Graphene Composites USA (GC USA) Selected to Develop Next Gen US Military Footwear

GC USA will participate in the HEROES research and development initiative run by UMass Lowell and DEVCOM SC.

Fuqiang Liu, Associate Professor at the SWIFT Program Kick-off at UMass Lowell

PROVIDENCE, RHODE ISLAND, USA, July 5, 2024 /EINPresswire.com/ -- GC USA has been selected to participate in research and development program between DEVCOM Soldier Center, Natick MA and UMass Lowell to develop materials for the next generation of U.S. military footwear.

The program, SWIFT [Supporting Warfighters through Innovative Footwear Technologies], is offered by the HEROES (Harnessing Emerging Research Opportunities to Empower Soldiers) initiative and will see GC extend its patented GC Composite graphene and aerogel technology to develop ultra-lightweight, durable, insulative materials for use in extreme cold weather.

Lightweight, effective, and durable thermal insulation is essential for extreme cold weather training and operations. This industry-academia collaborative program seeks to bring new innovations and next generation footwear solutions to US Warfighters with significantly enhanced performance in terms of protection, comfort, durability, and/or weight reduction that can be manufactured in the USA.

GC aims to address the significant scientific obstacle of enhancing the thermal capabilities of footwear in severe conditions, particularly in combating the challenges posed by ineffective insulative materials for extremely cold weather military footwear. Through the characterization and development of GC graphene and aerogel composite designs, the goal is to produce innovative, insulative, and durable materials, tailored to excel in extreme cold weather environments.

Overseen by Fuqiang Liu, Associate Professor, leading the Electrochemical Energy Lab in

Mechanical Engineering department at UMass Lowell, the project is named ‘Characterization and Sampling of Graphene Composites Insulative Materials for Extreme Cold Weather Footwear’.

Mox Weber, VP GC USA said “GC Composites stand out due to their unique combination of low density, better insulative abilities, and robust durability. We will apply our nanomaterials and advanced materials engineering expertise to graphene and aerogel composites to achieve super thermal insulation and enhanced durability of the nano-porous structure’.

“HEROES is excited to embark on this University-Industry-Government partnership with cutting technologies from industry partners such as Graphene Composites” says Ramaswamy Nagarajan, Ph.D. Distinguished University Professor, Co-Director of HEROES. “We are proud to contribute to DEVCOM SC's mission of developing high-performance footwear for our Warfighters and onshoring manufacturing capabilities to the US” .

To find out more, please visit www.graphenecomposites.com or get in touch at info@graphenecomposites.com.

About Graphene Composites: GC is an innovative advanced materials engineering company, driven by an ethos to create life-changing products. As a world leader in advanced and nano-materials research, development and design, we apply our expertise to a wide range of applications. We work with manufacturers to resolve key technical challenges by developing breakthrough solutions and incorporating our technologies to enhance existing product performance.

About UMass Lowell: UMass Lowell is a national research university committed to excellence in teaching, research and community engagement. Programs span and interconnect the disciplines of business, education, engineering, fine arts, health, humanities, sciences and social sciences. The university continues to build on its founding tradition of innovation, entrepreneurship and partnerships with industry and the community to address challenges facing the region and the world.

About HEROES - SWIFT program: SWIFT [Supporting Warfighters through Innovative Footwear Technologies] is a research and development program offered by the Harnessing Emerging Research Opportunities to Empower Soldiers (HEROES) initiative – partnership between DEVCOM Soldier Center, Natick MA and UMass Lowell. In collaboration with the United States Footwear Manufacturers this program focuses on next generation high performance footwear solutions for the US Warfighters with significantly enhanced performance in terms of protection, comfort, durability, and/or weight reduction that can be manufactured in the United States of America.

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