IACMI – The Composites Institute is Closing the Loop on Automotive Carbon Fiber Prepreg Manufacturing Scrap

Knoxville, Tenn., October 16, 2018 – The Institute for Advanced Composites Manufacturing Innovation (IACMI), a 160+ member, University of Tennessee, Knoxville and U.S. Department of Energy driven consortium committed to increasing domestic production capacity and manufacturing jobs across the U.S. composites industry, announces a project to close the loop on automotive carbon fiber prepreg manufacturing scrap for use in new automotive applications. The project, which is led by Vartega, a start-up company focused on carbon fiber recycling, with project partners including Michelman, Oak Ridge National Laboratory, Colorado School of Mines, Michigan State University, the University of Dayton Research Institute, and the University of Tennessee, Knoxville. Additional project support is provided by Ford, BASF, and Plasan Carbon Composites.

The two-year technical collaboration will address the challenges of creating consistent recycled carbon fiber reinforced thermoplastics for use in vehicle lightweighting applications. Through the use of innovative and novel enabling technologies the project team will characterize and validate materials to meet the growing demand for cost effective carbon fiber needed for vehicle weight reductions to improve fuel economy, reduce emissions, and extend electric vehicle range.

“Carbon fiber recycling technology has matured significantly over the past decade, but several challenges still exist in producing materials at automotive scale. We recognized that a holistic approach needed to be taken to create supply chain solutions for recycled carbon fiber,” said Andrew Maxey, Vartega CEO. “In our work with the project team we’ll be able to demonstrate the viability of a circular economy for recycled carbon fiber combined with optimized sizing chemistries and commercial scale thermoplastic processing for automotive applications.”

“IACMI’s commitment to composites recycling and ability to facilitate projects that connect small and medium enterprises with large organizations are our institute’s DNA,” said John Hopkins, IACMI CEO. “This project is a great example of how manufacturers throughout the supply chain are coming together to solve difficult technical and business challenges.”
In addition to its work on this IACMI project, Vartega also has plans to install its first commercial recycling system in the IACMI Scale-Up Research Facility (SURF) located in the Corktown area of Detroit. The SURF is located a half-mile away from the Michigan Central Train Depot which was recently acquired by Ford Motor Company as the centerpiece for its new mobility, autonomy, and electrification Corktown campus.

The Vartega-led project is supported in part through IACMI state partners including the Colorado Office of Economic Development and International Trade (COEDIT), Tennessee Department of Economic and Community Development, JobsOhio, and Michigan Economic Development Corporation (MEDC). These state partners catalyze innovation by supporting IACMI and its members.

About IACMI-The Composites Institute: The Institute for Advanced Composites Manufacturing Innovation (IACMI), managed by the Collaborative Composite Solutions Corporation (CCS), is a partnership of industry, universities, national laboratories, and federal, state and local governments working together to benefit the nation’s energy and economic security by sharing existing resources and co-investing to accelerate innovative research and development in the advanced composites field. CCS is a not-for-profit organization established by The University of Tennessee Research Foundation. The national Manufacturing USA institute is supported by a $70 million commitment from the U.S. Department of Energy’s Advanced Manufacturing Office, and over $180 million committed from IACMI’s partners. Find out more at IACMI.org.