



An electron-deficient azacoronene obtained by radial π extension.

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Streszczenie

A hexapyrrolohexaazacoronene derivative containing 37 fused rings, the largest such system to date, was obtained from a naphthalenomonoid-pyrrole hybrid in a concise and efficient synthesis. This large heterocycle is electron-deficient and shows extended redox activity, spanning at least 13 oxidation levels, but is otherwise chemically stable. Radial expansion of the π system creates a chromophore characterized by strong fluorescence and solvatochromism in the neutral state, and strong near-infrared absorption in the charged states. Additionally, the enlarged and ruffled aromatic surface supports a unique self-assembly mode in the crystal, leading to the formation of highly solvated organic clathrates.

Słowa kluczowe

aromaticity, heterocycles, polyaromatic compounds, redox chemistry, synthesis

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