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Synthesis of Oligoparaphenylene-Derived Nanohoops Employing an Anthracene Photodimerization–Cycloreversion Strategy

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Nanohoop through Anthracene Photodimerization–Cycloreversion

Significance: Nanohoops composed of highly strained aromatic hydrocarbons are fascinating carbon-rich structures, and creative strategies are required for their efficient syntheses. The authors utilize an anthracene photodimerization–cycloreversion strategy to make a novel nanohoop with interesting photophysical properties.

Comment: The rigid dianthracene scaffold approach generates the target nanohoop in excellent yields over six steps. The often critical ring-closing step was achieved in a particularly efficient manner under nickel-mediated Yamamoto coupling conditions.

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