

[Synlett., 121-122 (1993)]

[Lab. of Pharm. Chemistry]

**A Useful Synthetic Method for  $\alpha$ -Cyano Selenides.**

MITSUHIRO YOSHIMATSU, TATSUYA YOSHIUCHI, HIROSHI SHIMIZU,

MIKIO HORI, TADASHI KATAOKA\*

$\alpha$ -Cyano selenides and  $\alpha$ -cyano selenoacetals were synthesized by the reaction of selenoacetals and seleno ortho esters with trimethylsilyl cyanide in the presence of a Lewis acid ( $\text{SnCl}_4$ ,  $\text{TiCl}_4$ , and  $\text{SbCl}_5$ ) in high yields, respectively.  $\alpha$ -Cyano selenoacetals were very stable toward various Lewis acids at room temperature.

[Chem. Lett., 1491-1494 (1993)]

[Lab. of Pharm. Chemistry]

**1,7-Acetal Carbon Rearrangement via 1,5-Hydride Transfer in an Oxocanyl Carbenium Ion. Conversion of *O*-(5-Hexenyl)-*Se*, *O*-heteroacetals or *O,O*-Acetals into 7-Oxoheptanols or 7-Oxoheptyl Chlorides.**

MITSUHIRO YOSHIMATSU, NORIYUKI HATAE, HIROSHI SHIMIZU, TADASHI KATAOKA\*

Oxacyclooctyl (oxocanyl) carbenium ions generated by treatment of *O*-(5-hexenyl)-*Se*, *O*-heteroacetals with  $\text{SnCl}_4$  underwent intramolecular 1,5-hydride transfer, and the  $\alpha$ -oxy carbenium ions newly formed were hydrolyzed to give the 7-oxoheptanols or 7-oxoheptyl chlorides in good yields. Various *O*-(5-hexenyl)-*Se*, *O*-heteroacetals or *O,O*-acetals were converted into 7-oxoheptanols or 7-oxoheptyl chlorides.

[Chem. Pharm. Bull., 41, 1160-1162 (1993)]

[Lab. of Pharm. Chemistry]

**Generation and Alkylation of  $\alpha$ -Lithio-*Se*, *O*-heteroacetals, and Stereoselective Cyclization of Olefinic *Se*, *O*-Heteroacetals.**

MITSUHIRO YOSHIMATSU, MICHIO FUJIMOTO, HIROSHI SHIMIZU,

MIKIO HORI, TADASHI KATAOKA\*

Generation of  $\alpha$ -lithio-*Se*, *O*-heteroacetals was accomplished by direct deprotonation of *O*-methoxyethylselenoacetals with lithium 2,2,6,6-tetramethylpiperidide. Alkylation of the  $\alpha$ -lithioheteroacetals smoothly proceeded. Olefinic *Se*, *O*-heteroacetals were cyclized via  $\alpha$ -seleno carbenium ions generated by selective C-O bond cleavage with titanium tetrachloride to provide the cyclohexane derivatives.