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Showcasing research on biocomposites from Professor Chang Geun Yoo's laboratory, Department of Chemical Engineering, State University of New York College of Environmental Science and Forestry, United States.

Effects of chemical composition and physicochemical properties of poplar biomass on the performance of 3D printed poplar-reinforced PLA materials

This research demonstrated how chemical pretreatments of poplar biomass impact the final performance of 3D-printed biocomposites. By systematically correlating biomass characteristics with composite mechanical and thermal behaviour, the key structure-property-performance relationships were revealed. This study highlighted both the potential of untreated wood as a sustainable filler and the value of tailored pretreatments for tuning composite performance, providing a foundation for engineering renewable, high-performance materials for sustainable additive manufacturing.

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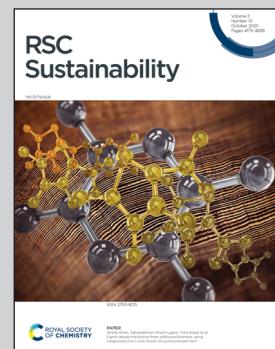
See Arthur J. Ragauskas, Chang Geun Yoo *et al.*, *RSC Sustainability*, 2025, **3**, 4478.