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## Phosphorus, Sulfur, and Silicon and the Related Elements

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## Ring Closing Metathesis Reactions on Phosphonamide and Phosphonate Templates

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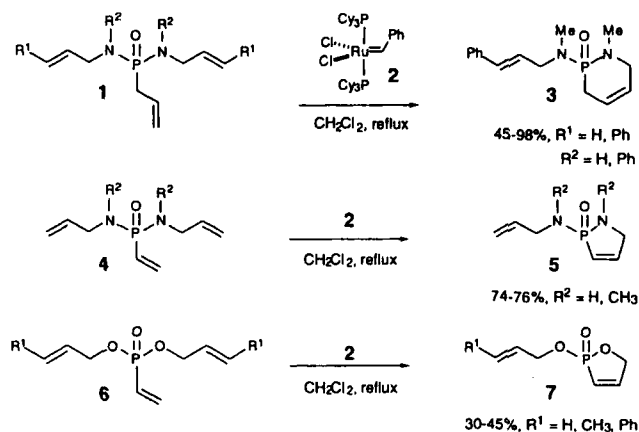
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## Ring Closing Metathesis Reactions on Phosphonamide and Phosphonate Templates

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Phosphorus containing organic compounds have shown enormous potential in the development of novel pharmaceutical and agricultural agents [1,2]. One attractive route into the formation of complex phosphonamides and phosphonates is via the RCM reaction of acyclic substrates such as **1**, **4**, and **6**. Recently we published the first example of a RCM reaction on a phosphonate template [4]. Although the RCM reaction has emerged as a powerful tool in the synthesis of complex ring systems [3], only one other example exists in the literature of a RCM reaction on phosphines using a tungsten carbene catalyst [5]. As part of our program aimed at developing organometallic approaches to diverse phosphorus containing compounds, we herein report the first examples of RCM reactions on phosphonamide templates such as **1** and **4** using the ruthenium catalyst **2**. In addition, we report new examples of RCM reactions on phosphonate templates such as **6**.



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