Chemistry of $C_6F_5SeLi$ and $C_6F_5SeCl$: Precursors to New Pentafluorophenylselenium(II) Compounds

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Pentafluorobenzeneselenenyl chloride, $C_6F_5SeCl$, was reacted with various nitrogen and chalcogen substituted trimethylsilyl nucleophiles. The products, $C_6F_5SeSCN$, $C_6F_5SeNSO$, $(C_6F_5Se)_2NMe$, $C_6F_5SeN(Me)SiMe_3$, $(C_6F_5Se)_2S$ and $(C_6F_5Se)_2Se$, were characterized by spectroscopic methods. The reaction of $C_6F_5SeLi$ with Me$_3$XHal compounds gave the products $C_6F_5SeXMe_3$ ($X = Si, Ge, Sn, Pb$). The molecular structure of $(C_6F_5Se)_2S$ has been determined by X-ray diffraction.

Key words: Pentafluorobenzeneselenenyl Pseudohalides, Pentafluorophenylselenolate, Multinuclear NMR Spectroscopy