**Aryne’t You Doubly Impressed with this Cyclopropenone Insertion?**

**Significance:** The authors demonstrate a method to formally insert two aryne units into the carbon–oxygen double bond of a ketone, producing spirocyclic xanthene–cyclopropene scaffolds 1. Mechanistically, a direct formal [2+2] cycloaddition of an aryne with cyclopropenone is followed by the subsequent cycloaddition of the ortho-quinone methide intermediate with the second aryne equivalent.

**Comment:** The reaction relies on the strong nucleophilicity of the ketone oxygen: cyclopropenone proved to be one of the best candidates due to its zwitterionic structure, and attempts to generalize the reaction with other ketones failed. Interestingly, the more electron-rich aryne precursor, when exposed to trace acid, ring-opened to produce xanthylum triflate 2.

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**Selected examples:**

1. ![Example Structure](image1.png)
   - 80% yield, 30 °C, 24 h

2. ![Example Structure](image2.png)
   - 78% yield, 30 °C, 24 h

3. ![Example Structure](image3.png)
   - 0% yield

4. ![Example Structure](image4.png)
   - 56% yield, 30 °C, 24 h

**Xanthylum triflate formation:**

1. ![Example Structure](image5.png)
   - MeCN, 35 °C, 24 h
   - CsF (9 equiv)
   - (2.5 equiv)
   - 37% yield

2. ![Example Structure](image6.png)
   - MeCN, 30–60 °C, 24 h
   - CsF (9 equiv)
   - (2.5 equiv)

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