Kompleksy metali dużych makrocykli iminowych i aminowych=Metal complexes of large imine and amine macrocycles.

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Streszczenie

Macrocyclic complexes continue to attract considerable attention due to their significance in biological systems, catalysis medical diagnostics and other fields. While the most intensively studied macrocycles containing donor nitrogen atoms are tetraazamacrocycles such as porphyrins or cyclen derivatives, larger macrocyclic ligands containing up to18(or even more) donor atoms are also known. Due to their enlarged size, these macrocycles can bind large metal ions such as lanthanide (III) ions or bind multiple metalions. In this review a subclass of largen macrocycles will be discussed i. e. macrocyclic amines and imines that can be generated in the condensation of diamines with dicarbonyl compounds, in particular with 2, 6 diformylpyridineor2, 6 diformylphenols. These macrocycles of various sizes lead to a rich variety of structures of metal complexes, in cluding polynuclear complexes. Moreover,macrocycles derived from enantiopure trans-1,2-diaminocylohexane form chiral metal complexes that exhibit unusual effects such as helicity inversion, enantioselective self-recognition or enantiodiscrimination of organic guest molecules.

Słowa kluczowe

macrocycles, chirality, polynuclar complexes, Lanthanides

makrocykle, chiralność, kompleksy wielordzeniowe, lantanowce