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(*E*)-1-Bromo-2-methyl-4-phenyl-1-butene

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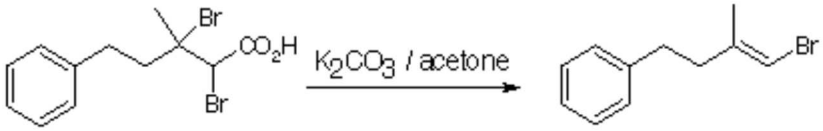

The general part of the experimental section [1] has been presented elsewhere. 2(*R,S*),3(*S,R*)-2,3-Dibromo-3-methyl-5-phenyl-2-pentanoic acid (0.99 g, 3 mmol) was refluxed with potassium carbonate (2.0 g, 14 mmol) in acetone (40 ml) in the dark for 3 hours. The solvent was removed by distillation and the residue was partitioned between ether (100 ml) and water (100 ml). The ether extract was washed with brine (30 ml), dried (Na_2SO_4), filtered and evaporated under reduced pressure. The crude product was purified by flash chromatography (light petroleum) and then Kugelrohr distilled to yield (*E*)-1-bromo-2-methyl-4-phenyl-1-butene (0.43 g, 68%) as a colourless oil.

B.p. 128°/2.5 mmHg

UV (ethanol) 259 (248), 254 (232) nm.

IR ($CDCl_3$) 3027, 2941, 1632, 1496, 1454(s), 1039, 747 cm^{-1}.

^{1}H-NMR (400 MHz, $CDCl_3$) 1.84 (3H, d, *J* 1.5 Hz, CH_3), 2.40 (2H, dt, *J* 1.1, 7.8 Hz, CH_2), 2.74 (2H, bt, *J* 7.8 Hz, CH_2), 5.90 (1H, m, =CH), 7.12-7.34 (5H, m, ArH). Stereochemistry confirmed by n.O.e. difference spectroscopy. Irradiation at 1.84 produced no n.O.e. at 5.90 (1% at 2.74). Irradiation at 5.90 produced no n.O.e. at 1.84 (3% at 2.74, 3% at 2.40 and -21% at 7.16).

^{13}C-NMR (15 MHz, $CDCl_3$) 19.22 (CH_3), 34.22, 40.13 (CH_2), 101.9 (=CH), 126.0, 128.2 128.4 (ArCH), 141.0 (quat, C1' or C2), 141.2 (quat, C1' or C2).

EI-MS 226(M^++2, 5%), 224(M^+, 5), 146(43), 145(78), 144(38), 129(31), 128(28), 92(52), 91(100), 77(33).

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References and Notes

1. Moloney, M.G.; Pinhey, J.T.; Stoermer, M.J. "Vinyl Cation Formation by Decomposition of Vinyl-lead Triacetates. The reactions of Vinylmercury and Vinyltin Compounds with Lead Tetraacetate." *J. Chem. Soc. Perkin Trans. 1* **1990**, *10*, 2645.

Sample Availability: No sample available.