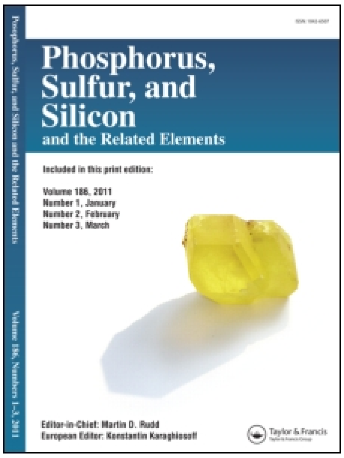

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Synthesis of the First Stable Pentacoordinate Selenaphosphirane

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SYNTHESIS OF THE FIRST STABLE PENTACOORDINATE SELENAPHOSPHIRANE

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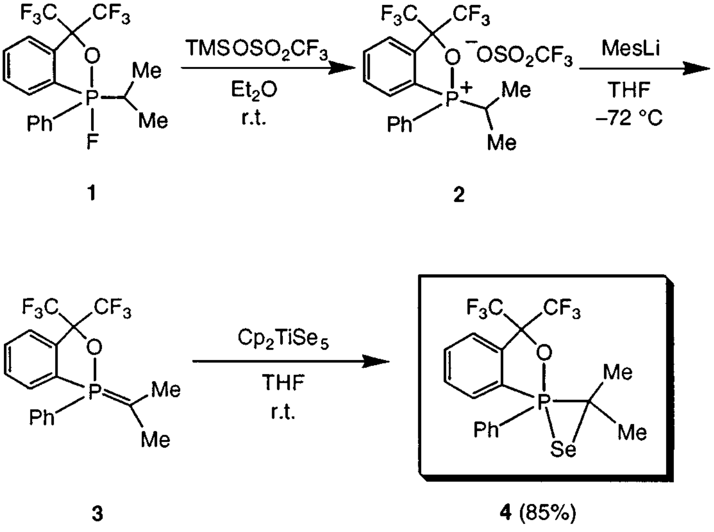
Although heteracyclopropanes containing a highly coordinate phosphorus atom are expected to have interesting structures and reactivities, only few examples have been reported so far. Here we report the synthesis of the first stable pentacoordinate selenaphosphirane **4** by taking advantage of the stabilizing effects of the Martin ligand. Alkylidenephosphorane **3**, which was prepared by the reaction of fluorophosphorane **1** with trimethylsilyl trifluoromethanesulfonate followed by



SCHEME 1

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deprotonation of the resulting phosphonium salt **2** with 1.2 equiv of 2,4,6-tirmethylphenyllithium (MesLi), was allowed to react with Cp_2TiSe_5 in THF at room temperature to give the pentacoordinate selenaphosphirane **4**. The pentacoordinate structure of **4** was determined by X-ray crystallographic analysis.