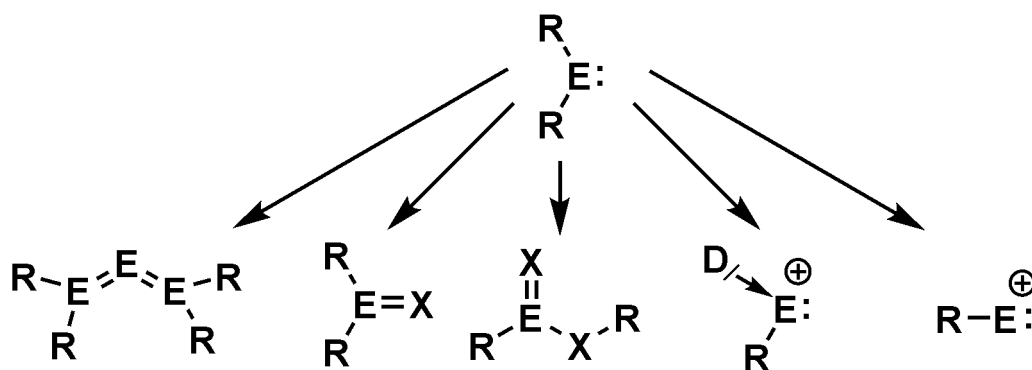


Syntheses and Properties of Group 14 Imidazoliumylidenes and Their Synthetic Potential for Low Valent Organo Element Compounds

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During the last years several new classes of compounds in group 14 chemistry became accessible by starting from low valent organo element species in oxidation state II. This embrace compounds with the group 14 element in oxidation state 0 like allenes, which became approachable by investigations of silylene chemistry.^[1] Additionally, the field of heavy ketones of group 14 elements arose from the study of the reactions of silylenes with chalcogenes.^[1-3] Apart from that group 14 ylidenes offer another interesting pathway to monosubstituted cations like silyl- or germyliumylidenes.^[4, 5]



Here we report on the systematic investigation in the chemistry of imidazoliumylidenes of group 14 elements (Silicon, Germanium and Tin). Synthetic pathways were evolved to approach the imidazoliumylidenes in high yields and multi gram scale. Furthermore first results of our investigation towards donor stabilized monosubstituted cations are presented.

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