UniSysCat-Colloquium

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C264
and via Zoom

Frustrated Lewis Pairs: Reactivity across the Periodic Tables

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Over the last 17 years, the concept of frustrated Lewis pairs (FLPs)[1] has emerged as an approach to transition metal-free hydrogenations as well as the activation of a wide range of small molecules. Indeed, the catalytic reductions of a wide variety of organic substrates, as well as the elegance of enantioselective metal-free hydrogenations have been developed. FLPs also react with or capture a wide variety of small molecules and the reactivity of C-H bonds, CO_2,

CO, SO_2, N_2O olefins, and alkynes, diazomethanes, and other N_2-species. In these efforts, a wide range of combinations of Lewis acids and bases have been employed from alkali metal species to inert gas derivatives and applied in both stoichiometric and catalytic processes. In this lecture, we will describe select examples, affirming that the concept of FLPs is a general strategy for reactivity.