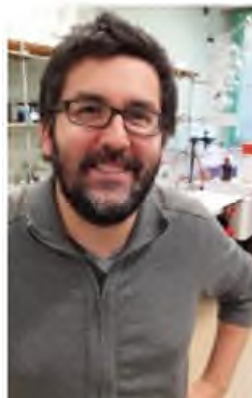


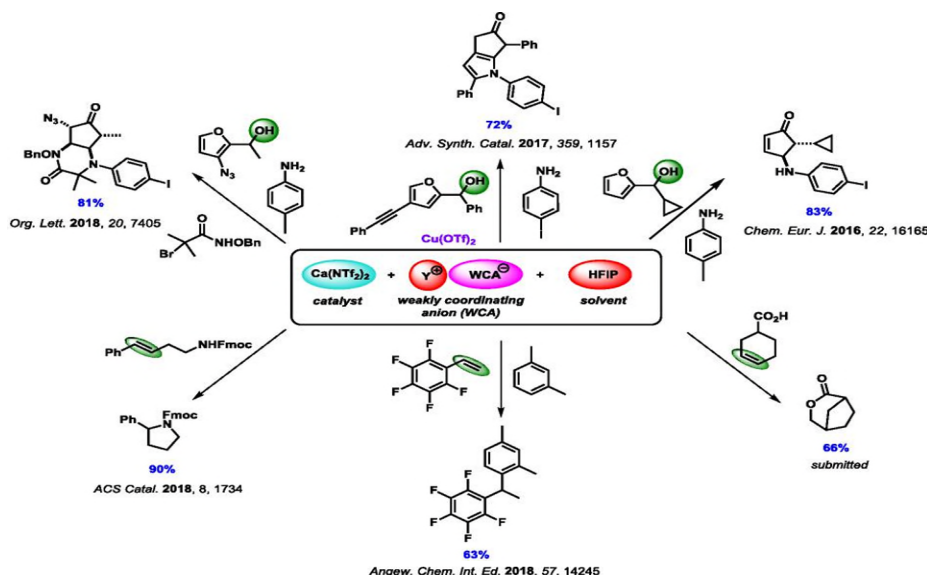
CBC SEMINAR ANNOUNCEMENT



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Hexafluoroisopropanol : A Solvent of Choice for Challenging Transformation

Today, there is a strong demand from the fine chemicals industry to develop procedures based on transition metals-free reactions using readily available starting materials. The main reasons behind this are the availability, cost and toxicity of transition-metals or electrophiles. In that respect, employing simple alcohols and alkenes for C-C bond forming reactions is truly appealing, but it can remain challenging, notably when the substrates are highly deactivated or prone to sequester the catalyst. Recently, we have demonstrated that the acidity of hexafluoroisopropanol (HFIP) could be significantly harnessed by calcium(II) salts in order to activate C-O and C-C bonds, outperforming common Lewis and Brønsted acids in terms of activity and efficiency in several reactions through the coordination of HFIP to calcium and the formation of H-bond clusters. Moreover, due its strong H-bond donor ability, HFIP has the capacity to facilitate the release of Lewis acids trapped by unwanted coordination to the substrate (or the product), allowing the catalytic process to turn over. In particular, the combination Ca^{2+} /HFIP can be a powerful tool to promote electrocyclizations, hydroaminations, hydroarylations and hydroacyloxylation. These reactions proved to be general and compatible with a wider range of substrates than the traditional catalytic systems.



Date: 27th September 2019 (Friday)
Time: 11.00am to 12.30pm
Venue: SPMS Graduate and Research
Conference Room
Host: Assoc Professor Leong Weng Kee/
Hélène Bertrand