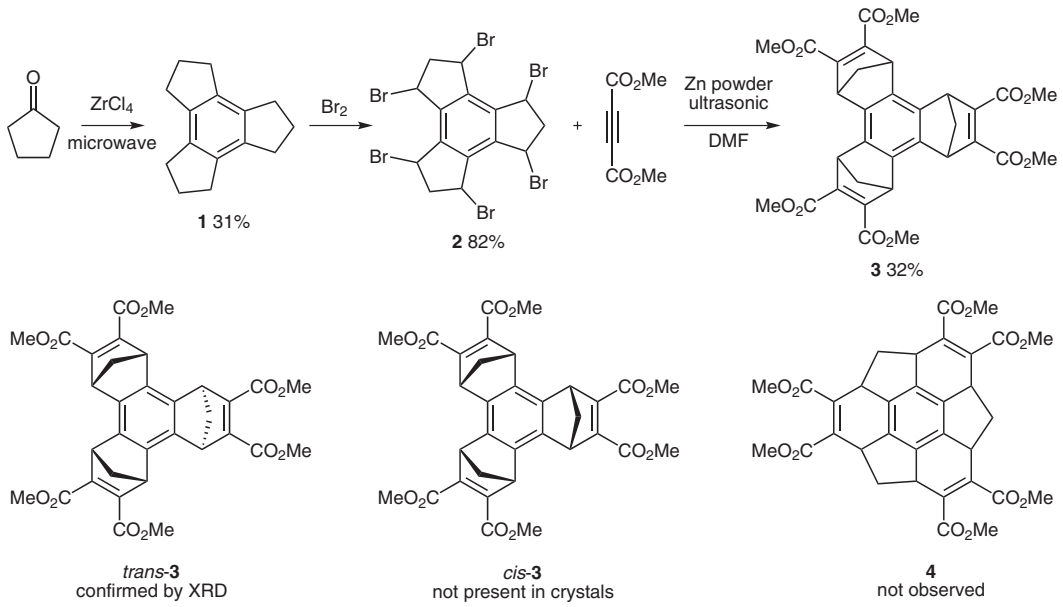
Z.-Q. GAO, J.-F. WEI,* X.-Y. SHI, J. YU (SHAANXI NORMAL UNIVERSITY, P. R. OF CHINA)
A Diels–Alder Approach to *trans*-Trisbicyclo[2.2.1]heptabenzene derivative
Tetrahedron Lett. **2008**, *49*, 6126-6128.

Diels–Alder Synthesis of Trisbicyclo[2.2.1]heptabenzene



Significance: The authors report the synthesis of a cyclohexatriene containing trisbicyclo[2.2.1]heptabenzene that does not involve highly reactive organometallic intermediates. The critical step involves a triple Diels–Alder cycloaddition between the tri-diene formed from 1,3,4,6,7,9-hexabromotrindane and dimethyl but-2-ynedioate. The desired product **3** was obtained in 32% yield. The structure of *trans*-**3** was confirmed by X-Ray crystal structural analysis.

Comment: The cyclohexatriene motif has a lot of potential for uses in materials and supramolecular chemistry. Compounds containing this subunit have been used in the synthesis of fullerene and trindane analogues. In addition, tris(bicyclo[2.1.1]-hexeno) benzene was the first example of a mononuclear benzenoid compound with observable bond alternation (localization), causing its analogues to be of theoretical interest (J. S. Siegel *Angew. Chem. Int. Ed.* **1995**, *34*, 1454). This synthesis provides a less toxic and costly route to such compounds.

SYNFACTS Contributors: Timothy M. Swager, Rebecca R. Parkhurst
Synfacts 2008, 11, 1161-1161 Published online: 23.10.2008
DOI: 10.1055/s-0028-1083478; **Reg-No.:** S11508SF