



Press kit

Hannover Messe 2019, 1.-5. April

You are more than welcome to meet us at Sweden Co-Lab Pavillion

Hall 27, Stand H30



INNOVATE WITH US!

Graphmatech – Bringing the World into the Graphene Age

Table of Content

1. Press release: Breakthrough – New generation of conductive engineering plastics with Aros Graphene®
2. About Graphmatech
3. Factsheet
4. FAQ
5. Quotes
6. Preview of Pictures
7. Contact

PRESS RELEASE

Uppsala 2019-04-01

Breakthrough – New generation of conductive engineering plastics with Aros Graphene®

Graphmatech, an award-winning materials startup, has good news to share at Hannover Messe, where they present themselves as Co-Exhibitor at Sweden Co-Lab, a place for smart innovations. Just in time for the fair Graphmatech scientists achieved world record values for conductive engineering plastics which has at least 100 times lower resistivity than achieved before in filaments for 3D printing. This is a further milestone in the success story of Graphmatech that began with the founding in 2017, led to the patented technology and material Aros Graphene®, great collaborations with Swedish, Swiss and German key industries and an award as Nanotech company of the year in the Nordics in 2018.

The recently measured world record values built upon a scalable and cost-efficient process for coating polymer granular and powder with Aros Graphene® for obtaining high-quality dispersion, that Graphmatech announced last summer. It made possible to develop a well-dispersed solution for Aros Graphene® in plastics. This process is considered as a compounding step before extruding filaments for 3D-printing or injection molding. The developed process can be also used for coating polymer granular/powder with other types of additives such as metals, oxides, ceramics, fibers, etc.

The 3D-printing technology of the ultra-conductive material Aros Graphene® could revolutionize the way we use multifunctional materials and manufacturing technologies. With the new technology, it is possible to tailor the exact level of conductivity of the filament which opens up for a wide range of new possible applications that's never been possible with 3D-printing before. The conductive filament can, for example, be used to produce circuit boards, shielding applications, electrostatics, sensors and other items for IoT applications.

Currently, the process is under scaling-up and first products are planned to be a highly conductive plastic filament for 3D printing, which will be launched in collaboration with the Swedish 3D filament producer AddNorth, as well as composite pellets/master batches for injection molding and other polymer manufacturing technologies.

Graphmatech was founded by materials scientist Dr. Mamoun Taher and serial entrepreneur Björn Lindh. The major investors of the company are ABB Technology Venture, InnoEnergy and the well-known business angel Jane Walerud.



3D-printed with conductive engineering plastic (preview picture). Picture: Graphmatech AB

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

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About Graphmatech

Graphmatech AB was founded in September 2017 as a spinout from the Ångström laboratories of Uppsala University, Sweden by the material scientist Dr. Mamoun Taher and the serial entrepreneur Björn Lindh. Dr. Taher had discovered a multiple award-winning method for preventing graphene from agglomerating which he called Aros Graphene®, which they realized is the missing link to large-scale industrial applications of the wonder material graphene.

The mission of Graphmatech is to solve industrial problems and co-develop next generation technologies in close collaborations with their customers.

Graphmatech is a part of the InnoEnergy Highway and the ABB innovation growth hub, SynerLeap, and has received initial financing from the Swedish Innovation Agency, Swedish Energy Agency as well as the EU Graphene Flagship. The company recently closed financing with new investors such as ABB Technology Ventures and Walerud Ventures.

Graphmatech is a privately held Swedish materials technology company that invents, develops and sells novel graphene-based composite materials and services.

Factsheet

Founders:

Mamoun Taher, CEO. Material Scientist, previously at ABB, Uppsala University, Luleå University and Universität des Saarlandes

Björn Lindh, CFO. Serial Entrepreneur and co-founder of Disruptive Materials, iku AB, Solelia Greentech and Lindhea AB.

Size:

10 employees

Key investors:

ABB Venture

Walerud family

InnoEnnergy (EU)

Michael Ingelög, CEO Credit Suiss Nordics

Board:

Jane Walerud, Walerud Ventures, Chairman

Malin Carlström, ABB Technology Venture

Pasi Kangas, Vice President, technology, Sandvik Additive Manufacturing

Magnus Eneström, sales manager, Berotech

Björn Lindh, serial entreprenör and co-founder

Support from:

InnoEnergy

Graphene Flagship

Swedish Innovation Agency

Swedish Energy Agency

AMLI

SIO Graphene

FAQ

What is special about Aros Graphene®?

Aros Graphene® is functionalized graphene that prevents graphene from agglomeration. The result is a powder that keeps the amazing feature of graphene, but is stable and easy to mix with water, oil, plastics or metals, coat on a surface or even 3D-print it. Together with leading Swedish industries we have created amazing results on conductive plastics, graphene-based filaments for 3D-printing, metal composites, coated metal powder, battery additive materials to mention some of the areas where we have tried.

What are graphene hybrid materials?

Since Aros Graphene® makes graphene easy to mix with different matrixes we can create a huge number of hybrid materials, or composites with enhanced engineering properties. Examples are Aros Graphene® enhanced plastics with electrical and heat conductivity and metal composites with enhanced tribological properties

Why did it take so long to apply graphene in industrial applications?

A major reason is that graphene tend to agglomerate, which makes pure graphene unstable and varying in quality over time and from batch to batch. Non-repeatable quality is hard for most industries to handle. With Aros Graphene® this problem is solved.

Which applications does Graphmatech intend?

First products launched in 2019 will be conductive plastics pellets, graphene-based filaments for 3D-printing and silver-Aros Graphene® composites for sliding and arcing electrical contacts.

On a longer perspective metal composites, plastic composites and energy storage are major focus areas.

What are the main industries and markets Graphmatech heads to?

Materials/Metal/Polymer, Electronics/Telecommunications/Power, Machinery, Energy Storage, Automotive, Thermal management

Quotes

“The market potential for truly conductive 3D-filaments is enormous. Filaments like the ones we are about to launch will radically change and expand the way we use additive manufacturing today. Sectors such as telecom, defence and automotive will benefit hugely from the IoT, radio frequency and electromagnetic shielding applications now available for production in a simple desktop 3D-printer”, Nils Åsheim, CEO ADDNorth.

“Graphmatech makes graphene industrially viable by Aros Graphene® technology, Dr. Mamoun Taher”, CEO Graphmatech.

“Aros Graphene® is the missing link to large-scale industrial applications of graphene”, Björn Lindh, CFO Graphmatech.

“ABB and SynerLeap have had the pleasure to work with and follow the promising development of Graphmatech ever since its inception in 2017. The many constructive ways with which ABB business units interact with the research-based technology and application areas led in 2018 to an investment from ABB Technology Ventures. We are excited to join the team on their journey towards industrializing graphene and bringing this holy grail of materials to the world for real”, Malin Carlström, ABB Technology Venture.

Preview of Pictures

(Copyright: Graphmatech AB / Cecilia Tilli)



Björn Lindh, CFO & Dr. Mamoun Taher, CEO



Björn Lindh & Dr. Mamoun Taher with new lab equipment



Aros Graphene®



Thermal paste with Aros Graphene®



Staff in the lab with conductive ink



During the inauguration of a new lab

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