

***Phosphine-Stabilized Silicon(II) Complexes:
Activation of Small Molecules (O_2 , CO_2 , C_2H_4 , ...)***

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Toulouse (France)**

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Professional career



J. Antoine Baceiredo was born in Cambre (Spain). He obtained his Ph.D. at the Université Paul Sabatier (Toulouse) in 1982, where he worked under the direction of Professor Guy Bertrand. In 1985 he joined the University of Southern California (Los Angeles) in the group of Professor W. P. Weber for a post-doc. In 1992 he was promoted to the rank of Directeur de Recherche CNRS at the Laboratoire de Chimie de Coordination (LCC) in Toulouse where he remained until 1999. In that year he joined the Laboratoire Hétérochimie Fondamentale et Appliquée (LHFA) where he has his research group. Currently he is the Director of the Institut de Chimie de Toulouse, and member of the Scientific Board of the CNRS. In 2011, he was awarded with the prize of the French Chemical Society, Organic Division.

Research Interests

Our research interests are mainly focused on group 13 to 15 heteroelements, at the borderline between organic and inorganic chemistry. We take advantage of the specific properties of these elements to stabilize highly reactive species and to discover new type of chemical bonding. Currently two topics can be highlighted:

- the synthesis of new mixed bis-ylide systems as asymmetric carbon atom sources,
- the development of new inorganic ylides such as phosphonium silaylides

In general, we try to find practical applications (organic or/and organometallic catalysis, new synthetic methodologies) using our original products, often in association with chemical companies. Specially, we are interested in the design of new catalyst systems for the controlled synthesis of some industrially important classes of polymers such as silicone derivatives.