

Synthesis, characterization, and chirality of dimeric N-confused porphyrin-zinc complexes: toward the enantioselective synthesis of bis(porphyrinoid) systems.

Autorzy

Marta Siczek

Piotr J. Chmielewski

Rok wydania

2007

Czasopismo

Angewandte Chemie -
International Edition

Numer woluminu

46

Strony

7432-7436

DOI

10.1002/ange.200701860

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Chirale „Muschel“: Im Komplex mit Zink-Ionen nimmt zweifach N-invertiertes 3,3'-Diporphyrin eine gebogene transoide Struktur mit homochiralen Untereinheiten ein, die zur supramolekularen Bindung von Alkoholen befähigt sind. Die Einführung eines dianionischen Liganden definierter Konfiguration bewirkt, dass das racemische Gemisch in ein reines Enantiomer umgewandelt wird (siehe Schema; tart= Tartrat-Dianion), wie Circular dichroismusstudien ergeben. Oligoporphyrins have attracted much attention as a result of their properties related to the interaction between the aromatic subunits, and may find potential application in molecular electronics, nonlinear optics, and catalysis.¹ Directly linked porphyrin oligomers are of special interest as the interaction between chromophores in these systems is expected to be particularly strong and tunable.² Bis(porphyrins) in which a pyrrole carbon atom is directly linked to the other subunit display intrinsic axial chirality as a consequence of the restricted rotation around the $\beta\beta'$ bond.³ This restriction is imposed by the meso substituents, which preserve the axial chirality of the system by preventing the interconversion of the rotamers. Although some efforts have been made to resolve the racemic mixture, no enantioselective synthesis of a directly linked bis(porphyrin) system has been reported to date

Adres publiczny

<https://doi.org/10.1002/ange.200701860>

Strona internetowa wydawcy

onlinelibrary.wiley.com