Synthesis and solution studies of Cu(II) complexes with pyridine derivatives of iminobisphosphonic acids.

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Streszczenie

New 2-pyridyl, 3-pyridyl and 4-pyridyl derivatives of iminobisphosphonic acid were prepared by addition of tris(trimethylsilyl)phosphite to the corresponding derivatives of pyridineimine-methylphosphonates **3** and subsequent methanolysis of the silylated products **4**. Solution studies on the coordination abilities of the ligands have shown that these compounds bind copper(II) ion through the tridentate {N,O,O} mode, where Cu(II) is stabilized by two five-membered chelate rings. The complexes obtained are very stable, with the pCu(II) value above 12, and therefore the ligands can be used as powerful chelating agents for copper ion.

Słowa kluczowe

Iminobisphosphonic acids, Pyridine derivatives, Copper(II) complexes, Stability constants, Potentiometry, UV–Vis and EPR spectroscopy

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