Incorporation of a *p*-phenylene unit into the azuliporphyrinogens frame-oxidation and ruthenium cluster coordination.

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Streszczenie

A porphyrinogen macrocycle incorporating two azulenes, phenylene and thiophene into the framework, joined by four C(sp^3) atoms has been obtained as a mixture of six isomers. They were successfully separated and characterized spectroscopically. The identity of two of them was confirmed by X-ray crystallography. One isomer was tested in reaction with $[Ru_3(CO)_{12}]$ yielding exclusively π-complex with two clusters attached to azulenes. The partial oxidation of porphyrinogens yielded dication with two unmodified *meso* bridges. The stepwise oxidation followed by reaction with water as nucleophile afforded the dicationic species with two hydroxyl groups and a trication with one OH group. The hydroxy-dication can be reversibly transformed into hydroxy-trication by addition of HBF_4 etherate.

Słowa kluczowe

azulene, carbaporphyrinoid, carbocation, macrocycles, ruthenium clusters

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