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**The C-O Bond Cleavage of Cyclic Ethers with Tris(phenylseleno)-borane-Lewis Acid.**

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Tris (phenylseleno) borane (**1**) has a hard boron element and a soft selenium element, and therefore it was expected that **1** cleaves the C-O bond. Tetrahydrofuran and tetrahydropyran were cleaved with **1** in the presence of zinc iodide to produce the  $\delta$ - and  $\epsilon$ -phenylseleno alcohols. The C(5)-O bond of 2-methyltetrahydrofuran was regioselectively cleaved with **1** and a catalytic amount of tin(IV) chloride to afford the  $\delta$ -phenylseleno alcohol. The selenoborane (**1**) was a weak reagent for the C-O bond-cleavage and cleaved cyclic ethers selectively.

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**Synthesis and Reactions of a Stable 2-Selenanaphthalene, 1-Cyano-2-methyl-2-selenanaphthalene.**

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A stable 2-selenanaphthalene, 1-cyano-2-methyl-2-selenanaphthalene (**1**) was prepared by deprotonation of 1-cyano-2-methylisoselechromenium salt with triethylamine in ethanol. The selenanaphthalene **1** was air-sensitive and rearranged thermally in aprotic solvents to form 1-cyano-1-methylisoselechromene in good yield. Reaction of **1** with dimethyl acetylenedicarboxylate in benzene afforded a benzocycloheptene derivative **2**, whereas the same reaction in sulfolane afforded a naphthalene derivative besides **2**. In contrast, the reaction with methyl propiolate gave a 2:1 adduct in addition to the rearranged product and isoselechromene.

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**Cyclic Selenonium exo-Ylides (3,4-Dihydro-1H-2-benzoselenin-2-io)-methanides; Syntheses and Reactions.**

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Stable cyclic selenonium exo-ylides (3,4-dihydro-1H-2-benzoselenin-2-io)methanides (**1a-e**) have been synthesized by reactions of 3,4-dihydro-1H-2-benzoselenin 2,2-dichloride or *N*-(3,4-dihydro-1H-2-benzoselenin-2-io) toluene-*p*-sulphonamide and active methylene compounds. The reactions of ylides having acetyl group(s) (**1a,b**) with dimethyl acetylenedicarboxylate afforded the furan derivatives and the dihydrobenzoselenin, while reactions of the ylides having no acetyl group (**1c-e**) afforded the benzoselenonines. The diacetylmethanide (**1a**) when heated gave the benzoselenepine, while the bis(ethoxycarbonyl) methanide (**1c**) afforded the styrene derivative and a tetrasubstituted ethylene.