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(s)-2,2'-Bis[5-(*p*-phenyloxyl)-10,15,20-triphenylporphyrin-methyl]-1,1'-binaphthyl

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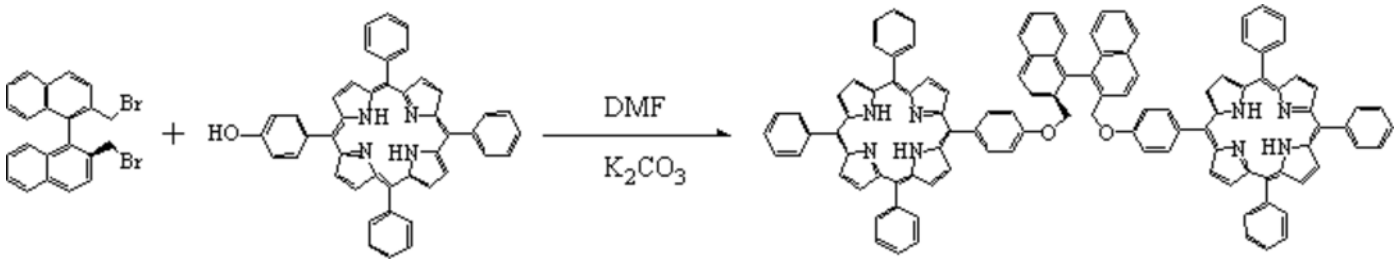

(s)-2,2'-Bis[Bromomethyl]-1,1'-binaphthyl was prepared *via* the bromination of (s)-2,2'-dimethyl-1,1'-binaphthyl[1] by N-bromosuccinimide (NBS) in CCl_4 with benzoyl peroxide as initiator (yield: 45.0%). The mixture of 2,2'-Bis[bromomethyl]-1,1'-binaphthyl (0.10g, 0.23 mmol), 5-(*p*-hydroxy)phenyl-10,15,20-triphenylporphyrin (0.73g, 1.16 mmol) and anhydrous potassium carbonate (1g) was stirred in dry DMF (30 mL) for 24 hours at room temperature. Reaction mixture was then poured into saturated NaCl aqueous solution (100 mL). The precipitate was filtered and washed with water, dried in vacuum. The product was purified by chromatography on silica gel with dichloromethane as an eluent. (s)-2,2'-Bis[5-(*p*-phenoxyl)-10,15,20-triphenylporphyrin-methyl]- 1,1'-binaphthyl was obtained as a purple solid (0.29 g, yield: 81.9%).

^{1}H-NMR (300 MHz, in $CDCl_3$) d(ppm): -2.85 (s, 4H, pyrrole NH), 5.15-5.31 (m, 4H, CH_2), 7.16-8.23 (several m, 50 H, Ar-H), 8.70-8.81 (m, 16 H, pyrrole b-H).

IR(KBr) ν_{max} (cm^{-1}): 3312.9 (w), 3052.6 (w), 1597.8 (m), 1557.8 (w), 1505.5 (m), 1471.5 (m), 1440.4 (w), 1400.2 (w), 1349.6 (m), 1287.7 (m), 1223.0 (s), 1174.2 (m), 1108.1 (w), 1072.3 (w), 1001.3 (m), 980.6 (m), 965.8 (s), 845.1 (w), 799.6 (s), 729.6 (s), 700.9 (s), 520.5 (w).

UV-Vis (in CH_2Cl_2) λ_{max} (nm): 418.1, 515.0, 552.0, 591.1, 647.0.

CD (in CH_2Cl_2) De (l, nm): -5.0 (285.2), -5.0 (395.3), +7.1 (418.2).

FAB-MS *m/z*: 1539.9 $[M+H]^+$.

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Reference

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