

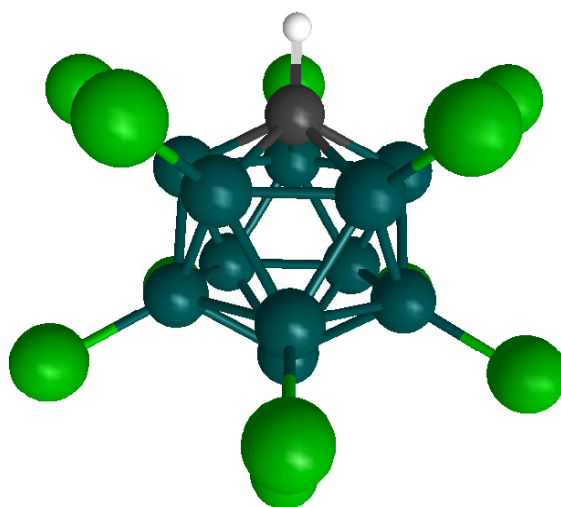
**INVESTIGATING THE WEAK TO EVALUATE THE STRONG, AN FTMS STUDY
INTO THE BASICITY OF CARBORANE ANIONS TO DETERMINE THE ACIDITY
OF THE CORRESPONDING SUPER ACIDS**

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Recent computational and experimental results suggest that acids resulting from the protonation of carborane anions are the strongest isolable acids known.¹ It has been proposed that the high intrinsic acidity of this new class of superacids results from the remarkable stability of the carborane anion. In efforts to evaluate the gas phase properties of these acids, the reactivity of the anion was examined utilizing ESI-FTMS, and attempts to bracket the electron affinity and proton affinities will be discussed. Though a wide ranging gas phase acidity scale is well developed, the proton affinity of the carborane anions are predicted to reside outside of the known scale.² To overcome this issue, the reactions of positive ion acids with these anions will be discussed. The results of these experiments will shed insight into the “strong but gentle” nature of these anions.



References

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2. Koppel, A. I.; *et. al.* *J. Am. Chem. Soc.* **1994**, *116*, 3047-3057.