



J. A. Baceiredo

The author presented on this page has recently published his 10th article since 2000 in Angewandte Chemie: "Synthesis and Structure of a Base-Stabilized C-Phosphino-Si-Amino Silyne": D. Gau, T. Kato, N. Saffon-Merceron, A. De Cozár, F. P. Cossío, A. Baceiredo, Angew. Chem. 2010, 122, 6735-6738; Angew. Chem. Int. Ed. **2010**, 49, 6585 - 6588.

J. Antoine Baceiredo

Date of birth: August 20, 1954

interests:

Director of Research-CNRS at the Université Paul Sabatier, Toulouse (France) Position: **Education:**

1982–1984 PhD with Professor Guy Bertrand, Université Paul Sabatier, Toulouse (France)

1985–1986 Postdoctoral Fellow with Professor William P. Weber, USC Los Angeles (USA) **Current research**

Our research interests are mainly focused on Group 13 to 15 heteroelements, at the interface between organic and inorganic chemistry. We take advantage of the specific properties of these elements to stabilize highly reactive species and to discover new types of chemical bonding. Two

topics can be highlighted: 1) the synthesis of new mixed bis-ylide systems as asymmetric carbon atom sources; 2) the development of new inorganic ylides such as phosphonium sila-ylides. 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. We are especially interested in the design of new catalyst systems for the controlled

synthesis of some industrially important classes of polymers such as silicone derivatives.

Hobbies: Reading, traveling, a good meal with friends

My favorite subject at school was ... physics.

When I was eighteen I wanted to be ... a scientist.

Looking back over my career I would change ... nothing.

The three qualities that make a good scientist are ... curiosity, no preconceptions, and objectivity.

If I could have dinner with three famous scientists from history, they would be ... Albert Einstein, Leonardo da Vinci, and Isaac Newton.

chose chemistry as a career because ... it is a fascinating science and it is very easy to quickly test a new idea, which is not the case in physics.

f I were not a scientist, I would be ... a carpenter.

The part of my job which I enjoy the most is ... to do experiments in the lab, but for many years I have had no time for that. I also very much enjoy interacting with my great co-workers.

My favorite book is ... the "Gormenghast" trilogy by Mervyn Peake.

My favorite piece of music is ... the Bolero by Ravel.

The biggest problem that scientists face is ... to solve the problem of degenerative diseases.

The biggest challenge facing chemists is ... to find alternative energy sources.

My 5 top papers:

- 1. "Synthesis and Structure of the First Cyclodiphosphazene. Dimerization of a Phosphonitrile": A. Baceiredo, G. Bertrand, J. P. Majoral, G. Sicard, J. Jaud, J. Galy, J. Am. Chem. Soc. 1984, 106, 6088-6089. (A stable cyclodiphosphazene is reported, the isolation of which had been predicted to be impossible).
- 2. "Analogous a,a'-Bis-Carbenoid Triply Bonded Species: Synthesis of a Stable λ^3 -Phosphinocarbene- λ^5 -Phosphaacetylene": A. Igau, H. Grützmacher, A. Baceiredo, G. Bertrand, J. Am. Chem. Soc. 1988, 110, 6463-6466. (The first preparation of a stable singlet carbene is presented).
- 3. "Stable Phosphonium Sila-ylide with Reactivity as a Sila-Wittig Reagent": D. Gau, T. Kato, N. Saffon-Merceron, F. P. Cossio, A. Baceiredo, J. Am. Chem. Soc. 2009, 131, 8762-8763. (This communication

- reports the synthesis of a new class of inorganic ylides, which opens new perspectives in silicon chemistry and in catalysis).
- "An Isolable Mixed P,S-Bis(ylide) as an Asymmetric Carbon Atom Source": N. Dellus, T. Kato, X. Bagan, N. Saffon-Merceron, V. Branchadell, A. Baceiredo, Angew. Chem. 2010, 122, 6950-6953; Angew. Chem. Int. Ed. 2010, 49, 6798-6801. (These bis-ylides allow the direct creation of a quaternary carbon center).
- 5. "Diastereoselective Synthesis of Bulky, Strongly Nucleophilic, and Configurationally Stable P-Stereogenic Tricyclic Phosphines": D. Gau, R. Rodriguez, T. Kato, N. Saffon-Merceron, A. Baceiredo, J. Am. Chem. Soc. 2010, 132, 12841-12843. (A one-step straightforward diastereoselective synthesis of P-chiral phosphines).

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