〔J. Am. Chem. Soc., **114**, 6269-6270 (1992)〕 [Lab. of Pharm. Synthetic Chemistry]

A Stable Crystalline (Alkylperoxy) iodinane : 1-(tert-Butylperoxy)-1,2-benziodoxol-3(1H)-one.

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Synthesis and characterization of the first stable crystalline (alkylperoxy) iodinane were reported. Treatment of 1-hydroxy-1,2-benziodoxol-3(1H)-one with tert-butylhydroperoxide in chloroform at room temperature in the presence of BF_3-Et_2O as a Lewis acid gave in high yield crystalline 1-(tert-butylperoxy)-1,2-benziodoxol-3(1H)-one, structure of which was established by a single-crystal X-ray analysis. The versatility of the peroxyiodinane as an oxidizing reagent was demonstrated in sulfide-oxidation, oxidative deprotection of 2,2-disubstituted 1,3-dithiane, selenide-oxidation, phosphine-oxidation, benzylic oxidation of 1,2,3,4-tetrahydronaphthalene, and 1,2-dehydrogenation of 1,2,3,4-tetrahydroisoquinoline.

〔Chem. Lett., **1992**, 1209-1212〕 [Lab. of Pharm. Synthetic Chemistry]

Total Synthesis of (+)-Asperlin Starting with (S, S)-Tartaric Acid.

YUKIO MASAKI*, TOSHIHIRO IMAEDA, HIROHISA ODA,
AKICHIKA ITOH, MOTOO SHIRO

Natural (+)-asperlin was synthesized stereoselectively starting with (S, S)-tartaric acid by way of the 6,8-dioxabicyclo[3.2.1]octane skeleton.

〔Tetrahedron Lett., **33**, 5089-5092 (1992)〕 [Lab. of Pharm. Synthetic Chemistry]

Short-Step Synthesis of Chiral C_2-Symmetric 2,3,4,5-Tetrasubstituted Pyrrolidines from D-Mannitol and Their Use as Chiral Ligands in the Reaction of Diethylzinc and Benzaldehyde.

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AKICHIKA ITOH, FANG XU

(3R, 4R)-Bis(hydroxy)-(2S, 5S)-bis (hydroxymethyl)-pyrrolidine and related chiral C_2-symmetric pyrrolidines including D_2-symmetric 1,2-bis (1-pyrrolidino) ethanes and N-hydroxyethylpyrrolidines were synthesized highly practically from D-mannitol and a high chiral induction of 82 % ee was observed in investigation of efficiency of these amines as chiral catalyst ligands in the addition reaction of diethylzinc and benzaldehyde.