

A mixed-valence bis-phosphorus complex entrapped in a oxatriphyrin (3.1.1) surrounding.

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The macrocyclic, porphyrinic environment has been reported as a ligand capable of accommodating different types and numbers of cations. The number of coordinated cations strongly depends on the coordination sphere size, which usually limits the possibility of forming multicationic structures to higher oligomers of macrocycles. Even for structures with enlarged coordination spheres, two interacting phosphorus ions with different oxidation states entrapped in a single organic frame are rarely reported. Oxatriphyrin(3.1.1) adapts its properties to form a mixed-valence, bis-phosphorus complex with a P–O–P unit entrapped. The macrocycle adjusts its coordination properties actively by involving the *meso* carbon atom to bind two phosphorus atoms with different oxidation states. The final complex presents emission properties that are characteristic for a triheterocyclic, fully conjugated fragment but that are tunable by the second P^V ion.

Słowa kluczowe

aromaticity, fluorescence, Phosphorus, porphyrinoids, Triphyrin

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