[*Chem. Lett.*, 55–56 (1997)] [Lab. of Pharm. Synthetic Chemistry]

Mild Esterification and Transesterification of Carboxylic Acids Catalyzed by Tetracyanoethylene and Dicyanoketene Dimethyl Acetal

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A π-acid tetracyanoethylene (TCNE) and its derivative dicyanoketene dimethyl acetal (DCKDMA) were found to catalyze esterification of lauric acid with various types of alcohols. This method was successfully applied to methyl esterification of a variety of carboxylic acids including aromatic, α,β-unsaturated, α–hydroxy, and *N*-Cbz and *N*-Boc-protected α–amino acids without racemization at the range from room temperature to 60 ℃. TCNE was also found to operate as a catalyst in transesterification of methyl laurate.

[*Synlett*, 1450–1452 (1997)] [Lab. of Pharm. Synthetic Chemistry]

Synthesis and Application of New Phenyl-functionalized Zeolites to Protection Against Radical Brominaion at the Benzylic Position

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New zeolites functionalized with phenyl group have been synthesized from phenyltriethoxysilane and/or tetraethylorthosilicate with dodecylamine as a template at room temperature. These zeolites have proved to have an ability to protect the benzylic position against radical bromination. 4-Chloromethylstyrene was brominated at the double bond selectively and the benzylic position was intact under irradiation with visible light in the presence of phenyl-functionalized zeolites, although without the zeolite, the both sites were brominated.

[*Chem. Lett.*, 145–146 (1997)] [Lab. of Pharm. Synthetic Chemistry]

Recoverable Chiral Sulfoxide: Asymmetric Diels–Alder Reaction Using Optically Active 1-(2-*p*-Tolylsulfinyl)pyrrolyl α,β-Unsaturated Ketones as a Dienophile

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The Diels–Alder reaction of chiral cinnamoyl- and crotonyl (2-*p*-tolylsulfinyl)pyrrole with cyclopentadiene in the presence of $AlCl_3$ or $Yb(OTf)_3$ proceeded smoothly to give the corresponding *endo* adducts in excellent yield with high diastereoselectivity, ranging from 92 to 99% d.e. The chiral auxiliary, 2-pyrrolesulfoxide was efficiently recovered after alcoholysis of the adduct without loss of optical purity.

[*Synlett*, 1459–1461 (1997)] [Lab. of Pharm. Synthetic Chemistry]

Highly Stereoselective Aldol Reaction of Chiral 3-(*p*-Tolylsulfinyl)furfural with Silyl Ketene Acetal Catalyzed by Lanthanide Triflate

Yoshitsugu ARAI,* Tsutomu MASUDA and Yukio MASAKI

The aldol reaction of optically active 3-(*p*-tolylsulfinyl)furfural with silyl ketene acetal catalyzed by a lanthanide triflate proceeded smoothly to give the *syn*- and *anti*-aldol products with high diastereoselectivities in high yield.