

## **CHEMISTRY** | COLLABORATION | WITHOUT COMPROMISE



## Haley Marie Keith, Co-founder and CEO



Single Use Plastics Toxic Additives Fossil Fuels Metal Mining

What if our Materials could Do More? Could we Use Less? Can we replace the wasteful and harmful additives?





Our mission is to improve advanced materials though **Chemistry** innovation while empowering **Collaboration** so product engineers can deliver optimum performance *without* **Compromise**.



# Engineering Sustainability through Innovation







Targeting Large Markets

Multiple Materials Platform

Proven Differentiator in the Market







Drop In Technology at various parts of the Value Chain Composition of Matter IP, Utilities thereof, and Trademarks Strategic M&A Potential



First and Only in the market

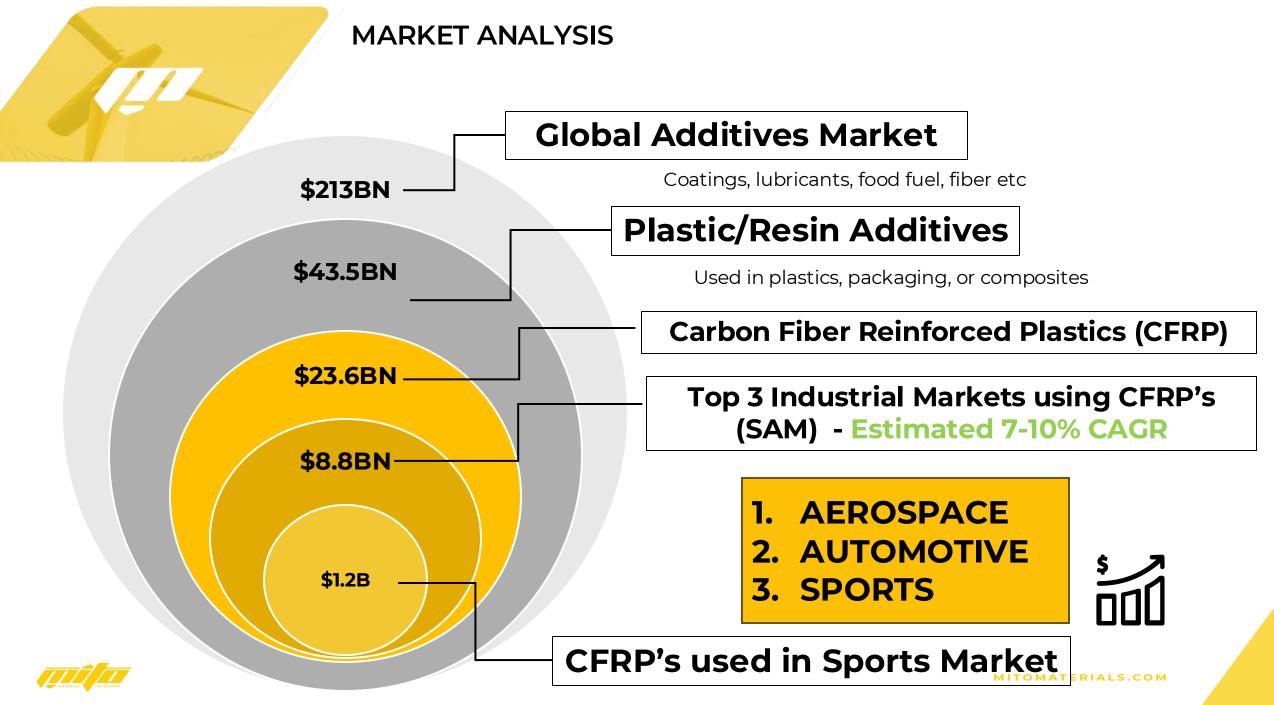


Founded in 2018 10 employees



Located in Indianapolis, IN Distributed worldwide



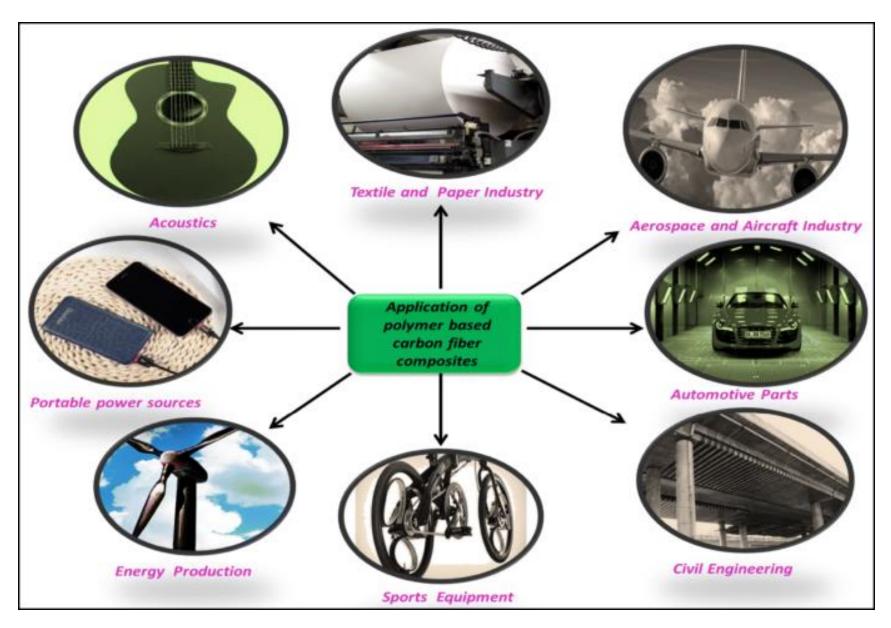


**Grandview Research - Source** 



# **Carbon Fiber**

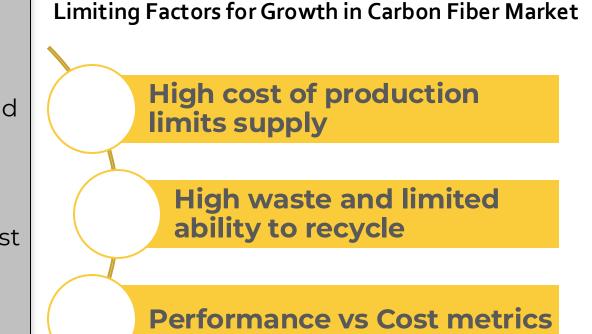
replaces or reinforces traditional materials in countless applications.





## OPPORTUNITY STATEMENT

The carbon fiber reinforced plastic (CFRP) market is poised for 7-10% growth driven by increasing demand from the automotive and wind industries, a focus on fuel efficiency, and the need for lightweight vehicles. This trend is encouraging manufacturers to invest in research and development to enhance production capabilities and quality.



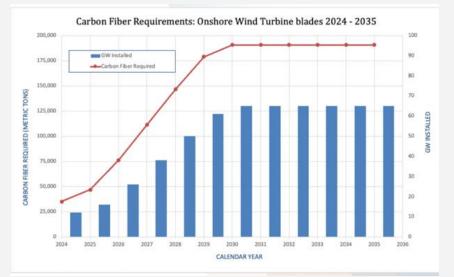


# PROBLEM

• Global demand for carbon fiber is set to **outpace supply.** 

• Carbon Fiber Reinforced Plastics <u>fail dramatically</u>, increasing liability with a high cost to repair and replace.















100% Tougher Carbon Fiber components 20% Less Carbon Fiber Utilization No Change in manufacturing processes **38,000 Tons** Carbon Fiber Available for Reallocation



MITO Makes hybrid additives (ingredients) that can be added to CFRP's as a drop in technology.

Our products deliver value at each point in the value chain, delivering multifunctional improvements



## THE MARKET NEEDS TO SEEKING SOLUTIONS FOR:

#### DURABILTY



OEMS looking to transition from metals to composites with higher durability and extended warranty.

#### WEIGHT



Lighter Composites.

#### PRODUCTION



Decreased material usage with increased durability means reduced production time and needs.





# MITO performs 3X better with 10X less material

MITO has 3 published case studies and 4 white papers further validating these claims.

Loading into Epoxy	Prod. Type	Flex Strength Increase	Flex Modulus Increase	Ease of Dispersion
0.1%wt	MITO E-GO	25%	14%	Easy (View Dispersion Comparison)
0.1%wt	Graphene (Bottoms Up)	-5%	-10%	Difficult
1%wt		8%	21%	
0.1%wt	Nano Graphite	2%	15%	Most Difficult
1%wt		7%	16%	

Data collected using our customer's composite system



#### **BUSINESS CASE**

MITO enabled ski designers to make stronger, lighter skis using less material, optimizing production processes and saving cost.

#### 2020-2021

Loaded at 1%wt via E-GO powder mixed in resin

Strength increased by **35%** 

Reduced Vibration by 100%

#### 2022-2023

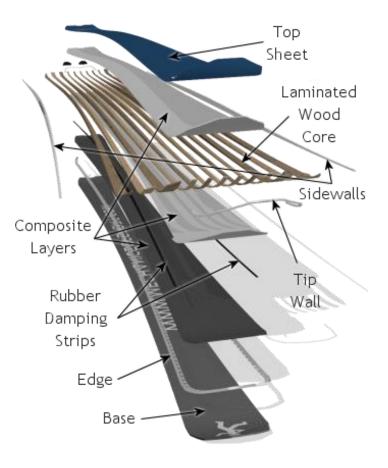
Purchased Resin from MITO loaded 1%

18% Reduction in Total Weight in Carbon Fiber Skis

Reduced Vibration by 100%

2024-2025

Integrating it across all Carbon and Fiberglass ski builds





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## **BUSINESS MODEL**







Formulated Product Sales Material Development Services

Licensing and Exclusivity More than just materials: a development partner



Material Development

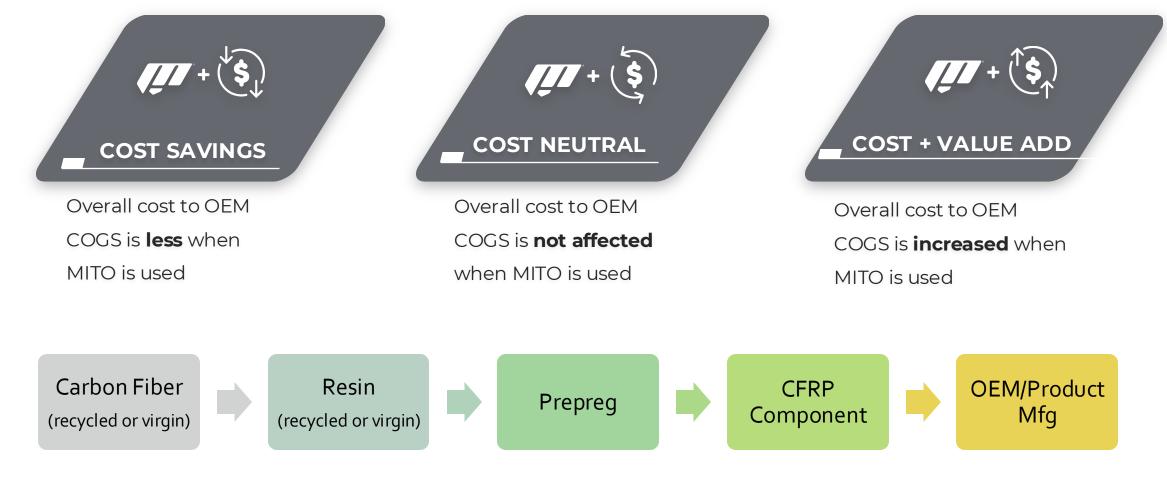


- Currently Generating Revenue with upward growth
- Products with MITO launched in market
- Pilots ongoing with Fortune 500 companies

**Q** Material Characterization



VALUE BASED PRICE MODEL WITH SALES CHANNEL PARTNERS THROUGHOUT THE SUPPLY CHAIN







## **GRAPHENE: A QUICK INTRO**

The world's strongest material still struggles to get market traction because:

# Quality

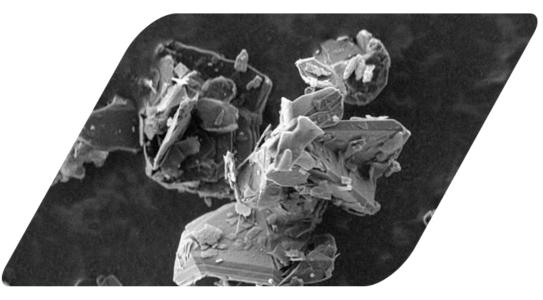
One size fits all stigma

# Dispersion

Agglomerates degrade properties

# Integration

Must work in established manufacturing methods





Graphene is a class of materials ranging from a 1-15 layers of carbon. Characteristics of graphene include strength, toughness, flexibility, heat and electrical property improvements.



#### **TECHNOLOGY DIFFERENTIATION**

# **GRAPHENE:** A raw material ingredient in MITO products that we source from vetted suppliers

Our technology adds Special chemistries added to graphene surface, making it more compatible with CFRPs. Multifunctional Improvement Means: Mechanical Performance Thermal Management Electrical Conductivity Corrosion and Wear resistance

**Light Weighing** 

**Fire Resistance** 

And more...

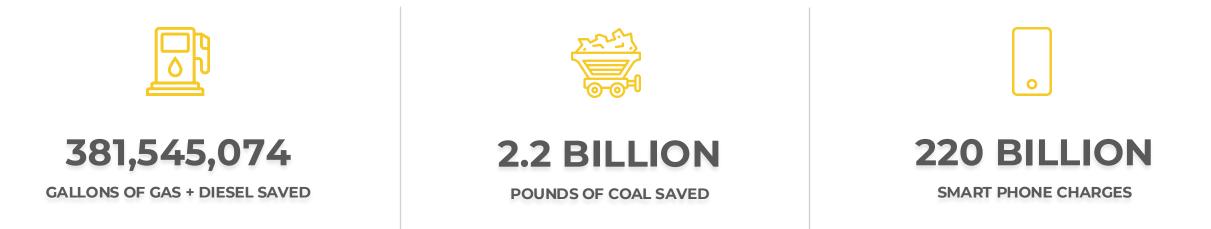




**REDUCE GLOBAL CONSUMPTION** 

**OF CARBON FIBER BY 20%** 

**1,810,366** METRIC TONNES OF CO2 SAVED ANNUALLY<sup>1</sup>



<sup>1</sup>Extrapolated data via white papers, coupling data with EPA Greenhouse Gas Equivalencies Calculator via <u>epa.gov/energy/greenhouse-gas-equivalencies-calculator</u>



# Industry Experts

#### Management



Kevin Keith Co-Founder, CTO Graphene Council



Caio Lo Sardo Co-Founder, EVP





Haley Marie Keith Co-Founder, CEO



Mahdi Ghazizadeh President & COO





Joel Neale Global Commercial Director of Advanced Polymers at Ingevity

#### **Board of Directors**



Rich Diemer Former CFO of Albemarle and Avient

Miguel Galvez Former CEO NBD Nano (acq. By Henkel

## **Industry Advisory Board**



Dustin Davis Director of Sales and BD Norplex-Micarta



Alexandre Correa GM - VideoJet Technologies