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Templated Synthesis of Cyclic [4]Rotaxanes Consisting of Two Stiff Rods Threaded through Two Bis-macrocycles with a Large and Rigid Central Plate as Spacer
J. Am. Chem. Soc. 2010, 132, 6840-6850.

## A Cyclic [4]Rotaxane



Significance: The authors synthesized the two cyclic [4]rotaxanes $\mathbf{1}$ and $\mathbf{2}$. The structure of $\mathbf{2}$, containing zinc porphyrin units, was determined by X -ray crystallography and is the largest rotaxane molecule characterized in this way.

Comment: The synthetic strategy includes the quantitative copper-driven assembly and threading of $\mathbf{5}$ through the macrocycles $\mathbf{3 , 4}$ and the attachment of stoppers $\mathbf{8}$ by click chemistry in high yields. Compound $\mathbf{2}$ was tested as a receptor for ditopic guests in complexation studies.

