



## TALGA COMMENCES GRAPHENE & BATTERY MATERIAL PROGRAM WITH LEADING GERMAN RESEARCH GROUPS

### Highlights:

- Talga undertaking joint graphene work program to test and develop low cost bulk graphene production for supercapacitor and battery related applications
- Program underway with Dresden University of Technology and Max Planck Institute for Polymer Research in Germany
- Research heads at both organisations are recognised world experts in graphene production and both chair research clusters within the €1 billion funded Graphene Flagship program
- Agreement adds to increasing global research and development momentum behind Talga's low-cost Swedish graphene potential

Perth based technology materials developer, Talga Resources Limited ("Talga") (ASX: "TLG") is pleased to announce the commencement of its second advanced research program with German graphene application specialists.

Following on from the conductive graphene ink program with University Jena (see TLG:ASX 17th December 2014), the new work comprises a joint graphene test program with Germany's Dresden University of Technology ("Dresden University") and the Max Planck Institute for Polymer Research ("Max Planck").

### Graphene Program

The 12 month program will test and demonstrate Talga's low cost bulk graphene product for supercapacitor and other battery related applications. Professor Xinliang Feng from Dresden University will head up the joint work program alongside renowned materials scientist, Professor Klaus Müllen at Max Planck. Professor Feng previously worked with Professor Müllen at Max Planck where they accumulated extensive experience on graphene liberation technology complementary to Talga's processing pathway. Both Professor Müllen and Professor Feng chair research clusters within the €1 billion funded Graphene Flagship program.

Precursor material to feed the graphene program will be sourced from the Company's wholly owned Swedish flagship Vittangi project ("Vittangi"). As part of the diligence required for work program commencement, Dresden University replicated Talga's graphene liberation process using Vittangi unprocessed ore as feedstock. Results closely mirrored those achieved by Talga in its own laboratory based test programs. Talga's low cost one step liberation of graphene from raw ore has now been successfully replicated by four organisations in two different countries.

*Talga Managing Director Mark Thompson with Dresden University's Professor Xinliang Feng*



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### Corporate Information

ASX Code TLG/TLGO

Shares on issue 124.59m

Options (unlisted) 8.10m

Options (listed) 7.72m

### Company Directors

**Keith Coughlan**

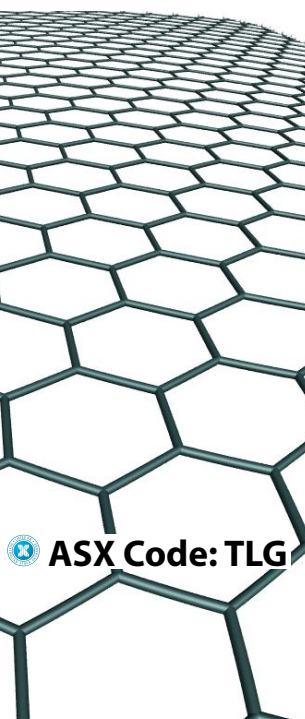
Non-Executive Chairman

**Mark Thompson**

Managing Director

**Grant Mooney**

Non-Executive Director



Given that large volume lower cost production of graphene is critical to enabling commercialisation, the program will commence by optimising the Company's bulk graphene processing pathways before developing and testing Talga's graphene for supercapacitor and battery related materials. An added target for the research program is the exploration of Talga ore characteristics for construction of novel high-performance materials.

### **Graphene in Energy Storage**

Graphene is destined to trigger the next major wave of new-generation mobile energy technology. Graphene has been demonstrated to make superior performing battery materials such as electrodes in Li-ion batteries due to its higher conductivity and surface area compared to commonly used spherical graphite. This may enable faster charge times, longer travel distances and higher maximum power output in electric vehicles. The potential exists to develop new battery materials where graphene is either added to current production specification spherical graphite material or formed into new compounds.

**Managing Director Mark Thompson** commented: *"We are thrilled to be working with these parties who are pre eminent minds in the field of graphene research. The willingness to work jointly with Talga provides further validation around the way we propose to remove the volume and price hurdles that have been limiting global commercialisation of graphene. The new program is designed to both accelerate our processing power while at the same time revealing new applications in mobile energy materials."*

*This program with Dresden University and Max Planck follows from Talga's graphene conductive ink research in Jena (central Germany) and Talga's sale of test-based graphene output to German 3D printing group, Microdrop Technologies GMBH. Germany is strategically placed proximate to Talga's mineral assets, world class research capabilities and potential end users. The aim is to have a complete ore-to-product pathway developing to demonstrate our graphene potential to the economic heart of Europe".*

**For further information, please contact:**

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