(Chem. Lett., 1989, 659 (1989))

p-Anisyloxymethyl Group, a Novel Oxidatively Removable Acetal Type OH-Protecting Group.

Yukio Masaki,* Ikuhiro Iwata, Isao Mukai, Hirohisa Oda, Hiromu Nagashima

Protection of various types of alcohols with p-anisyloxymethyl (p-AOM) chloride gave the corresponding p-AOM ethers which were deprotected with ceric ammonium nitrate efficiently. Chemoselecsive removal either of p-AOM group or of tetrahydropyranyl group is also reported.

(Tetrahedron Lett., 30, 6395 (1989))

Enantiospecific Synthesis of Optically Active Natural (+)-Conhydrine from (S, S)-Tartaric Acid.

Yukio Masaki,* Toshihiro Imaeda, Kinnosuke Nagata, Hirohisa Oda, Akichika Ito

The first enantiospecific synthesis of (+)-conhydrine, one of the poisonous alkaloids of the hemlock was achieved via partial ring opening of 6,8-dioxabicyclo(3.2.1) octane skeleton prepared from (S,S)-tartaric acid.

(Tetrahedron Lett., 30, 6701 (1989))

Synthesis of Iodo(III) Enol Lactones via Iodine(III)-Induced Lactonization of Alkynoic Acids. Structurally Potential Serine Protease Inactivators.

Masahito Ochiai,* Yoshikazu Takaoka, Yukio Masaki, Minako Inenaga, Yoshimitsu Nagao

Iodine(III)-induced lactonization of 4- and 5-alkynoic acids utilizing a combination of iodosylbenzene and BF₈-Et₂O affords cyclic β -acyloxyvinyliodonium tetrafluoroborates, structurally potential serine protease inactivators. The lactonization proceeds stereoselectively in an exo manner to give five- and six-membered exocyclic enol lactones. The reaction involves an initial activation of iodosylbenzene by the depolymerization which leads to the formation of acyloxy(hydroxy)iodobenzene. The formation of acyloxy(hydroxy)iodobenzene makes the subsequent attack of trivalent iodine toward a carbon-carbon triple bond a facile intramolecular process.