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# Reprogramming the Reactivity of Carbenium and Silylium Ions

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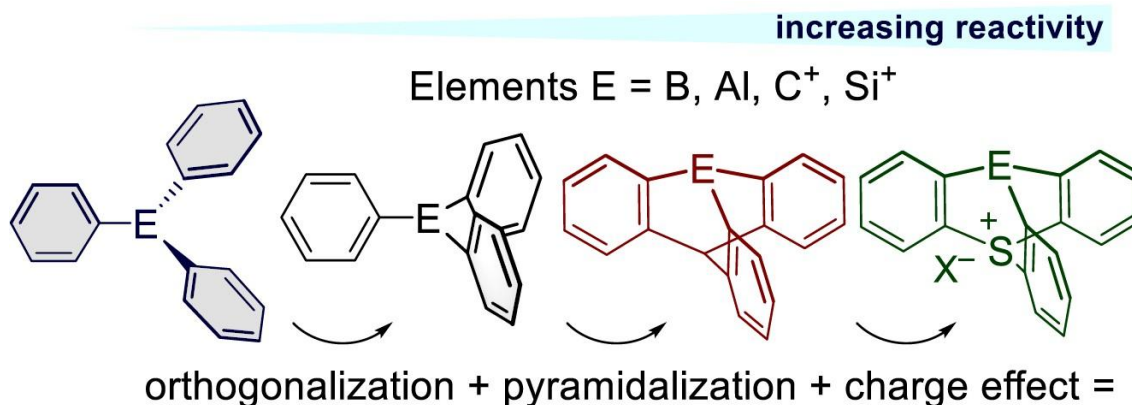
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## ABSTRACT

Lewis acids are playing a significant role in chemistry. These electron deficient species are finding numerous applications in organic synthesis, material sciences, catalysis and polymer chemistry.<sup>[1]</sup> A new method for increasing their reactivity recently developed in our group is the following. Starting from a classical triaryl derivative, the orthogonalization of the aromatic groups, the pyramidalization of the central atom and introduction of a positively charged atom near to the central Lewis acidic centre led to a spectacular enhancement of Lewis acidity.<sup>[2]</sup>

In this poster, the synthesis of the precursors of the triptycenylium carbenium and silylium ions will be presented as well as the first attempts for the *in-situ* generation of these cationic electrophiles from the group XIV series.<sup>[3]</sup> Based on that activation of small molecules, the triptycenylium carbeniums platform could act as Lewis superacidic catalysts which can bind small molecules, activate and release them during the catalytic cycle.<sup>[4]</sup>



## Reprogramming the reactivity of main-group compounds

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