THE ART AND SCIENCE OF GETTING GRAPHENE OUT OF THE LAB AND INTO THE MARKET

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Abstract: Discovered in 2004, Graphene was the new "wonder material" – the first 2D material made entirely of carbon, rumored to unlock the secrets of untold material performance. It increases strength, conductivity, electricity, adhesion, and so much more at extraordinarily small concentrations. All of this is true, in theory, but the practicality of graphene applications has been harder to realize. Like nanomaterials before it, the entire supply and demand of the market had to be developed in tandem. Many players rushed to produce Graphene, assuming the demand would come quickly, but the nuance of the material continued to unfold with each discovery. The biggest challenges that the market came to bear can be summed up in one question: How can an industry integrate graphene to unlock its magical properties at scale?

MITO Materials engineers hybrid nano-additives by using functional chemistry to solve this problem at scale. Our specialty chemical process adds functional sites to nanomaterials like graphene. This functionality enables reactive dispersion which means existing manufactures do not need to change their manufacturing process to integrate and unlock the material benefits. The technology is novel, but through the art of customer discovery MITO Materials became the first company who successfully commercialized graphene additives out of the lab and into the market.

Bio: Haley Marie Keith is the Founder and CEO of MITO Material Solutions, a material science tech startup commercializing graphene and bio-based nano-additives to enhance materials. Haley grew up in Elkhart, IN surrounded by large industrial manufacturers too big to innovate. She began her career working for the nation's largest family-owned RV dealerships and then switched gears to lead operations at a local company in Arkansas. In both companies, Haley thrived on innovating the business model and implemented optimization and organizational processes, which helped both companies achieve greater success. During her first MBA course, Haley discovered MITO: a platform technology and patented resin modifier that enhances the durability of composite materials without altering the manufacturing process. The I-Corps program interviews and other entrepreneurship programs helped shape MITO Materials vision, company, and team. Under her leadership, MITO has raised over $3 million dollars in grant and investor funding and recently launched its flagship product, E-GO out of its lab in Stillwater, OK and into the marketplace. MITO Materials is now selling product commercially and aims to provide future solutions for lightweighting, carbon emission reduction, and increasingly durable and sustainable materials.

Haley Marie Keith was named a featured honoree in the 2020 Forbes 30 Under 30 Manufacturing & Industry List and is among the few female leaders in the materials space