

TALGA GRAPHENE PARTNERSHIP WITH TATA STEEL

- **Formal collaboration agreement executed with UK steel arm of global conglomerate Tata Group**
- **Links Talga's emerging industrial scale graphene production to Tata's growing large volume graphene coating innovations**
- **Graphene and graphitic carbon nano-materials from Talga pilot production to supply Tata coatings product development across diverse applications**
- **Supports Talga's focus on graphene additives for the global paint & coatings market currently consuming >40 Mt of materials per annum**

Advanced materials company, Talga Resources Ltd (ASX: TLG or Talga), is pleased to advise that it has signed a Collaboration Agreement ("Agreement") with Tata Steel UK Limited ("Tata") to jointly explore opportunities across graphene supply, processing and development of graphene applications.

Initial work will see Talga supply graphene and graphitic carbon materials for use across applications in various Tata research programs including, but not limited to, anti-corrosion pigments and conductive, formable, barrier and thermal coatings.

Details of the agreement are in commercial confidence however Talga's pilot test-work facility scale up is being designed to accommodate the needs of Tata product developments. Each Company will bear its own costs and the Company's can share jointly in new arising intellectual property/product developments.

Tata is a subsidiary of the Tata Group; a multinational industrial conglomerate with over 100 operating companies, operations in more than 100 countries, revenue in 2014 of over US\$100 billion and a staff count exceeding 580,000 people worldwide. Tata Group has a globally significant market share in the automotive, wire and energy packaging sectors.

Tata has its European headquarters in the Netherlands and is the second largest steel producer in Europe with key sites in the Netherlands, South Wales and north east England. Tata also runs a large number of distribution/processing, manufacturing and consulting businesses and sales offices around the world.

Graphene in Coatings

The global paint & coatings market uses over 40 million tonnes of materials per annum and is forecast to reach 52 million tonnes by 2017 worth \$186 billion¹. The bulk of this market is aimed to control corrosion which is estimated to cost US\$2.2 trillion, or ~3% of global GDP per annum².

Work by Tata Steel and others has demonstrated graphene incorporated in coating systems can provide a high performance solution towards protection against corrosion³. This has been attributed to graphene's combination of high surface area, impermeability and high conductivity. Additionally graphene-based steel coatings can provide an environmentally friendly alternative to chrome and other potentially toxic chemicals that are being increasingly restricted by international health and environment laws³. The demand for replacements is driving innovations in the anti-corrosion sector.



Talga Managing Director Mark Thompson commented:

“Following lengthy interactions and sample testing with the Tata Group, we are pleased they wish to continue a scale up of work under formal terms. On the back of our recent induction to the Graphene Flagship, I think this development underscores end-user perception of Talga’s bulk graphene production potential.

The Tata Group has been an innovation leader in graphene for coatings and bulk applications for some time and its depth of knowledge around graphene applications is very mature. The scope to supply what could become very large bulk graphene and related micro-graphite demand is particularly attractive to Talga. This agreement highlights the enactment of our partnering strategy, where we aim to work directly with end users capable of forming the largest market for our products.”

For further information, visit www.talgaresources.com or contact:

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References

- 1 Freedonia Industry Study 3135, March 2014.
- 2 “Now is the Time” F. G. Hays, PE Director General, World Corrosion Organization, 2010.
- 3 “Graphene based anticorrosive coatings for Cr (VI) replacement” K. S. Aneja, S. Bohm, A. Khanna and M. Bohm, Nanoscale, September 2015.