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[Lab. of Pharm. Chemistry]

**Meyer-Schuster Rearrangement of  $\gamma$ -Sulfur-substituted Propargyl Alcohols: A Convenient Synthesis of  $\alpha, \beta$ -Unsaturated Thioesters**

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$\gamma$ -Sulfur-substituted propargyl alcohols reacted with polyphosphoric acid trimethylsilyl ester (PPSE) to give the  $\alpha, \beta$ -unsaturated thioesters in good yields. However the reactions of 3,3-dibutyl-1-(phenylthio)propargyl alcohol and 1-(phenylthio)ethynyl-1-cycloalkanols with PPSE gave the enyne sulfides exclusively. The mechanism for formation of the  $\alpha, \beta$ -unsaturated thioesters and the enyne sulfides is discussed.

[Tetrahedron Lett., **36**, 5559 - 5562 (1995)]

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**Ring Transformation of 1,2-Thiazetidine 1,1-Dioxides with Lewis Acids: Formation of *trans*-1,2,3-Oxathiazolidine 2-Oxides and *cis*-Aziridines**

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Treatment of 1,2-thiazetidine 1,1-dioxides ( $\beta$ -sultams) bearing a poor migratory substituent at C-3 with Lewis acids such as  $\text{EtAlCl}_2$  and  $\text{AlCl}_3$  provided *trans*-1,2,3-oxathiazolidine 2-oxides and/or *cis*-aziridines via the C-S bond cleavage and recyclization. *cis*-Aziridines and/or ketones were provided from the reactions of 3-aryl- $\beta$ -sultams with  $\text{SnCl}_4$ , depending on the migratory aptitude of the C-3 aryl substituent and configuration of C-3 and C-4 groups. Hydrolysis of (*2R*\*,*4S*\*,*5S*\*)-3-cyclohexyl-5-phenyl-4-(3-pyridyl)-1,2,3-oxathiazolidine 2-oxide with 1N HCl-THF provided (*1S*\*,*2S*\*)-2-aminoethanol derivative in 84% yield together with a small amount of (*1R*\*,*2S*\*)-isomer.

[Heteroatom Chemistry, **6**, 259 - 264 (1995)]

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**A Useful Synthesis of  $\alpha, \beta$ -Bis(methylseleno)alkanes and  $\alpha, \delta$ -Bis(methylseleno)alk-2-enes by the Reactions of Alkenes and 1,3-Dienes with  $\text{B}(\text{SeMe})_3$ -Lewis Acid**

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Reactions of tris(methylseleno)borane- $\text{SnCl}_4$  with alkenes gave  $\alpha, \beta$ -bis(methylseleno)alkanes stereospecifically, and reactions with 1,3-dienes afforded  $\alpha, \delta$ -bis(methylseleno)alk-2-enes regioselectively. 1,4-Methylseleno groups of 1,4-bis(methylseleno)alk-2-enes could be changed to other functional groups. The methylation reaction of 1,4-bis(methylseleno)-2,3-diphenylbut-2-ene with various bases and MeI gave 2,3-diphenylbut-1,3-diene, and the reaction with NBS afforded 1,4-dibromo-2,3-diphenylbut-2-ene.