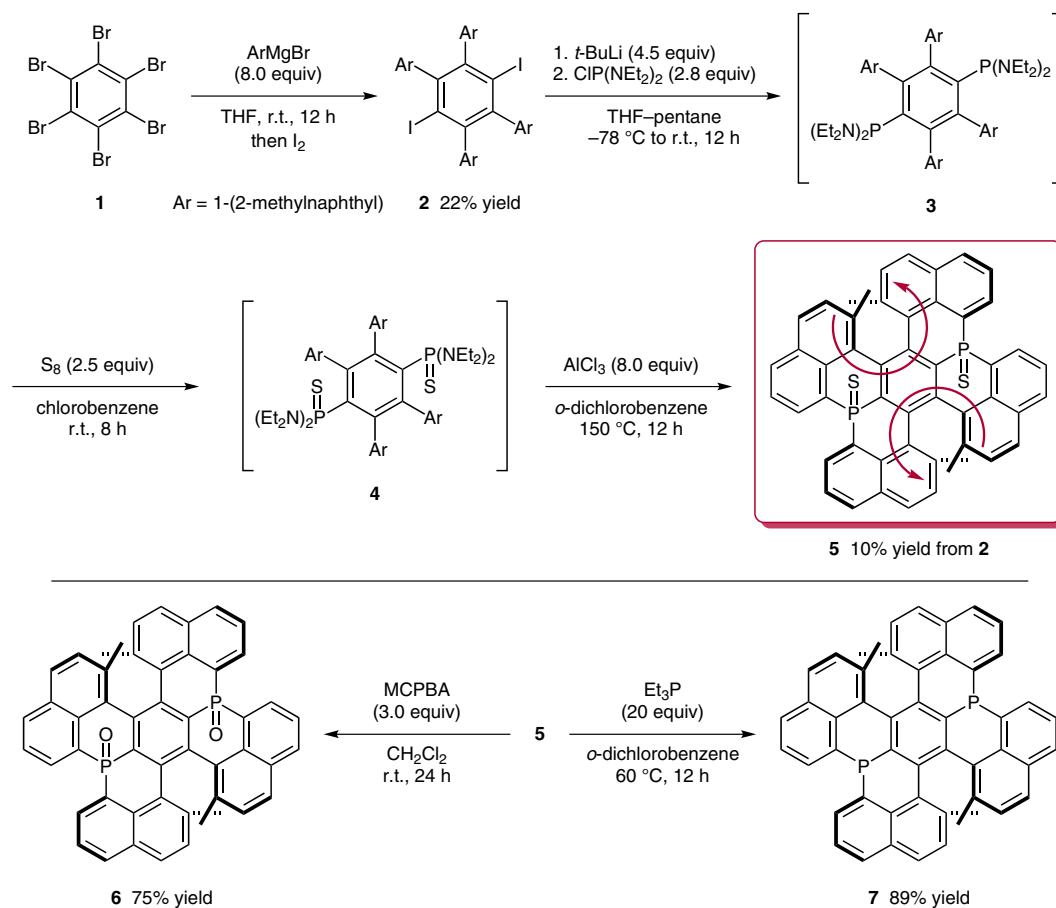


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Construction of a Highly Distorted Benzene Ring in a Double Helicene

Angew. Chem. Int. Ed. **2014**, *53*, 14074–14076.

Twin Helicenes Twist Benzene



Significance: The authors report a new approach to construct distorted benzene rings by constraining a benzene ring between two opposing [5]helicenes. Double helicene **5** was synthesized via a tandem intramolecular phospho-Friedel-Crafts reaction. By X-ray crystallography, the central benzene ring of **5** was found to possess a bending angle of 23° , and the sulfur atoms were found to be in a *cis* arrangement.

Comment: Distorted double helicene **5** can be de-sulfurized with triethylphosphine to yield bis(phosphine) **7**, which could find potential use as a C_2 -symmetric ligand for bimetallic complexes, following separation of enantiomers.

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Synfacts 2015, 11(1), 0031 Published online: 15.12.2014

DOI: 10.1055/s-0034-1379667; Reg-No.: S12614SF

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Category

Synthesis of
Materials and
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Key words

aromaticity

helical structures

ligand design

Friedel-Crafts
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