

[Synlett, 529-531 (2001)]

[Lab. of Pharm. Synthetic Chemistry]

1,6-Asymmetric Induction during the Conjugate Addition of Arylcopper Reagents to Chiral Sulfinyl-substituted Pyrrolyl α, β -Unsaturated Enones.

Yoshitsugu ARAI,* Kimio UEDA, Jianhua XIE, and Yukio MASAKI

Remote (1,6-) asymmetric induction in the conjugate addition of arylcopper reagents, derived from aryl Grignard reagents and copper(I)iodide, to chiral sulfinyl pyrrolyl α, β -unsaturated enones has been achieved. The conjugate addition of the (*E*)-cinnamoyl derivative with aryl copper reagents proceeded smoothly to give the 1,4-adducts with high diastereoselectivities in high yields.

[Chem. Lett., 686-687 (2001)]

[Lab. of Pharm. Synthetic Chemistry]

New Synthetic Method of Benzaldehydes and α, β -Unsaturated Aldehydes with I_2 under Photoirradiation.

Akichika ITOH,* Tomohiro KODAMA, and Yukio MASAKI

Benzylic alcohols and allylic alcohols were found to be oxidized to the corresponding benzaldehydes and α, β -unsaturated aldehydes easily in the presence of I_2 under photoirradiation.

[Synlett, 1311-1313 (2001)]

[Lab. of Pharm. Synthetic Chemistry]

Novel Polymer Effect in Cleavage Reaction of Acetals and Silyl Ethers in Aqueous Media Catalyzed by a Polymer-Supported Dicyanoketene Acetal.

Yukio MASAKI,* Tomoyasu YAMADA, and Nobuyuki TANAKA

Deprotecting reactions of acetals including acetonides, ethylene acetals, and THP ethers of alcohols, and an aldehyde, and ketones, and silyl ethers of primary and secondary alcohols were investigated using dicyanoketene acetals (DCKA) and a polymer-supported DCKA as a π -acid promoter in aqueous acetonitrile and a single aqueous medium. In all reactions catalytic activity of the polymer-supported DCKA was found to be much higher than that of the molecular DCKAs and an excellent polymer effect was observed. Particularly in the deacetalization reactions in water, difference of catalytic efficiency between the polymer-supported DCKA and the molecular DCKAs was remarkable.

[Org. Lett., 3, 2653-2656 (2001)]

[Lab. of Pharm. Synthetic Chemistry]

Oxidative Transformation of Arylmethyl Bromides and Alcohols with a Combination of Mesoporous Silica FSM-16 and Alkali Iodides under Photoirradiation.

Akichika ITOH,* Tomohiro KODAMA, Shinji INAGAKI, and Yukio MASAKI

A mesoporous silica FSM-16 was found to be a selective and recyclable promoter for the oxidative dehalogenation of arylmethyl bromides to provide the corresponding alcohols, and the oxidation of arylmethyl alcohols to provide the corresponding aldehydes with a combination of alkali iodides and solvents under photoirradiation conditions.