

ORGANOMETALLICS

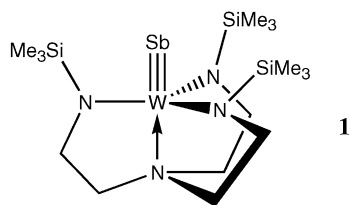
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Editor's Page

The Editor's Introduction to the Review by Balázs, Gregoriades, and Scheer in This Issue of *Organometallics*

The subject of triple bonds between two atoms is one of great interest to organometallic and inorganic chemists these days. With the exception of the N≡N bond of the dinitrogen molecule, compounds with triple bonds (acetylenes and nitriles) had been in the domain of the organic chemists. The discovery of molecules that contain the C≡P triple bond (HC≡P and RC≡P) demonstrated that elements other than carbon and nitrogen could participate in triple bonds and the hunt for other examples began. Since then, both homo- and heterodinuclear triply bonded compounds have been discovered. In the transition metal chemistry area, Fischer's carbyne complexes with M≡C bonds and Dehnicke's metal nitrides with M≡N bonds are notable early examples. There is by now a voluminous literature concerning the preparation, structure, bonding, and reactivity of compounds containing M≡C and M≡N bonds, including many useful applications of the former. More recent newcomers to this area have been those complexes that contain a transition metal atom triply bonded to an atom of a heavier main group element, of groups 14 (Si, Ge, Sn, Pb) and 15 (P, As, Sb, Bi). An excellent account of this interesting, exciting, and currently still very active area is given in the review by Gabor Balázs, Laurence J. Gregoriades, and Manfred Scheer of the University of Regensburg in the present issue of *Organometallics*. Our cover molecule, **1**, which introduces this review, features a



tungsten–antimony triple bond as reported recently by Professor Scheer, the senior author of the present review, and his co-workers in *Angew. Chem., Int. Ed.* **2005**, *44*, 4920.

Professor Scheer obtained his Diplom and Ph.D. degrees at the University of Halle in what was at the time the German Democratic Republic. His dissertation research on Sn(II) inorganic and organometallic chemistry, notably very interesting intramolecular donor-stabilized stannylenes complexes, was carried out under the guidance of the late Professor Alfred Tzschach and Dr. Klaus Jurkschat. After he received his Ph.D. degree in 1983, he spent a postdoctoral year at the Institute of

Inorganic Chemistry of the Russian Academy of Sciences in Moscow. Upon his return to Germany, Professor Scheer began independent research for his Habilitation (awarded in 1992) at the University of Halle in the area of polyphosphorus compounds and “naked” P_n ligand complexes (notably P₄ complexes). Eighteen months as a visiting professor at the University of Indiana with Malcolm Chisholm (1992–1993) was followed by some 12 years at the University of Karlsruhe, first as a Heisenberg Fellow and subsequently as a C3 (associate) professor. He was appointed full professor at the University of Regensburg in 2004. There his research projects have been quite varied, but all with a group 15 theme. They represent a nice mix of challenging, original synthetic chemistry that ranges from projects that are of fundamental interest and importance to those that are of a more practical nature: the preparation and study of the very interesting and highly reactive complexes with transition metal–group 15 element triple bonds; the synthesis of novel E_n ligand complexes (E = group 15 element) and their use as linking units to obtain interesting oligomers, polymers, and spherical nanoclusters; the synthesis of ligands containing combinations of different group 15 elements or combinations of group 15 elements with elements of groups 13, 14, and 16; the synthesis of transition metal–group 15 precursors for the thermal, hydrothermal, or CVD generation of transition metal pnictides; the synthesis and studies of the reactivity of group 15 ligands in low coordination numbers.

Professor Scheer's coauthors are co-workers in his laboratories in Regensburg. Gábor Balázs has been a postdoctoral researcher since 2002. A native of Romania, he studied chemistry at Babes-Bolyai University in Cluj-Napoca, Romania, and obtained his Ph.D. degree at the University of Bremen in Germany, carrying out research under the guidance of Professor H. J. Breunig. Laurence J. Gregoriades, a native of Cyprus, studied chemistry at the University of Lancaster in the U.K. and subsequently carried out his Ph.D. research under the guidance of Professor Scheer, starting at Karlsruhe and finishing up in 2006 in Regensburg.

The cover figure was kindly provided by Professor Arnold L. Rheingold.

Dietmar Seyferth

Editor

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