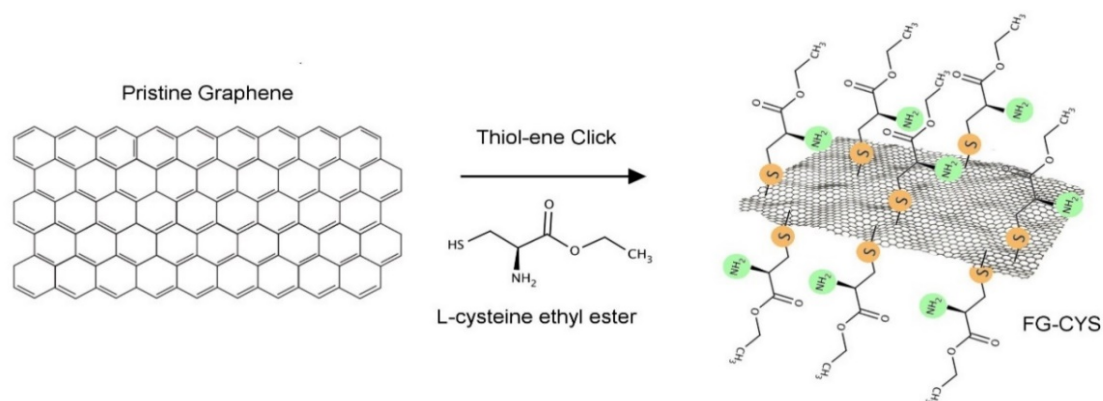
Innovation Development of New Technology

Functionalising graphene

The University of Adelaide has developed an efficient and scalable process to further functionalise **PureGRAPH®** platelets. Advanced functionalised **PureGRAPH®** will improve dispersibility and performance of graphene enhanced systems, opening up a wider range of markets to First Graphene. The researchers confirmed that First Graphene's **PureGRAPH®** products are large size, low-defect, few-layer, pristine platelets that have some oxygen-edge functionality on receipt, making them ideally suited to this chemistry.

A research paper, titled "*Highly Water Dispersible Functionalised Graphene by Thermal Thiol-ene Click Chemistry*", was written by a team of world-leading researchers led by Professor Dusan Losic, leader of the Nano Research Group at The University of Adelaide and Director of ARC Graphene Research Hub. It has been peer reviewed and was published on 25th May 2021 in science and engineering journal Materials. **PureGRAPH®** has a broad range of applications which can be further expanded by adding additional finishing steps, generally referred to as functionalising. The process is shown in the figure below.

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PureGRAPH® in Thermoplastics

University of Warwick early research highlights benefits of using **PureGRAPH®** for industrial thermoplastics. The team, led by Research Director Professor Tony McNally, Professor in Nanocomposites and Director of the International Institute for Nanocomposites Manufacturing (IINM) at WMG, has completed a study of First Graphene's materials and their suitability for incorporation into commonly used engineering polymers. Results confirm easy dispersion, good flowability and processability. This is promising for extending First Graphene's reach into numerous additional sectors including automotive manufacturing and various engineering applications.

Graphene catalyst for low-cost hydrogen fuel cells

Metal oxide coated graphene is shown to be an effective catalyst for next-generation hydrogen fuel cells, potentially offering a replacement for high-cost platinum catalysts. Grant funding has been secured for further testing. This was the result of collaborative research between First Graphene and Dr Yagya Regmi and Dr Laurie King, of the Manchester Fuel Cell Innovation Centre at the Manchester Metropolitan University. Initial results confirm that metal oxide coated **PureGRAPH®** is an effective catalyst for the cathode oxygen reduction reaction. It has the potential to be used as a cheaper alternative to platinum in the next generation of fuel cells. This is a great result that consolidates First Graphene's position in the growing energy storage market. It showcases the Company's capability as an innovative and technically capable provider, willing to work with world-class research teams.

Petroleum feedstock to graphite & green hydrogen

First Graphene released a whitepaper on its patented process, using cavitation chemistry, for converting petroleum feedstocks into graphite, graphene and clean hydrogen. The Company also released an animated presentation with a view to attracting industry partners to collaborate on the continued development and commercialisation of the innovative technology. High purity graphite is in demand for use in the production of battery anodes such as those used in electric vehicles. With strong growth predicted in the EV market

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globally, and a corresponding decline in traditional petrol and diesel-powered vehicles, First Graphene's unique process provides a potential path to new revenue and more sustainable energy markets for petroleum manufacturers.



Strengthening Fundamentals

Institutional placement to underwrite growth strategy

On 27th May 2021, First Graphene entered into a subscription agreement with Specialty Materials Investments, LLC (SMI) and secured funding of up to A\$8 million. SMI is a US-based investor that has a clear understanding of the strong upside potential that is offered by graphene generally, and specifically, the placement is an acknowledgement of First Graphene's commanding position in the sector. The funding will go towards securing the growth strategy and commercial focus being led by the Company's new management team.

Options exercised

Investors continue to show confidence in First Graphene, with a significant number of option holders converting over 8 million options since 1st April 2021 until 26th July 2021. Cash received by FGR over the period includes:

- Quarter ending 30th June 2021: ~A\$0.7 million
- Post quarter ending to 26th July 2021: ~A\$1.1 million
- ASX: FGROC options with a strike price of \$0.25 expire on the 8th of August 2021. Please see ASX Announcement: [Notice of Expiry to Option Holders](#)

Listing on the OTCQB in the US

On 21st April 2021, First Graphene announced that the Company was now quoted on the OTCQB trading platform in the USA, trading under the OTCQB:FGPHF ticker. This initiative was undertaken to cater for increased investor and trading interest in the USA and provides expanded global investor access when viewed with the Company's Frankfurt quotations. This expanded investor base provides significant ability to manage its liquidity over the long term.

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Cost control

Over the last quarter, a number of initiatives were undertaken by the new CEO and CFO to set a new cost baseline for the business. In a very short period, more than \$300,000 of annual costs were removed from the business through reduction in consultant expenditure, implementing a new enterprise resource platform and headcount reductions. These savings will be redeployed to further accelerate the Company's commercial goals.

Letter from Managing Director & CEO

Dear Shareholders,

I have recently returned to Australia from Singapore to spend time with the team at Henderson, cover off end of financial year and AGM requirements, and help advance additional opportunities with a range of prospects.

You may have seen I was recently appointed Managing Director in addition to my role as CEO. This provides me with an opportunity to work closely with the management team to positively influence the ongoing growth of the company, while also representing shareholders as a member of the Board. This coupled with my rapidly expanding understanding of the Graphene market, helps me affirm that my decision to join First Graphene has proven to be a good one.

Since commencing as CEO earlier this year, I have come to realise that graphene is unlike any other material. We are seeing rapid growth and faster evolution in applications than for any other new material over recent decades. One of the most exciting aspects is that this industry is not reliant on any one market sector, and so there is no make-or-break opportunity, client, or distributor. Applications for graphene touch an almost endless array of products and industries, and therefore enables a natural diversification and de-risking of a single market.

At the same time, for First Graphene the new team is starting to solidify and get clarity about the business, both in terms of commercial opportunities and ways that we can work more efficiently and productively. I have been working closely with our CFO to ensure better management of our cash burn rate and alignment with commercial milestones. This is an imperative activity that aligns our spend more proportional to our achievements and potential for revenue growth.

For the first time in the company's history, we can forecast demand, thanks to the recently announced commercial activation of several early adopter foundation customers. Those successes have also resulted in a wave of new inquiries from across all our target verticals. These verticals are in areas where we know there is significant opportunity for high volume deals, including:

- Composites and Plastics
- Rubbers and Elastomers
- Cement and Concrete
- Coatings and Inks
- Energy Storage

While much of the focus to date has been on composites and elastomers/rubbers, we are

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seeing positive progress in concrete and coatings.

We have announced a collaboration with UK-based AMD to further explore conductive ink opportunities, and a distribution deal with New Zealand-based GtM Action to market cement and concrete applications in that country. While it is a minor part of the global market, we are working actively to identify similar arrangements in other regions. The Company is also looking at opportunities in anti-corrosion, anti-static and thermal coatings.

First Graphene also continues to be a global leader in research and development activities, including recently announced advances in hydrogen fuel cell technology and our patented novel cavitation chemistry to convert petroleum feedstocks into graphene, graphite, and clean hydrogen.

These activities, often carried out in conjunction with industry partners, provide valuable education and validation to the broader market, and are essential to build confidence in the benefits of graphene across new industries and products. We are advancing discussions and seeking additional industry partners to further develop the commercial roadmap for supercapacitors, our cavitation process and expansion across all our target verticals.

As we have seen in the composites and plastics space, success in one area allows First Graphene to successfully leverage **PureGRAPH®** into adjacent markets.

Building our strategic partner network is also key to growing commercial opportunities for **PureGRAPH®**. First Graphene's focus is on upstream material, chemical and additives manufacturers and formulators, which offer significant potential for high-volume sales. This starts to formulate our go-forward strategy and identifying suitable partners to further drive the demand for **PureGRAPH®**.

With these recent developments we have witnessed increased investor confidence, with over 8 million options being exercised since the 1st of April 2021. I would encourage all ASX: FGROC option holders to review their alternatives before the option expiry date and consider being part of FGR's journey. FGROC options expire on the 8th of August 2021 (please see the recent [ASX announcement](#)).

The Board and management of First Graphene looks forward to continuing to work for our shareholders, customers, and staff to build on our commercial successes and firmly cement our position as the world's leading provider of graphene and associated technologies.

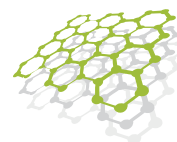
Michael Bell
Managing Director & CEO

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List of Recent Significant Announcements

Date & Time	Announcement Title
7 Jul 2021	<u>Notice of Expiry to Option Holders</u>
5 Jul 2021	<u>FGR Appoints Managing Director</u>
2 Jul 2021	<u>FGR Distribution Agreement with GtM Action</u>
1 Jul 2021	<u>FGR Cavitation White Paper</u>
23 Jun 2021	<u>FGR Commercial Update</u>
16 Jun 2021	<u>FGR signs MoU with AMD</u>
15 Jun 2021	<u>FGR Launches PureGRAPH LDPE</u>
9 Jun 2021	<u>Functionalised Graphene</u>
27 May 2021	<u>Institutional Placement to Underwrite Growth Strategy</u>
11 May 2021	<u>Graphene catalysts for low-cost hydrogen fuel cells</u>
5 May 2021	<u>PureGRAPH benefits in thermoplastics</u>
23 Apr 2021	<u>Final Director's Interest Notice</u>
21 Apr 2021	<u>First Graphene Admitted to OTCQB Market in the USA</u>
20 Apr 2021	<u>Patented process converts petroleum feedstock to graphite</u>
19 Apr 2021	<u>FGR New Commercial Manager - Marine Composites & Windfarms</u>
19 Apr 2021	<u>PureGRAPH 50 Launch</u>
15 Apr 2021	<u>Appointment of Commercial Manager for Cement Sector</u>

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first graphene

The world's leading graphene company

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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 **PureGRAPH® MB-LDPE 20-30** masterbatch for thermoplastics, are available in tonnage volumes. The products are high performing additives, characterised by their high quality and ease of use.

First Graphene Limited

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Trading Symbols

Australia: FGR
FGROC
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.