S. HASHIMOTO, S. NAKATSUKA, M. NAKAMURA,* T. HATAKEYAMA* (KWANSEI GAKUIN UNIVERSITY, HYOGO, KYOTO UNIVERSITY, AND JAPAN SCIENCE AND TECHNOLOGY AGENCY, TOKYO, JAPAN)

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 desulfurized 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.

SYNFACTS Contributors: Timothy M. Swager, Kathleen R. White

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

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

2015 © THIEME STUTTGART • NEW YORK

Category

Synthesis of
Materials and
Unnatural Products

Key words

aromaticity

helical structures

ligand design

Friedel–Crafts
reaction

SYNFACT
of the month

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.