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Enzymatic synthesis of furan-based polymers

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Stellingen

Behorende bij het proefschrift

“Enzymatic Synthesis of Furan-based Polymers”

Door Dina Maniar

1. Enzymatic polymerization has proven to be an efficient method for the preparation of furan-based polymers.
– *Chapter 2-5 of this thesis*
2. The properties of novel FDCA-based polyamides can be tuned by enzymatic polymerization.
– *Chapter 3 of this thesis*
3. Enzymatic polymerization can be performed for the preparation of furan-based copolyesters with increased content of aromatic units. However, the molecular weight is still restricted by the aromaticity content in the backbone.
– *Chapter 4 of this thesis*
4. The achieved molecular weights depend on the enzyme specificity, as well as the solubility of the furan polymers in the reaction mixture.
– *Chapter 2-4 of this thesis*
5. Enzymatic polymerization of biobased furan monomers in bulk and in ionic liquid represents a feasible route towards a fully green polymer synthesis.
– *Chapter 3 & 5 of this thesis*
6. Enzymatic polymerization shows enormous potential to be applied for the synthesis of various biobased polymers and paves the way for the future development of sustainable polymers.
– *This thesis*
7. We are not there yet, but there is good reason to stay the course and continue to push the frontiers of biobased polymers for the sake of sustainability.
– *Marc A. Hillmyer, Science* **2017**, 358, 868-870
8. When one door of happiness closes, another opens; but often we look so long at the closed door that we do not see the one which has been opened for us.
– *Hellen Keller*
9. I is the hardest word to define.
– *John Green*