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Wrapping Polymer Powder with Aros Graphene: A Leap Towards High-quality Graphene Composites

After the breakthrough at Uppsala university that solves the practical issues of large-scale industrial implementation of the super-material graphene the company Graphmatech was founded. Now Graphmatech's research team has succeeded in developing a scalable method for coating polymer powder and granular with a layer of Aros Graphene®. Mamoun Taher, CEO of Graphmatech, wrapping polymer powders with Aros Graphene® is a multifunctional gift to polymer composites industries.

Graphene is a two-dimensional carbon material, one atom thick and the strongest material the world has ever seen. It has extremely high electrical and thermal conductivity and is ultra-light and transparent. Graphene was first isolated, and characterized in 2004 and was rewarded the Nobel prize in 2010. Graphene is expected to revolutionize engineering materials, power and electronics sectors.

However, the development has so far been held back by industrial implementation issues. The problem is that the properties of the material deteriorate when implemented at large scale due to agglomeration and poor dispersion when added as a reinforcement additive

Now Graphmatech's research team has succeeded in developing a simple and scalable method for coating polymer powder and granular with a layer of Aros Graphene®.

This newly developed method is very efficient to obtain high quality dispersion of Aros Graphene® additive inside a polymer matrix without the

use of high shear forces in melt mixing. It enormously reduces production costs and minimizes property degradation for both the polymer matrix and the additive while maintaining high quality and homogeneous composite. The invented method can be also applied for coating polymer powder with different materials such as metals, ceramics, fibers, cellulose and etc. Says Zargham Jabri, R&D engineer at Graphmatech.

Applications of polymer-Aros Graphene® composites are many such as multifunctional filaments for 3D printing, or engineering composites with light weight, high thermal conductivity, high mechanical strength and enhanced tribological properties (low coefficients of friction and wear).

Graphmatech AB was founded in August of 2017 by materials scientist Dr. Mamoun Taher and serial entrepreneur Björn Lindh. The company is a part of the InnoEnergy Highway - Europe's leading business accelerator specializing in sustainable energy - as well as to the ABB innovation growth hub, SynerLeap and has received initial financing from Swedish Innovation Agency as well as the Swedish Energy Agency.

More information, pictures and data regarding Graphmatech can be found at www.graphmatech.com

Previous press release:

<http://www.mynewsdesk.com/se/graphmatech/pressreleases/swedish-start-up-enables-full-scale-implementation-of-graphene-2402270>

Graphmatech presentation:

<https://www.youtube.com/watch?v=KB3C5Wssb00>

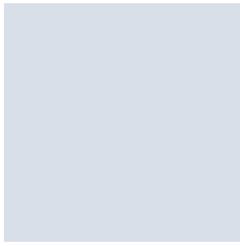
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GraphMatech is a Swedish materials technology startup company that invents, develops and sells novel Graphene-based nanocomposites materials and services. We are on a mission to deliver truly world-changing graphene hybrid materials that have the potential to make the world a better place.

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