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FOR IMMEDIATE RELEASE

Harper teams with Oak Ridge National Laboratory on Carbon Fiber Project

Buffalo, NY – Harper International, world leader in custom thermal processing solutions for advanced materials, announced that in partnership with Oak Ridge National Laboratory (ORNL) they have been awarded funding for a project through the U.S. Department of Energy Advanced Manufacturing Office's HPC4Mfg Program. The Program was designed to spur the use of high performance supercomputers to advance U.S. manufacturing via public-private partnerships.

Specifically, the Harper International / ORNL project, titled "Development and Validation of Simulation Capability for the High Capacity Production Carbon Fiber", will focus on analysis of critical processing factors, such as temperature, gas flow and chemical reaction, in carbon fiber production equipment. The purpose is to ensure designs provide the necessary uniformity to produce fiber of a certain quality, output and cost ideal for automotive applications. Results will then be validated at the pilot scale equipment designed and installed by Harper at ORNL's Carbon Fiber Technology Facility, followed by testing in a commercial production facility.

"This project allows Harper to continue its work as a champion of innovative carbon fiber processing technologies to meet the needs of future markets, such as mass automotive applications, now with access to world-class supercomputers and deeper scientific expertise," commented Dr. Prasad Apte, Director of Technology at Harper International. "We are proud to be collaborating with the pioneering thought leaders at ORNL in continuation of our strong relationship."

Read more on the latest round of awards for the HPC4Mfg Program in the news release from Lawrence Livermore National Laboratory here:

<https://www.llnl.gov/news/doe-hpc4mfg-program-funds-13-new-projects-jumpstart-clean-energy-technologies>

About Harper International

Harper International is a global leader in complete thermal processing solutions and technical services essential for the production of advanced materials. From concept to commercialization, from research scale to full production line operations, Harper is perpetually on the cutting edge of the most innovative furnace and oven designs in the world. For decades, they have pioneered some of the most unique, customized systems available, with a focus on processing materials at high temperatures up to 3000°C and in non-ambient atmospheres. For additional information, please visit www.harperintl.com or email info@harperintl.com.

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