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8 SEPTEMBER 2021 ASX ANNOUNCEMENT ASX: EGR

Enhanced Anode Coatings for Lithium-ion Battery Market

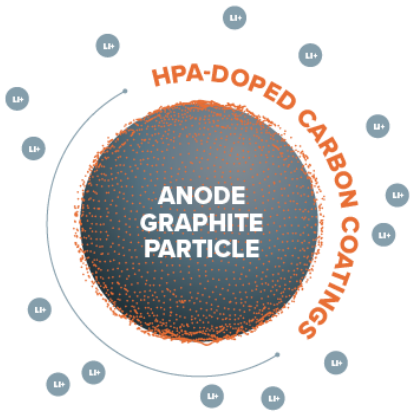
ECOGRAF AND FYI RESOURCES COLLABORATION TO DEVELOP HPA-CARBON COATINGS FOR THE LITHIUM-ION BATTERY MARKET

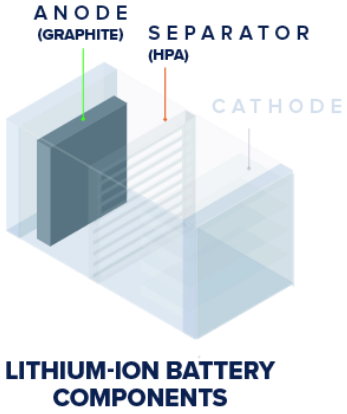
Diversified battery anode materials company EcoGraf Limited (**EcoGraf** or the **Company**) (ASX: **EGR**; FSE: **FMK**; OTCQX: **ECGFF**) is pleased to announce it has signed a non-binding Memorandum of Understanding (**MoU**) with FYI Resources Limited (ASX: **FYI**) to develop enhanced High Purity Alumina (**HPA**) doped carbon coatings material for the lithium-ion battery market.

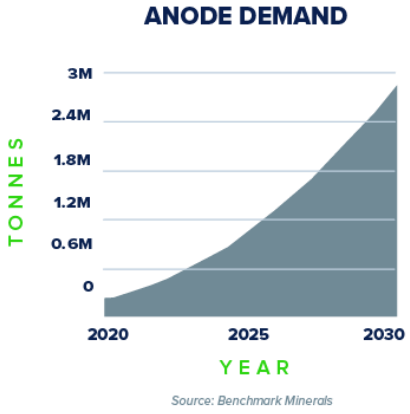
Initial research has demonstrated HPA-doped carbon coatings enhance battery anode performance, by minimising first cycle losses during battery charging cycles, through improvement in protective layering[1]. The collaboration will also include evaluation of HPA and graphite composites for new battery technologies and materials in clean energy applications.

Lithium-ion battery anodes are composed of both synthetic graphite, natural graphite, carbon black and silicon. HPA is used as a nano thickness thin coating on the separator sheets used within a lithium-ion battery, as alumina coated separators improve the ability to withstand high rates of discharge, battery performance durability and overall safety. The separator, combined with the anode materials, are the major raw materials in the lithium-ion battery.

The battery anode coatings market is a significant value proposition given the forecast demand for anode materials.







The MoU sets out a technical program, which will include FYI's HPA and EcoGraf's purified battery spherical graphite (**SpG**).

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The initial technical program to produce and evaluate HPA-doped carbon coated SpG will include development of:

- the efficient utilisation of HPA, and/or its derivatives, and formulation as a coating precursor for battery anode material and separators
- an appropriate Atomic Layer Deposition Coating (ALD) process using HPA as coating precursor specific to EcoGraf™ high purity SpG
- Battery Coin Cell testing for evaluating the performance of Alumina coated EcoGraf™ SpG

The cost of the technical programs will be shared equally. Upon successful completion of the testwork programs, the parties will pursue agreement on key commercial principles for further collaboration.

FYI Resources (ASX: FYI) is an Australian listed resources company that is focused on developing an innovative and vertically integrated high quality, high-purity alumina for use in various high growth tech applications. HPA is increasingly becoming the primary sought after input material for various high-tech products, principally for its unique properties, characteristics and chemical properties that address those applications high specification requirements.

FYI are in discussion with Alcoa of Australia Limited negotiating a possible joint venture (JV) regarding FYI's innovative high quality HPA refining process. The JV discussions include participating in selected potential downstream and value-add HPA development and commercialisation opportunities within the electric vehicle, static power, LED and other niche market segments.

FYI and EcoGraf look forward to reporting the results and the programs as they progress.

Mr Andrew Spinks abstained from the board resolution approving and authorising the signing of the MoU, as he is a shareholder of FYI Resources.

This announcement is authorised for release by Board of EcoGraf Limited.

Note 1, Synthesis of Alumina-Coated Natural Graphite for Highly Cycling Stability and Safety of Li-Ion Batteries, January 2019, Journal of Chemistry. DOI:10.1002/cjoc.201800559

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ENGINEERING CLEAN ENERGY

About EcoGraf

EcoGraf is building a diversified battery anode material business to produce high purity graphite products for the lithium-ion battery and advanced manufacturing markets. Over US$30 million has been invested to date to create two highly attractive, development ready graphite businesses.

The first new state-of-the-art **EcoGraf** processing facility in Western Australia will manufacture spherical graphite products for export to Asia, Europe and North America using a superior, environmentally responsible HF*free* purification technology to provide customers with sustainably produced high performance battery anode material. Subsequently, the battery graphite production base will be expanded to include additional processing facilities in Europe and North America to support the global transition to clean, renewable energy in the coming decade and the rapid growth in battery materials.

In addition, the Company's breakthrough recovery of carbon anode material from recycled batteries using its EcoGraf™ process will enable the recycling industry to reduce battery waste and use recycled carbon anode material to improve battery lifecycle efficiency.

To complement these battery graphite operations, the Company is also advancing the **TanzGraphite** natural flake graphite business, with development of the Epanko Graphite Project, which will supply additional feedstock for the battery anode material facilities and provide customers with a long term supply of high quality graphite products for industrial applications such as refractories, recarburisers and lubricants.

A video fly-through of this new facility is available online at the following link:

https://www.ecograf.com.au/#home-video

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