ARTIFICIAL RECEPTORS FOR BINDING OF OXOANIONS

Md. Alamgir Hossain¹ Musabbir A. Saeed¹, John S. Mendy¹, Avijit Pramanik¹, Douglas R. Powell³ and Frank R. Fronczek²

¹Department of Chemistry, Jackson State University, Jackson, MS 39212, USA
²Department of Chemistry, Louisiana State University, Baton Rouge, LA 70803, USA
³Department of Chemistry and Biochemistry, University of Oklahoma, Norman, OK 73019, USA

Abstract: The field of anion coordination chemistry emerged in 1968 with the discovery of diazabicyclic compounds, known as katapinands, by Park and Simmons. These compounds were shown to form inclusion complexes with halide anions by hydrogen bonding interactions in acidic solution, which was later confirmed by X-ray structure determination. During the last two decades, this area has been progressed significantly. A variety of synthetic receptors have been reported that show high binding affinity and selectivity for common inorganic anions. In particular, recognition of oxoanions has received significant interests because of their impact on life and environment. In this presentation, several types of artificial receptors and their affinity toward oxoanions will be discussed. (The project described was supported by NSF-CAREER award, CHE-1056927 to MAH).

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