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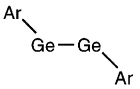
Editor's Page

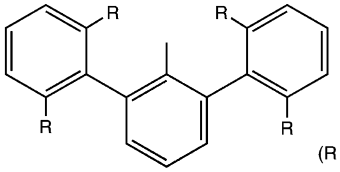
An Introduction to the Review by Power in This Issue of *Organometallics*

In the review in this issue of *Organometallics*, Professor Philip Power of the University of California at Davis treats the heavier group 14 element acetylene analogues, compounds of composition ArEEAr, where E is silicon, germanium, tin, and lead and Ar is a very bulky aryl group. This is a fascinating class of compounds whose structures and bonding are not ones one would at first sight expect if one thinks that they will just be larger versions of the wholly organic acetylenes, RC≡CR. They are newcomers to the chemical scene, the first stable compounds of this class having been isolated by Professor Power and his co-workers only in 2000. In the meantime, representatives of all four heavier group 14 elements have been prepared and structurally characterized, those of germanium, tin, and lead by Power and those of silicon by Sekiguchi and Wiberg.

The molecule on the cover is an organogermanium example, ArGeGeAr, **1**, where the aryl substitutent is the superbulky **2**. Groups such as **2** are required for the protection of the highly reactive E−E bonds. The preparation and X-ray crystal structure of red-orange crystalline **1** were published by Power and co-workers in 2002 (*Angew. Chem., Int. Ed.* **2002**, *41*, 1785).



1



2

(R = $(CH_3)_3CH$)

The compound was found to have the structure shown on the cover: a planar, trans-bent ArGe−GeAr geometry, not the linear structure one might have expected. As Professor Power tells us in his review, structure and bonding in the ArEEAr series are more complicated than previously thought and are incompletely understood at the present time. This series represents an interesting example of how structures and properties can change dramatically for a given type of derivative of the elements of a given group of the periodic table as we go down a group element by element from the lightest to its heaviest congener.

Professor Power needs no introduction to our readership. He has been surprising and entertaining us for over 25 years with his innovative, always interesting, often unexpected, wonderful organometallic "rabbits" that he has pulled out of his hat.

A native of Ireland, Professor Power obtained his B.A. in chemistry in 1974 at Trinity College of the University of Dublin. His introduction to organometallic chemistry came during his Ph.D. research at the University of Sussex (1974−1978) under the guidance of Professor Michael Lappert. He strayed from organometallic chemistry during a two-year postdoctoral stay with Professor Richard Holm, then at Stanford University. He returned to it when he was appointed assistant professor of chemistry at the University of California at Davis in 1981. He has been there ever since, over the course of the years rising in rank to Professor of Chemistry.

Professor Power lists his research interests as exploratory inorganic synthesis, low-coordinate transition metal complexes, multiply bonded heavier main group compounds, metal−metal multiple bonds in transition metal complexes, low-valent main group metal hydrides, clusters of group 14 elements, and isomerism in main group compounds, which makes for a varied and highly interesting publication list. His research covers the periodic table broadly. As shown by the examples in the present review, he has used sterically highly crowded substituents elegantly to stabilize species with new, at times unprecedented types of bonding, of low coordination numbers, and of high reactivity. His many publications report multiply bonded compounds, organometallic carbene analogues, persistent or stable main group element radicals, and radical anions. Among his awards is the richly deserved F. A. Cotton Award in Synthetic Inorganic Chemistry in 2005, which recognized his outstanding contributions to these areas.

My thanks to Professor Arnold L. Rheingold for the cover figure.

Dietmar Seyferth
Editor

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