Structure and properties of 2,2'-bipyridine-3,3',6,6'-tetracarboxylic acid and its iron(II) and cobalt(II) complexes.

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Streszczenie

The new compounds 2,2'-bipyridine-3,3',6,6'-tetracarboxylic acid (bptcH(4)) () and iron(II) [Fe(2)(bptcH(2))(2)(H(2)O)(4)].4.74H(2)O () and [Co(2)(bptcH(2))(2)(H(2)O)(4)].4.5H(2)O () have been prepared and characterized using (1)H NMR, IR and UV-Vis spectroscopic methods. X-Ray structures of these compounds have been determined. Acid crystallizes in the space group Aba2 and complexes and in P2(1)/c. The metal atoms are coordinated with N and O atoms of 6,6' carboxylate groups of the bridging ligands and two aqua ligands. The crystals are stabilized by intra- and intermolecular O-HN and OHO hydrogen bonds. Magnetic moments of complexes and at room temperature are characteristic of the high spin Fe(II) and Co(II) compounds. The 1/chi(M) dependences on temperature show weak antiferromagnetic interactions of and .

Adres publiczny

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