

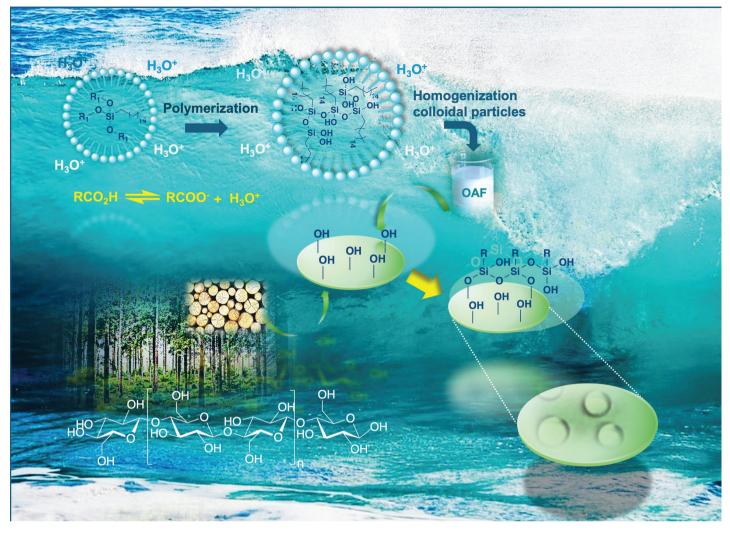


EES Batteries

Exceptional research on batteries and energy storage

Part of the EES family

Join Publish with us in rsc.li/EESBatteries



Showcasing research from Professor Córdova's laboratory, FSCN, Mid Sweden University, Sundsvall, Sweden.

Organocatalytic aqueous formulations: green organocatalytic hydrophobization of heterogeneous polysaccharide-based materials in water through "on-water" mechanisms

A concept for creating stable, water-based colloids enabling simple, eco-friendly, organocatalytic hydrophobization of polysaccharide-based materials is disclosed. Mixing a surfactant, organocatalyst, and alkyl trialkoxysilane in water initiates polymerization in surfactant micelles *via* an "on-water" mechanism, progressing to aggregation and colloid formation upon homogenization. Next, application of these organocatalytic aqueous formulations (OAFs) on diverse cellulose substrates yields hydrophobic or superhydrophobic surfaces via a novel "on-water" mechanism. The dual function of the organocatalyst showcases a sustainable strategy for catalytic transformations in water using small organic molecules.

Image reproduced by permission of Córdova and Alimohammadzadeh from *Green Chem.*, 2025, **27**, 5728.

Sea and forest images from Pixabay.com.

