

# **GRAFOID: LEADING THE GRAPHENE REVOLUTION**

Graphene is the revolutionary 'wonder material' that will forever change the world. Grafoid Inc. endeavors to become a world-leading graphene research, development and investment company, which jointly establishes international standards for the production of economically scalable, functional graphene and develops graphene applications for the betterment of humanity, in conjunction with like-minded partners. At the forefront of the Graphene Revolution, Grafoid's financial and scientific investment resulted in a novel. one-step, patent-pending process for the large-scale extraction and mass production of near-pristine, few-layer graphene, sourced directly from raw, unprocessed graphite ore, leaving the lowest possible ecological footprint. The completely unique, proprietary process results in what Grafoid regards as a new global standard for economically scalable highpurity graphene products — trademarked under the Mesograf<sup>™</sup> trade name — that can be tailored to both industrial and commercial applications.

# WHAT IS GRAPHENE?

Graphene is the revolutionary 'wonder material' that will forever change the world.

- A Two-Dimensional, One-Atom-Thick allotrope of Carbon, derived from natural Graphite
- The Strongest Material ever Measured
- The Thinnest Material in the World
- The Stiffest Known Material
- Transparent, Stretchable, Highly Flexible and Incredibly Light
- The Most Impermeable Material on Earth
- The World's Most Conductive Material
- Incredibly Energy Efficient

Graphene holds the potential to bring about a new era in material science. A potentially 'disruptive' technology, the addition of graphene to most any

material (including plastics, polymers, metals, batteries, etc.) tremendously enhances the properties of said material. The properties of graphene are truly amazing, and the potential applications extend across every industrial sector. The total graphene industry size impact exceeds \$100 billion.

## "The key vendors dominating this marketspace are BASF, **Grafoid**, IBM, and Samsung."

*Infiniti Research Limited* (October 2013)

# THE GRAFOID ADVANTAGE - COMMERCIALIZING GRAPHENE

The greatest challenge to commercializing graphene is being able to produce high-quality material, on a large scale at a low cost — and in a consistent, reproducible manner. The key to successfully commercializing graphene is based on 3 primary factors:

- 1. Having unlimited access to a secure source of high-grade, high-quality graphite. Grafoid has partnered with Focus Graphite Inc. (TSX-V: FMS | OTCQX: FCSMF | FSE: FKC) for a direct source of ultra-high-grade graphite from its flagship Lac Knife graphite project in Quebec, Canada, which is transported to Grafoid's production facilities in Ontario, Canada.
- 2. Being able to produce near-pristine graphene on an economically scalable basis. Grafoid has successfully developed a proprietary, environmentally friendly, one-step process to produce near-pristine graphene in bulk with Mesograf<sup>™</sup> and is currently producing graphene on a commercial scale.
- **3.** Partnering with the right players in the development of the right applications. *Grafoid has launched a global vertical-integration platform to produce, functionalize and commercialize graphene with numerous blue-chip, household name joint venture partners.*

Grafoid excels in all three aforementioned areas, effectively addressing the fundamental barriers to graphene commercialization. Grafoid brings world-leading expertise in graphene, resolves commercial scalability issues, tailors graphene for unique applications, and provides solutions for achieving success.

# Mesograf

"Graphene, on its own, does not do anything. But graphene can make everything better."

*Gary Economo Chief Executive Officer Grafoid Inc.* 

#### MESOGRAF<sup>™</sup> — REDFINING GRAPHENE

The world's first trademarked graphene, Grafoid's Mesograf<sup>™</sup> is a touchstone for graphene commercial application development. Grafoid's technology produces near-pristine, high-energy density Mesograf<sup>™</sup> functional graphene at signifcant gross margins. Grafoid's unique patent-pending production process does not use harsh chemicals — normally employed in graphene production — that damage the material or diminish any of its extraordinary properties; creating a high-yield, high-energy-density graphene. Mesograf<sup>™</sup> achieves Grafoid's vision of a global standard for economically scalable graphene products that can be tailored to specific industrial, commercial, military, biomedical, and humanitarian applications. Grafoid believes Mesograf<sup>™</sup> is a 'game-changer.' Why? Because Mesograf<sup>™</sup> may afford every company the opportunity to utilize low-cost, high-purity graphene in all of their products, by offering the most direct, clearest, fastest, affordable way toward graphene's commercialization on a global scale.

#### THE GRAFOID GLOBAL PLATFORM

Grafoid is the global platform to deliver mine-to-market graphene products. The Company has entered into a number of high-profile joint venture application development relationships with leading industrial and academic partners around the world for the development of next-generation products. Grafoid is engaged in the development of graphene patent joint ventures globally in the areas of renewable energy, advanced polymer materials, bio-medicine, thermal dispersion technologies, coatings, and a number of classified material development projects. The founding of joint venture partnerships to develop next-generation Mesograf <sup>™</sup>-based products drive Grafoid's business model. Grafoid's extensive joint venture relation-ships — 15 currently — demonstrate the Company's global market penetration and acceptance attained over a 24-month period. Grafoid's process, intended to lead the global commercialization of graphene, is unique. No other known graphene produced can match the characteristics of Mesograf<sup>™</sup> — low cost, mass produced and functional. Grafoid believes that, for the first time, industry will have access to high-quality graphene in bulk at affordable prices.



### **MANAGEMENT TEAM**

Jeffrey York Chairman

Gary Economo Chief Executive Officer

Judith Mazvihwa-MacLean Chief Financial

Chester Burtt Director of Communications

Norm Major Chief Technology Officer

## **HOW GRAFOID COMPARES**

CONTACT

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Sells graphene solutions	S	×
Unique, proprietary, one-step process to produce economically scalable graphene	S	×
A diverse company that will not depend on the success of one application	S	×
Partners with industry leaders worldwide to advance joint applications	Ø	×
Positioned to generate revenue from every market sector	S	×
Mesograf™ – Grafoid's vision of a Global Standard for Graphene	Ø	×
Environmentally friendly and sustainable	S	×

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#### **GRAFOID PARTNERS**







### **GRAFOID ACQUISITIONS**



GRAFOID: A Complete Graphene Solutions Company - For more company info please visit www.Grafoid.com





#### **Braille Battery Inc.**

www.braillebattery.com – a Grafoid Company Internationally recognized developer and manufacturer of advanced lightweight lithium-ion batteries. Braille services as both a battery sales company and a battery development company for the Grafoid platform of energy creations



#### Alcereco Corporation

www.alcereco.com – a Grafoid Company A Global technology leader in advanced composite materials, alloys and coatings, focused on the development, testing and production of advanced materials. Alcereco spearheads Grafoid's research and development applying graphene to material sciences.



#### MuAnalysis Inc.

www.muanalysis.com - a Grafoid Company Providing expert analytical and laboratory services to OEMs and manufacturers serving the microelectronis, electronics and photonics industries. MuAnalysis also serves as Grafoid's in-house testing facility.



**Graflow Inc.** – a Grafoid Subsidiary Developer of proprietary technologies that combine graphene with polymers to produce lighter, stronger and more durable plastics for the automotive and aerospace industries.



**GrafCoat - GrafeneX Coatings.** – *a Grafoid Subsidiary* Providing electrically and thermally conductive graphene coatings applicable to a variety of substrate materials such as polymers, glasses, metals and refractories. This allows most sheet products to benefit from having the GrafeneX coating for commercial applications.



**PHOS Solar Systems Inc.** – a Grafoid Subsidiary Developer of full-spectrum solar energy systems from the integration of Mesograf TM graphene in solar panels. Full-Spectrum Energy Systems utilize nearly 100% of the sun's radiation, thereby creating efficiencies over existing solar technologies.



**Grafprint3D Inc.** – *a Grafoid Subsidiary* Production of metallic and polymer fine powders and graphene enhanced polymer filaments for 3D Printing materials produced from a novel, proprietary automotive and aerospace sectors.



**Surfacene Environmental Inc.** - **GPURE Membranes**- *a Grafoid Subsidiary* Developer of proprietary graphene foam for numerous applications such as energy creation and energy storage, oil spill recovery - both wet and dry, water treatment and environmental remediation, water purification and desalination, air filtration, industrial and commercial insulation and noise and acoustic control.

GRAFOID: A Complete Graphene Solutions Company - For more company info please visit www.Grafoid.com



# OUR MARKETS

**ENERGY STORAGE** 



**COATINGS** 



### **MEMBRANES**



