Incorporation of the 1,5-naphthalene subunit into heteroporphyrin structure: toward helical aceneporphyrinoids.

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Streszczenie

5,10,15,20-Tetraaryl-22-hetero-1,5-naphthiporphyrins, which contain a 1,5-naphthylene moiety instead of one pyrrole embedded in the macrocyclic framework of heteroporphyrins, were obtained by the [3 + 1] approach using the 1,5-naphthylene analogue of tripyrrane (1,5-bis(phenyl(2-pyrolyl)methyl)naphthalene) and 2,5-bis(arylhydroxymethyl)heterocyclopentadiene (heterocyclopentadiene: thiophene, selenophene, tellurophene). The steric constraints, imposed by the substitution mode of the 1,5-naphthylene building block, resulted in the specific helical conformation of 22-hetero-1,5-naphthiporphyrins. The spectroscopic and structural properties of these aceneporphyrinoids indicate a lack of macrocycle aromaticity. Their protonation yielded solely dicationic species.

Adres publiczny

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