OP-10

1, 3-H-SHIFT – A NEW ROUTE TO STATIC BICYCLOBUTONIUM IONS FURTHER ANSWERS TO THE CONUNDRUM OF THE STRUCTURE OF $C_4H_7^+$ CATIONS

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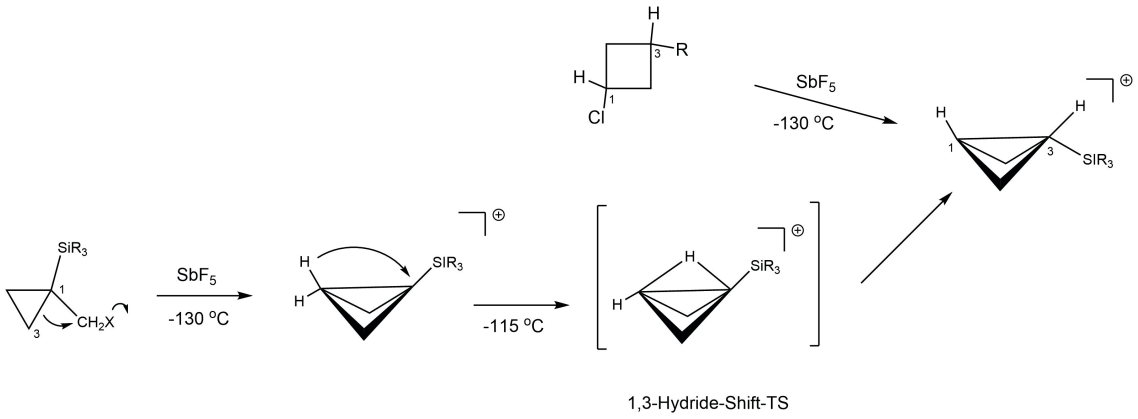
The cyclobutyl/cyclopropylmethyl cation system $(C_4H_7)^+$ has most likely been the focus of more studies than any other carbocation system except the 2-norbornyl cation. Over a timespan of more than half a century practically all the tools of experimental physical organic chemistry and numerous computational methods have been utilized to shed light on the structure and dynamics of these type of carbocations. The current consensus for the parent $C_4H_7^+$ cation seems to be that two isomeric structures each threefold degenerate and of nearly equal stability equilibrate on a very flat potential energy surface. The fast interconversion prevented a straightforward structural assignment in solution.

Recently we have shown that **static** substituted bicyclobutonium cations can be generated using appropriate silyl-substituted cyclobutyl precursors.

We now describe a new pathway to generate static 3-silyl substituted bicyclobutonium cations via 1,3-Hydride shift.



REFERENCE

[1] H.-U. Siehl, *Adv. Phys. Org. Chem.* **2018**, *52*, 1–47.