ABSTRACT

TITLE:	Synthesis of Conformationally Constrained Diarylether Cyclophanes
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ABSTRACT: We report progress toward the synthesis of a series of chiral conformationally constrained diarylether cyclophanes with variation in the length of the bridging carbon chain. These cyclophanes are chiral by virtue of restricted bond rotation, not by the presence of stereocenters. Cyclophanes are a class of compounds that occur naturally and are conformationally constrained due to the presence of a carbon chain bridging the para positions of an aromatic ring. Many naturally occurring diarylether cyclophanes have a seven-carbon bridge linking the diarylether component of the molecule. We report a method for the synthesis of diarylether cyclophanes with variation in the tether length. Experiments to determine the relationship between tether length and the barrier to racemization will be disclosed. Because of structural similarities to biologically active diarylether heptanoids, the synthesis of diarylether cyclophanes could lead to compounds with significant biological activity.