

## Answer on Question #76562 – Chemistry – Inorganic Chemistry

Which metal are called class 'a' elements or 'hard acid' and why?

### **Solution:**

Class 'A' elements are metals that form hard acids. Metal ions with the highest affinities for hard bases are hard acids. Hard acids are usually cations of electropositive metals; consequently, they are relatively nonpolarizable and have higher charge-to-radius ratios. Hard acids prefer to bind to hard bases.

Examples of hard acids:  $H^+$ ,  $Li^+$ ,  $Na^+$ ,  $K^+$ ,  $Be^{2+}$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $VO^{2+}$ ,  $Al^{3+}$ ,  $Sc^{3+}$ ,  $Cr^{3+}$ ,  $Ti^{4+}$

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