Expanded \([n] \)Radialenes: Unusual Carbon-Rich Molecules

**Significance:** Conjugated macrocycles belong to a class of carbon-rich molecules that exhibit unusual structures and fascinating electronic and optical properties. Here, Tykwinski and co-workers report synthetic approaches to extended \([4] \)radialenes 1 and \([3] \)radialenes 2.

**Comment:** Synthesis of the extended radialenes 1 and 2 is accomplished by a one-pot deprotection and palladium-catalyzed cross-coupling reaction of common intermediates 3 and 4, respectively. Increased bond-angle strain appears to reduce yields in the synthesis of 2 compared to 1. A modified synthesis that leads to \(C_2 \)-symmetric expanded \([4] \)radialenes is also presented in this work.

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**Synthesis of extended \([4] \)radialenes:**

1. TBAF, THF

2. \(\text{Pd(PPh}_3\text{)}_4, \text{CuI, i-Pr}_2\text{NH, THF, }\Delta\)

**Synthesis of extended \([3] \)radialenes:**

1. TBAF, THF

2. \(\text{Pd(PPh}_3\text{)}_4, \text{CuI, i-Pr}_2\text{NH, THF, }\Delta\)