

Investigation of Shape and Geometry on the Macrocyclization of Oligoester Macrocycles via Alkyne Metathesis

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Macrocyclic oligoesters were synthesized via alkyne metathesis enabled depolymerization-macrocyclization of the corresponding diarylethynylene-polyesters. The effect of monomer shape and geometry on the macrocyclization landscape were investigated. A symmetric *meta*-monomer (Figure 1a) displayed a broad product distribution due to the ester's degrees of freedom. However, the product distribution was narrowed when an asymmetric *ortho*, *para*-monomer was studied (Figure 1b). The results of this work exemplify the notion that an appropriately designed polymer/monomer system will display a greater tendency to form a narrow macrocyclic product distribution.

