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compounds and their derivatives

2.9 The role of transition metal ions in the construction of model systems2.9.1 Porphyrins and related compounds; 2.9.2 Corrins; 2.9.3 Phthalocyanines; 2.10 References; 3 Template synthesis of macrocyclic systems based on di- and polyamines, and polyfunctional dicarbonyl compounds; 3.1 Macrocycles based on 2,6-dicarbonylpyridines, 2,5-diformylpyrrole and the simplest diamines; 3.2 Macrocycles based on 2,6-dicarbonylpyridines and 1,n-diamines containing an additional supporting donor atom

3.3 Macrocycles based on 2,6-dicarbonylpyridines and diamines containing two additional supporting donor atoms3.4 Macrocycles based on 2,6-dicarbonylpyridines and diamines containing three additional supporting donor atoms; 3.5 Macrocycles derived from 2,6-dicarbonylpyridines, 2,5- diformylpyrrole and 1,3-diaminopropan-2-ol; 3.6 Macrocycles derived from 2,5-diformylfuran, 2,5-diformylthiophene and 1,n-diamines; 3.7 References; 4 Template synthesis of three-dimensional macrocyclic systems; 4.1 Clathrochelates; 4.1.1 Clathrochelates based on 1,2- and 1,3-diaminoalkanes

4.1.2 Macrobicyclic tris(mono- and di-)oximates and other cage complexes4.1.3 Siderophore models and cryptands; 4.2 Catenanes, rotaxanes and knots; 4.2.1 Introduction; 4.2.2 Threading: pseudorotaxanes; 4.2.3 Rotaxanes; 4.2.4 Catenanes; 4.2.5 Knots; 4.3 References; 5 Phosphorus- and arsenic-containing macrocyclic compounds; 5.1 Phosphorus; 5.2 Arsenic; 5.3 References; 6 Crown ethers and related compounds; 6.1 Crown ethers; 6.2 Thiacrown ethers; 6.3 Heterocrown ethers; 6.4 References; 7 Covalent template synthesis; 7.1 Macrocyclic polylactones, polylactams and related compounds; 7.2 References

8 Polynucleating macrocyclic compounds

Sommario/riassunto

The synthesis of macrocycles is an art in itself. Template-controlled synthesis provides elegant access to fascinating macrocyclic structures. Polyazamacrocycles, crown ethers, cryptands, rotaxanes, knots -- the range of macrocyclic compounds is as broad as their potential application as molecular switches, in ion exchange, electron transfer or catalysis.This book provides authoritative information on all aspects of template-controlled macrocyclizations. It covers in depth the current state of research on template processes - novel synthetic techniques and mechanistic approaches. The c