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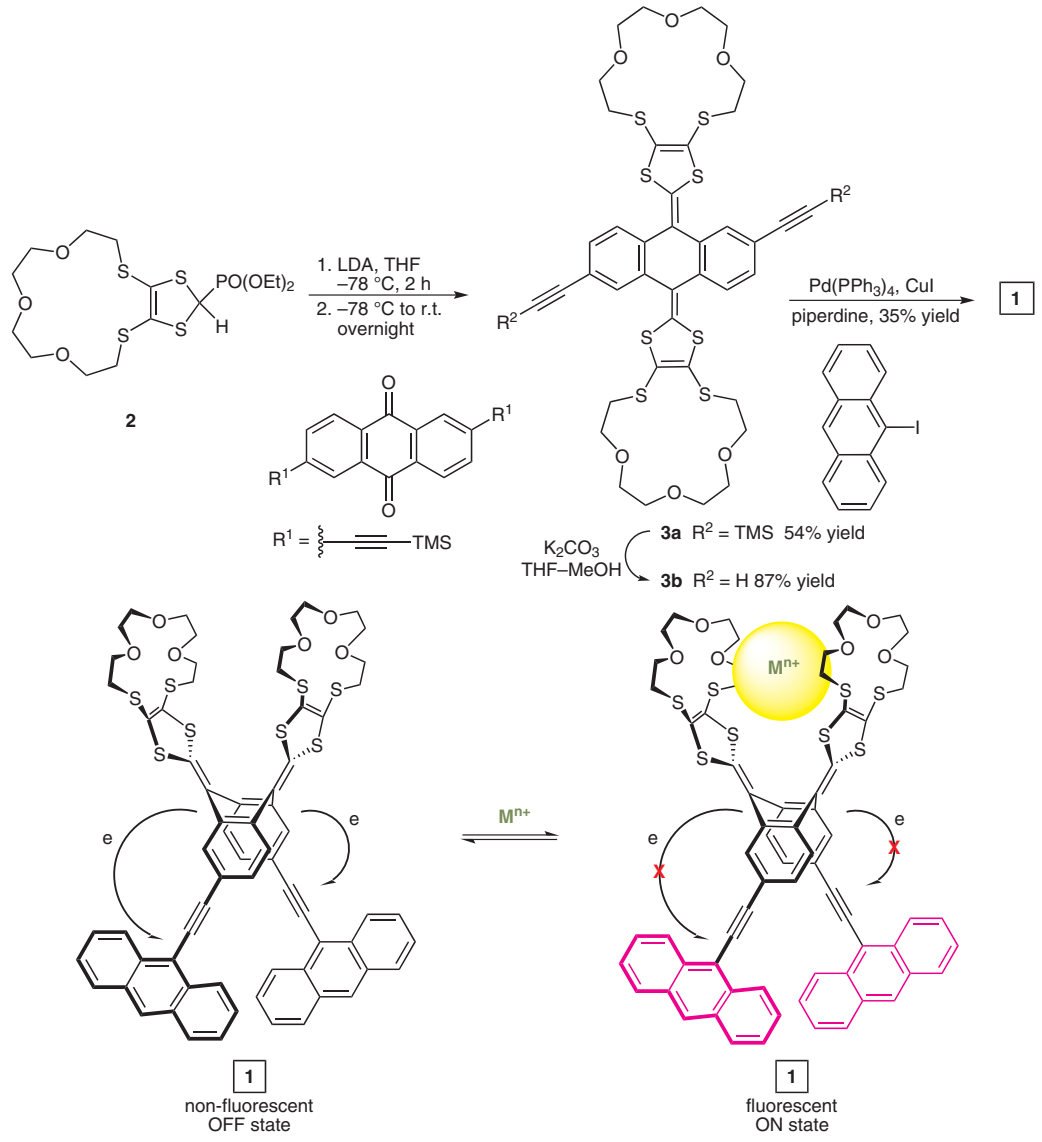
Biscrown-Annulated TTFAQ-Dianthracene Hybrid: Synthesis, Structure, and Metal Ion Sensing
Org. Lett. **2010**, *12*, 3050-3053.

A Cation Sensor: All Saddled Up



Significance: Anthraquinodimethane-type extended tetrathiafulvalenes (TTFAQs) are known for having a rigid, non-planar, saddle-like structure in the neutral state. Here the authors demonstrate the ability of this class of extended tetrathiafulvalenes to act as selective metal cation sensors, in particular Ba^{2+}.

Comment: Uncomplexed **1** shows a quenched fluorescence due to electron transfer between the electron-donating, thiafulvalene-containing unit, and the electron-accepting anthracenes. The reduced electron-donating capabilities experienced upon crown ether–cation binding, suppresses the electron transfer, 'turning on' fluorescence.

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