

Vendredi 21 juin 2019 à 9h30

“Modern Alchemy: Turning Boron Into Gold”

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Auditorium Fernand Gallais,
Campus CNRS 205
205, route de Narbonne, Toulouse



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Modern Alchemy: Turning Boron Into Gold

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As main group chemistry, in particular boron chemistry, has expanded and developed over the past 20 years, one reagent has risen to prominence as well. Tris(pentafluorophenyl)borane, B(C₆F₅)₃, (commonly known as BCF) has demonstrated extensive applications in a wide variety of chemistry, including borylations, hydrogenations, hydrosilylations, frustrated Lewis pair chemistry, Lewis acid catalysis and more.[1] The high Lewis acidity of B(C₆F₅)₃ is achieved from the electronic effects of its three C₆F₅ rings, rendering it a versatile reagent for a great number of reactions. The talk will show our recent uses of Lewis acidic boranes in small molecule activation and catalysis (Figure 1) and will also focus on our latest advances in novel borane and borocation usage which eclipses that of the stalwart B(C₆F₅)₃. [2-4]

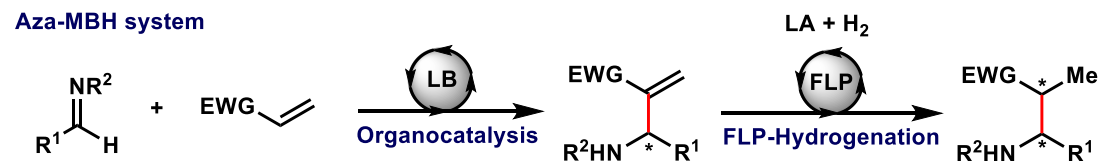


Fig. 1 – Tandem organocatalysis and frustrated Lewis pair hydrogenation.

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[4] I. Khan, M. Manzotti, G. J. Tizzard, S. J. Coles, R. L. Melen, L. C. Morrill, ACS Catalysis, 2017, 7, 7748.