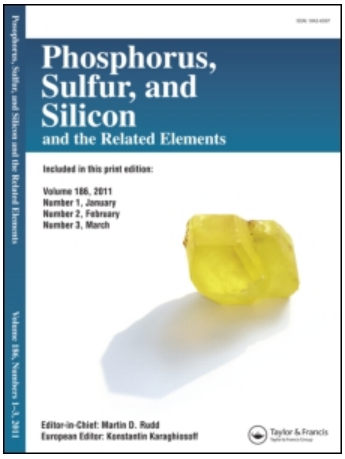

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From Primary Silylphosphanes and Arsanes to Novel Group 13-15 Clusters

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From Primary Silylphosphanes and Arsanes to Novel Group 13–15 Clusters

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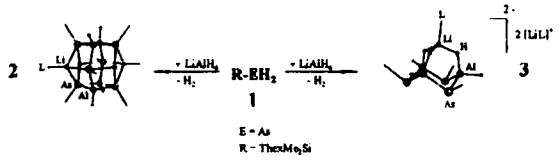
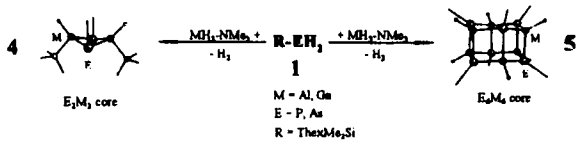
The reaction of the primary silylphosphanes and -arsanes 1 with [$LiAlH_4$] leads, under evolution of H_2 and depending on the solvent, to the different unusual clusters 2 and 3. Compound 2 has a rhombododecahedral skeleton. Surprisingly, the same reaction of the starting materials in DME instead of Et_2O as solvent furnishes the triple ion pair 3.



The metathesis reaction of the primary silylarsanes 1 with the adducts of $AlH_3(NMe_3)$/ $GaH_3(NMe_3)$ gives, under liberation of H_2, the heterocycles 4. These compounds are thermally labile and rearrange to the corresponding clusters 5.



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