Synthesis, spectra and properties of the first protono- and ionogenic tris-dioximate iron(II) clathrochelates.

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Kolekcja

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Streszczenie

Water-soluble ribbed-functionalized iron(II) cage complexes with iono- and protonogenic substituents were obtained by nucleophilic substitution of the reactive chlorine atoms of mono-, di- and hexachloroclathrochelate precursors with thiolate ions – the derivatives of *ortho*-, *meta*- and *para*-mercaptobenzoic acids and sodium 3-mercapto-1-propanesulfonate – as nucleophiles. The complexes obtained were characterized using elemental analysis, MALDI–TOF and ESI mass spectrometry, IR, UV–Vis, ^{1}H and ^{13}C{^{1}H} NMR spectroscopies; their electrochemical properties were studied by cyclic voltammetry. The oxidized iron(III)- and reduced iron(I)-containing clathrochelate species are chemically unstable because of the destabilizing electronic effects of the ribbed sulfide substituents and the substantial structural and electronic changes in the clathrochelate framework after the reduction process, respectively.

Słowa kluczowe

Clathrochelates, Tris-dioximates, Iron complexes, Solubility, Macrocyclic compounds, Transcription inhibitors

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