

Showcasing research from the Hybrid research group Biopolymer and Recycling Innovations (HyBRIt) of the University of Groningen and NHL Stenden University of Applied Sciences

Enzymatic bulk synthesis, characterization, rheology, and biodegradability of biobased 2,5-bis(hydroxymethyl)furan polyesters

Novel biobased and biodegradable BHMF-based polyesters, produced via a sustainable and efficient bulk polymerization process by using either enzymes or commercially available catalysts, are reported. The thermal, mechanical and rheological properties can be tuned by varying the number of methylene units of the aliphatic comonomer. Different biodegradability rates were observed, depending on the polyesters' structure. Microbial degradation yields  $CO_2$  and  $H_2O$ , closing the loop for BHMF-based polyesters.

Back cover designed by Cornelis Post and Dina Maniar.



