

CBC SEMINAR ANNOUNCEMENT

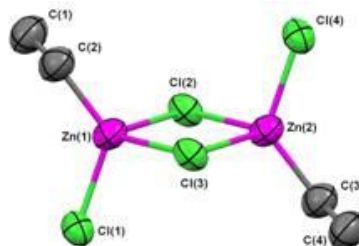
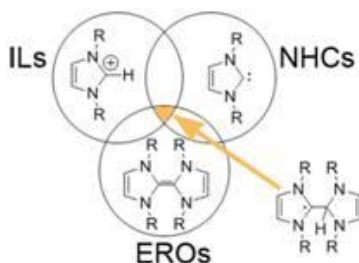


Professor Jason Clyburne
Saint Mary's University

Neutral bases and anionic organometallic complexes in ionic solvents: from discovery science to applications

Ionic liquids (ILs) have attracted attention because of their potential applications in various industrial settings, as well as for their “green properties”, namely negligible vapour pressure and high thermal stability. ILs offer unique opportunities to affect significant changes to the way chemists and industries perform their chemistry, but it is important to recognize that the properties of ILs are variable. Broad generalizations concerning important aspects such as reactivity, stability, and decomposition are tempting, but these features are widely variable. Here we report our studies examining the behaviour of ILs in various industrially relevant conditions. I will examine the volatility and thermal stability of a series of ionic liquids and compare the results to that obtained for polymeric solvents and a deep eutectic. Possible implications will be discussed.

Finally, if time permits I will describe the use of strong C-centered bases in ILs including Grignard reagents, (RMgX), organozinc reagents (R_2Zn), and *N*-heterocyclic carbene (NHC) complexes of metals. Grignard and organozinc reagents are important sources of the formal carbanion $[R]^-$ and find extensive use in organic synthesis. NHCs, both as free carbenes, where they can behave as organocatalysts, and also as essential components of transition metal complexes, have a wide range of reactivity in either stoichiometric or catalytic reactions. I will survey some new chemistry of simple aryl- and alkyl- substituted organometallic species with strong donor ligands in ionic media.



Date:	22nd February 2012 (Wednesday)
Time:	2pm – 3.30pm
Venue:	NTU SPMS CBC Building Level 2, Conference Room
Host:	Asst Professor Dragoslav Vidovic