Selective Strong Bond Cleavage Catalyzed by Transition Metal Complexes

Hiroshi Nakazawa

Department of Chemistry, Graduate School of Science, Osaka City University

nakazawa@sci.osaka-cu.ac.jp

A short summary

The selective cleavage of a strong bond with a weak bond remaining intact is generally quite difficult. The use of a transition metal complex is one of the most appropriate approaches to achieve selective strong bond cleavage. I will express that an iron or a molybdenum complex can cleave C-CN bonds in organonitriles and N-CN bonds in cyanamides, and O-CN bond in cyanates, even though these C-CN, N-CN and O-CN bonds are strong and hence difficult to cleave. The reaction mechanism will be discussed.