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### **Perstorp's Dr. Ioanna Tzortzi and Coauthors Receive 2026 American Coatings Award**

Dr. Ioanna Tzortzi, associate specialist in the Coating Solutions business unit at Perstorp, along with her coauthors, received the 2026 American Coatings Award for the most outstanding conference paper on May 5 during the Plenary Session of the American Coatings Conference in Indianapolis, Ind. The paper titled, "Accelerated Alkyd Emulsification through AI-Driven Experimentation," was authored by Tzortzi and her colleagues: Albin Jansfelt, Perstorp data scientist; Marie Westerblad, Perstorp senior laboratory engineer; Eirini Palaiologlou, Perstorp R&D intern and Chemical Engineering student at National Technical University of Athens; and Nils Honhon, Perstorp R&D intern at Masters's degree student in Chemistry at the Université libre de Bruxelles.

Tzortzi, who led the Perstorp research and presented the paper at the 2026 American Coatings Conference was presented with a sculpture and accompanying \$2,500 cash award.

In their paper, the authors show how the coatings industry is accelerating its transition toward biobased and waterborne systems to reduce VOC emissions and environmental impact. Alkyd resins—often containing more than 50% biobased content—are central to this transition; however, achieving stable oil-in-water emulsions with the required performance remains a key bottleneck. Because fresh-emulsion behavior and long-term stability arise from the coupled effects of alkyd structure, emulsifier composition, and process variables such as temperature and degree of neutralization, the problem defines a highly nonlinear and dynamically expanding formulation space.

The authors posit that machine learning and informatics offer a transformative approach to materials acceleration, yet their application to complex heterophase and macromolecular systems remains comparatively limited relative to real-world formulation challenges. Their study reports the first application of a closed-loop AI sequential-learning workflow to waterborne alkyd emulsification, demonstrating that this active learning framework can effectively surrogate expert decision-making, optimizing for a rigorous four-index emulsification success criterion comprising emulsification capability, fresh particle size specifications, stability under accelerated

aging test, and corresponding particle size of the heat aged samples. More broadly, the study shows how AI-guided experimentation can accelerate discovery within this complexity by prioritizing the most promising formulation pathways rather than relying on broad empirical screening.

With a background in waterborne coatings, polymer chemistry, and rheology, Tzortzi focuses in her role at Perstorp on sustainable coating development, spanning waterborne systems and surfactant chemistry, with particular expertise in waterborne alkyd technologies. At Perstorp, Tzortzi works at the interface of experimental coating development and AI-guided innovation, using ML approaches to accelerate formulation design and process understanding. Beyond her industrial role, she is also active in academic collaborations that connect fundamental science with industrial applications.

Tzortzi earned an integrated Master's diploma in Chemical Engineering and a Ph.D. in Chemical Engineering from the National Technical University of Athens.

For more information about the American Coatings Show & Conference, please visit <https://american-coatings-show.com/conference/>.

*The American Coatings Show and Conference is hosted by AC Media, in collaboration with the American Coatings Association and Vincentz Network. The biennial trade show and technical conference is dedicated to serving as a global business platform and educational forum for the paint and coatings industry, offering a complete spectrum of current and future trends and technologies.*