

[J. Am. Chem. Soc., **114**, 6269-6270 (1992)]

[Lab. of Pharm. Synthetic Chemistry]

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

MASAHITO OCHIAI\*, TAKAO ITOH, YUKIO MASAKI, MOTOO SHIRO

Synthesis and characterization of the first stable crystalline (alkylperoxy) iodine were reported. Treatment of 1-hydroxy-1,2-benziodoxol-3(1H)-one with tert-butylhydroperoxide in chloroform at room temperature in the presence of  $\text{BF}_3 \cdot \text{Et}_2\text{O}$  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 peroxyiodine 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]

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**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)]

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**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.**YUKIO MASAKI\*, HIROHISA ODA, KEN-ICHI KAZUTA, AKIRA USUI,  
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.