CBC SEMINAR ANNOUNCEMENT

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Chiral phosphate in Rh\textsuperscript{+} and Ir\textsuperscript{+}-asymmetric catalysis

Chirality control is a major challenge for synthetic chemists, especially given the importance of optically active drugs. Several methods exist to control the enantioselectivity, such as chirality transfer from a nonracemic substrate, asymmetric organocatalysis or organometallic catalysis. This latter approach is traditionally allowed by the introduction of a chiral ligand on the metal M. In the “chiral counterion strategy”, the information is carried by the counterion of the cationic metal species.1 In most cases, it is a sterically hindered phosphate derived from BINOL, (S)-TRIP, that is used as the vector of the chiral information. In the context of cycloisomerization reactions as well as [2+2+2]-cycloadditions, we will discuss our results on carbon-carbon bond formation using the chiral counterion strategy. Particular attention will be paid to the nature of the catalytic species involved. In those cases, is the phosphate (S)-TRIP a real counter-ion, or an X-type ligand?2

References

Founding’s: ANR SACCAOR ANR-09-BLAN0108; ANR HELCATS ANR-13-JS07-013

Date: 20th December 2018 (Thursday)
Time: 3:00pm – 4:30pm
Venue: SPMS Lecture Theatre 5
Host: Assoc Professor Hélène Bertrand / Assoc Prof Leong Weng Kee