

Manganese N-heterocyclic carbene complexes in catalysis

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In recent years, the development of homogeneous manganese catalysts has attracted great interest due to the natural abundance and nontoxic character of this metal. So far, the majority of the Mn-based catalysts described in the literature are coordination compounds bearing N-, O- and P- ligands; pure organometallic Mn-based catalysts are scarce. We have developed a new family of manganese(I) complexes bearing N-heterocyclic carbene (NHC) ligands that have proven to be particularly effective for catalytic reductive transformations. This seminar will highlight the application of manganese NHC complexes in the reduction of carbonyl groups through hydrosilylation reactions and electrocatalytic processes.



Beatriz ROYO graduated in Chemistry at University of Alcalá (Spain) and received her PhD degree in chemistry from the University of Sussex (UK) in 1993 working with Prof. M. F. Lappert. After four years in University of Alcalá as Assistant Professor, she moved to ITQB (Portugal) to join the group of C. Romão. Since 2004 she is the Head of the Organometallic Catalysis group in ITQB. Her current research interests focus on bio-relevant metal-based compounds for catalytic and biological applications.