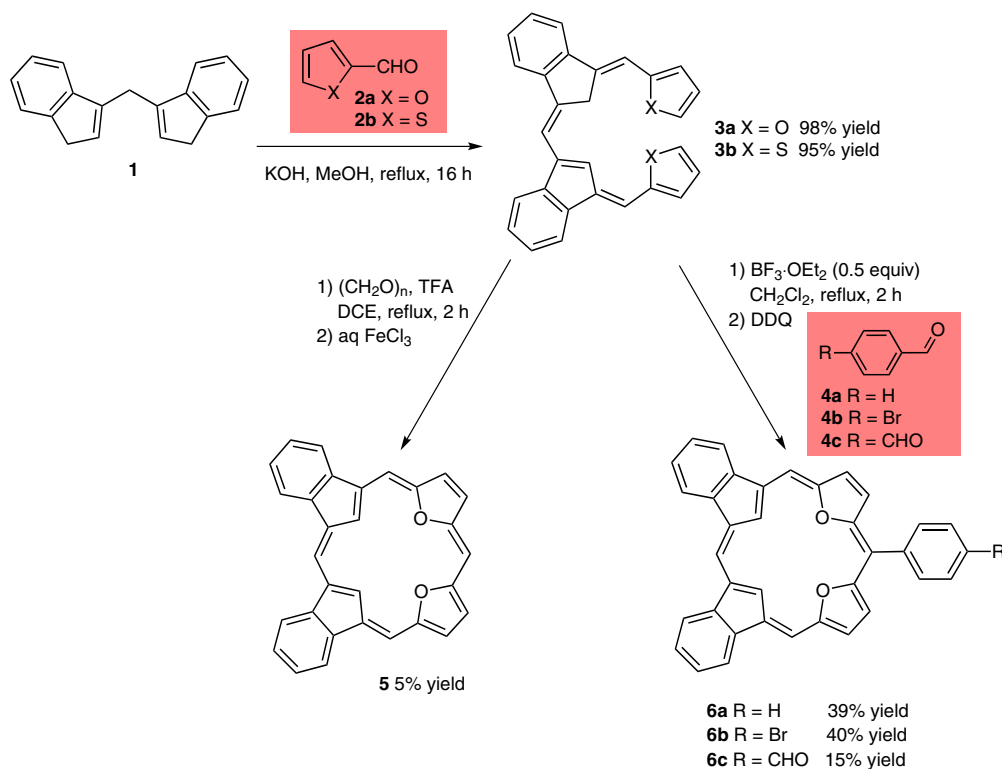


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Two-Step Synthesis of Stable Dioxadibaporphyrins from Bis(3-indenyl)methane

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Nitrogen-Free [18]Porphyrinoids in Two Steps



Significance: The researchers synthesized substituted and unsubstituted dioxadibaporphyrins, which are the first examples of porphyrinoids with adjacent indenes. Bis(3-indenyl)methane **1** was reacted with various aryl aldehydes to yield compounds **3**. Reaction with formaldehyde or an aryl aldehyde followed by oxidation led to the formation of dioxadibaporphyrins **5** and **6**, respectively. These bilin analogues are interesting as natural products as well as organic opto-electronic materials.

Comment: The reaction of bis(3-indenyl)methane **1** with aryl aldehydes was expected to give a symmetric difulvene; however, the fully conjugated derivative **3** was obtained instead and confirmed with 2D NMR and X-ray crystallography. The ^1H NMR spectra of the porphyrinoids **5** and **6** displayed that the macrocycles are diatropic, as expected from the [18]annulene core.

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