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# PPG Receives DOE Funding for Energy-Saving Automotive Paints and Coatings

08/13/2020

*Scientists to explore new algorithms and supercomputing resources to model paint flow, leveling for advanced multi-layer coatings systems*

PITTSBURGH--(BUSINESS WIRE)-- PPG (NYSE:PPG) today announced a partnership with the U.S. Department of Energy (DOE) Lawrence Berkeley National Laboratory (LBNL) for a research initiative aimed at developing energy-efficient coatings systems for the automotive industry. The PPG project – “Modeling Coating Flow and Dynamics during Drying” – was selected to receive funding through the DOE High Performance Computing for Energy Innovation (HPC4EI) program.

PPG scientists will collaborate with LBNL experts to model the complex physics that contribute to paint flow and leveling in a two-layer coatings system. The insight gained will accelerate the introduction of new multi-layer coatings systems that can be co-cured in a single, lower-temperature bake, reducing paint line energy consumption for automotive original equipment manufacturers (OEMs) by up to 30%.

“Beyond the energy savings achieved from fewer curing steps and faster process times, our research will provide a foundation for future models for water-based coatings and lighter-weight vehicle substrates,” said Xinyu Lu, PPG development engineer, automotive OEM coatings. “PPG is at the forefront of coatings technologies that can help vehicle manufacturers significantly reduce their costs and environmental footprints.”

The PPG initiative was one of 11 research projects selected in the latest HPC4EI award cycle. PPG has worked with the HPC4EI program over many years to advance programs that increase automotive manufacturing throughput and enable vehicle lightweighting. In 2019, PPG also received a DOE grant to study the aging characteristics of a new generation of structural adhesives needed to join high-strength steel, aluminum, magnesium and other substrates that can help reduce vehicle mass and increase fuel economy.

The HPC4EI program is funded by the DOE Office of Energy Efficiency and Renewables and the Fossil Energy Office. It uses world-class DOE capabilities in high-performance computing to help improve manufacturing processes, and further product and material development to reduce national energy consumption. These high-performance computers use new mathematical breakthroughs to enable increased accuracy of engineering and science simulations, and provide faster optimization and enhanced data analytics. To learn more, visit [hpc4energyinnovation.llnl.gov](https://hpc4energyinnovation.llnl.gov).

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At PPG (NYSE:PPG), we work every day to develop and deliver the paints, coatings and materials that our customers have trusted for more than 135 years. Through dedication and creativity, we solve our customers’ biggest challenges, collaborating closely to find the right path forward. With headquarters in Pittsburgh, we operate and innovate in more than 70 countries and reported net sales of \$15.1 billion in 2019. We serve customers in construction, consumer products, industrial and transportation markets and aftermarkets. To learn more, visit [www.ppg.com](https://www.ppg.com).

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CATEGORY Automotive OEM Coatings

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Source: PPG