

New Addition Reactions. (II)

Addition of Aliphatic Epoxides to Schiff Bases

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Bulletin of the Chemical Society of Japan, **35**, 1216 (1962)

By the stannic chloride-catalyzed addition of aliphatic epoxides to Schiff bases, various oxazolidines have been obtained. For example, the reaction of propylene oxide with N-t-butylazomethine and benzalaniline afforded 3-t-butyl-5-methyl-oxazolidine and 5-methyl-2,3-diphenyloxazolidine in 24% and 30% yields, respectively. The use of boron trifluoride as a catalyst resulted in a lower yield of the desired adduct.

New Addition Reactions. (III)

Addition of Aliphatic Epoxides to Nitriles

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Bulletin of the Chemical Society of Japan, **35**, 1219 (1962)

Upon treatment of aliphatic epoxides with aliphatic or aromatic nitriles in cold concentrated sulfuric acid, the formation of the cyclic adducts, 2,4- and/or 2,5-disubstituted 2-oxazolines, has been observed in low yields (below 20%). The reaction of acetonitrile with propylene oxide gave a mixture of 2,4- and 2,5-dimethyl-2-oxazoline (70:30), while the reaction with epichlorohydrin afforded only 4- (or 5-) chloromethyl-2-methyl-2-oxazoline.

Partial Asymmetric Synthesis in the Conjugate Addition of a Grignard Reagent to an α, β -Unsaturated Ester

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Journal of Organic Chemistry, **27**, 2706 (1962)

In the series of our asymmetric synthesis studies, a successful asymmetric synthesis in a Diels-Alder condensation has recently been reported (H. M. Walborsky, L. Barash and T. C. Davis, *J. Org. Chem.*, **26**, 4778 (1961)) and the resemblance in mechanism suggested the possibility of asymmetric synthesis in the conjugate addition of a Grignard reagent to an α, β -unsaturated ester.

The addition of phenylmagnesium bromide to (-)-menthyl crotonate resulted