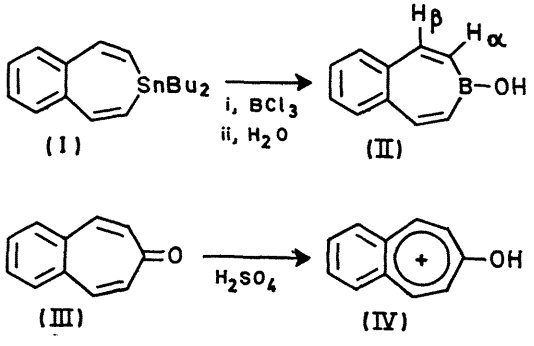
# 3(3*H*)-Benzoborepin-3-ol

By GEORGE AXELRAD and DONALD HALPERN

(*Department of Chemistry, Queens College of the City University of New York, Flushing, New York* 11367)

*Summary* 3(3*H*)-Benzoborepin-3-ol which appears to be aromatic, is synthesised from 1,2-diethynylbenzene.

CONDENSATION of 1,2-diethynylbenzene[1] with di-n-butyltin dihydride[2] gave a polymer. Thermal depolymerization[2,3] gave 1,1-di-n-butyl-3-benzostannepin (I), which was added to a solution of boron trichloride in heptane, then treated with 1 equiv. of water. The resulting air-sensitive 3(3*H*)-benzoborepin-3-ol (II) began to melt at 110°. (Found: C, 76·95;H, 5·9; B, 7·1. Calc. for $C_{10}H_9BO$: C, 77·0; H, 5·8; B, 6·95%); $\nu_{max}$ ($CHCl_3$): 3650, 3012, 1600, 1541, 1447, 1274, 1256, 1189, 992, and 817 $cm^{-1}$; mass spectrum: *m/e* 156(10%), 128(100), 115(10), and 102(13); $\lambda_{max}$ ($C_7H_{16}$): 235 (log $\epsilon$ 4·6), 244 (4·7), 257 (4·7), 268 (4·1), 275 (5·0), 286 (3·5), 307 (2·6), 319 (2·6), and 335 (2·9) nm; n.m.r. spectrum ($CDCl_3$), relative to $Me_4Si$ ($\tau$ 10) $H_\alpha$ $\tau$ 3·32 (d), $H_\beta$ $\tau$1·98 (d), ($J$ = 14 Hz).




The u.v. and n.m.r. spectra of (II) closely resemble those of (III) and (IV)[4] suggesting that it is aromatic.

(*Received, October 26th,* 1970; *Com.* 1860.)

[1] O. M. Behr, G. Eglinton, A. R. Galbraith, and R. A. Raphael, *J. Chem. Soc.*, 1960, 3614.
[2] D. Sheehan, Ph.D. thesis, Yale University, New Haven, Connecticut, 1964.
[3] A. J. Leusink, W. Drenth, J. G. Noltes, and G. J. M. van der Kerk, *Tetrahedron Letters*, 1967, 1263.
[4] E. Kloster-Jensen, N. Tarkoy, A. Eschenmoser, and E. Heilbronner, *Helv. Chim. Acta.*, 1960, **43**, 1221.