

Bosch and Talga join the Graphene Flagship as associate members

Francis Sedgemore (</project/workpackages/13/Pages/Science-writer.aspx>), 29 October 2015.



Two years into the 10-year voyage of the [Graphene Flagship](http://graphene-flagship.eu/) (<http://graphene-flagship.eu/>), [Robert Bosch GmbH](http://www.bosch.com/en/com/home/index.php) (<http://www.bosch.com/en/com/home/index.php>) and [Talga Resources Ltd](http://www.talgaresources.com/IRM/content/default.aspx) (<http://www.talgaresources.com/IRM/content/default.aspx>) have joined the €1bn, EU-founded collaboration designed to take graphene and related two-dimensional materials from laboratory to factory floor and beyond. The accession of Bosch and Talga as Associated Members was announced at the 2015 General Assembly in Berlin.

The Graphene Flagship is an international academic-industrial consortium with 141 partners distributed in 23 countries. It is one of two [Future and Emerging Technology Flagships](http://ec.europa.eu/programmes/horizon2020/en/h2020-section/future-and-emerging-technologies) (<http://ec.europa.eu/programmes/horizon2020/en/h2020-section/future-and-emerging-technologies>) founded and part-funded by the European Commission. In addition to full partners, the flagship has a growing number of associate members, who as part of the flagship community facilitate alignment and information flow between the consortium and related national and international activities.

Robert Bosch GmbH is a multinational engineering and electronics company based near Stuttgart in Germany. It is one of the world's largest suppliers of automotive components, and global market leader in MEMS sensors (micro-electrical-mechanical systems), as measured by revenue in 2014. Bosch's sensor portfolio comprises magnetic, temperature, humidity and air quality devices, as well as microphones for use in consumer electronics devices such as mobile phones.

In June of this year, at the flagship's annual Graphene Week conference in Manchester, Robert Rölver [announced \(http://graphene-flagship.eu/bosch-breakthrough-in-graphene-sensor-technology\)](http://graphene-flagship.eu/bosch-breakthrough-in-graphene-sensor-technology) that Bosch researchers in collaboration with the [Max-Planck Institute for Solid State Research \(https://www.mpg.de/153319/festkoerperforschung\)](https://www.mpg.de/153319/festkoerperforschung) in Stuttgart had made substantial progress in developing graphene-based magnetic Hall sensors. Bosch is actively investigating the use of 2d materials in sensor devices, with a focus on bottom-up fabrication methods.

"Information exchange related to the technology needs of Robert Bosch, particularly when it comes to graphene synthesis, is a valuable contribution of industry to align the research direction within the flagship," says Rölver. "In addition, Bosch is willing to participate in flagship events such as Graphene Week and the Graphene Connect industrial workshops, as it has in the past with presentations at the sensors workshop in Gothenburg in 2014, and at Graphene Week 2015."

Talga Resources Ltd is an advanced materials company with its headquarters in Perth, Australia, and a graphene demonstration plant at Rudolstadt in the German state of Thuringia. Talga is well-established in the development of carbon-based materials, with five graphite projects in northern Sweden. By processing its mined graphite into graphene in a simple, one-step process, Talga is looking to overcome an availability and cost barrier to the widespread adoption of this 2d material. In this way, the company hopes to unlock markets in polymers, 3d printing, energy storage, coatings, conductive inks, and composites.

"Talga welcomes the opportunity to work more closely with flagship members," says Georg Hochwimmer, technical manager of Talga's Rudolstadt plant. "It is hoped that associated membership will provide significant networking and collaboration opportunities,



whereby Talga can demonstrate its potential to remove the barriers to low-cost, industrial-scale production. Furthermore, Talga is keen to share experience and knowledge with other members of the flagship community."

Speaking for the Graphene Flagship, director Jari Kinaret comments: *"Associated Membership is an important means for our European Commission-funded project to engage additional organisations that work towards the goals of the flagship. In*

particular, associates broaden the industrial base of the flagship, and we are looking forward to working together with Bosch and Talga to create new technologies based on graphene and related materials".

Flagship executive board chairman Andrea Ferrari adds: *"The growing number of companies applying to become associate members of the Graphene Flagship shows that we are steadily progressing along our roadmap taking graphene and related materials from lab to factory floor. This gives us confidence, when it comes to our ultimate goal of providing economic and social benefits through exploiting the unique properties of layered materials."*

In addition to Bosch and Talga, toy manufacturer The LEGO Group has also joined the Graphene Flagship as an Associated Member.

Image 1: Robert Rölver of Bosch, speaking at Graphene Week (© 2015 Anders Frick, Chalmers University of Technology).

Image 2: Mark Thompson, MD of Talga Resources, and Georg Hochwimmer, Technical Manager of Talga's Rudolstadt graphene plant (© 2015 Talga Resources Ltd).

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Publishing date: 2015-10-28 09:00

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