Hg(TeR)₂ thermolyze to give HgTe and organotelluriums

$$\begin{array}{c} Ph_{2}Hg + Et_{3}PTe \rightarrow \{PhHgTePh\} \xrightarrow{Et_{3}PTe} \\ Hg(TePh)_{2} \rightarrow Ph_{2}Te + HgTe \ \ (2) \end{array}$$

(both TeR₂ and Te₂R₂). The pathway shown in eq 2 ra-

tionalizes the observed products. The reversibility of the reaction between Hg and Te_2R_2 accounts for the increasing yield of ditellurides with increasing initial Te/Hg ratio. Mercury, when expelled from the $Hg(TeR)_2$ complex, is immediately scavenged by the excess Et_3PTe .

The critical feature of this proposal is the insertion of Te atoms into the Hg-C bonds of Ph₂Hg. This process

has precedent in the literature. Grignard 10 and organolithium 11 reagents are known to react with elemental Te to give RTeM compounds in a heterogeneous reaction. In an example perhaps more relevant to the present discussion, the reaction of $t\text{-Bu}_3\text{PTe}$ with $t\text{-Bu}_2\text{PSiMe}_3$ results in insertion of Te into the P-Si bond in a homogeneous process. 12

In this communication we have shown a very mild route to the semimetal HgTe. The ability to prepare such solid-state compounds at low temperatures highlights one aspect of the utility of organometallic reactions in material synthesis.

Additions and Corrections

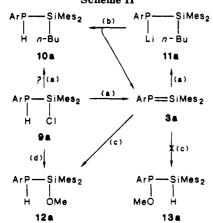
Cornelis N. Smit and Friedrich Bickelhaupt*: Phosphasilenes: Synthesis and Spectroscopic Characterization. 1987, 6, 1156.

Schemes I and II should appear as follows.

Scheme 1

(a) n-BuLi, THF, ca. -60 °C. (b) R'R''SiCl₂ (4), -60 °C. (c) n-BuLi, -60 °C, then slowly warming to room temperature. In some reactions, steps a and b were combined to one step.

Sahama II



(a) n-BuLi, THF, $-60 \rightarrow +25$ °C. (b) 9a. (c) MeOH. (d) MeONa/MeOH in THF.

Alberto R. Dias,* Palmira B. Dias, Herminio P. Diogo, Adelino M. Galvão, Manuel E. Minas da Piedade, and José A. Martinho Simões: Energetics of Molybdenum-Azobenzene, Titanium-Azobenzene, Titanium-Iodide, and Titanium-Carbonyl Bonds in Bis(cyclopentadienyl) Complexes. 1987, 6, 1427.

The E(M-L) values for the complexes $M(Cp)_2(PhN=NPh)$ (M = Ti, Mo) in Table V, 49 and 144 kJ mol⁻¹, are incorrectly calculated from the remaining data in the same table. They should be replaced by 195 and 290 kJ mol⁻¹, respectively. The conclusions are not affected, except that a disagreement with literature ab initio values is now apparent. However, the theoretical prediction that titanium-azobenzene bond is "weak" is still supported by the corrected bond enthalpy terms.

H. H. Murray, David A. Briggs, Guillermo Garzón, Raphael G. Raptis, Leigh C. Porter, and John P. Fackler, Jr.*: Structural Characterization of a Linear [Au···Pt···Au] Complex, Au₂Pt(CH₂P(S)Ph₂)₄, and Its Oxidized Linear Metal-Metal Bonded [Au-Pt-Au] Product, Au₂Pt(CH₂P-(S)Ph₂)₄Cl₂. 1987, 6, 1992–1995.

In the summary, the space group for complex 2 should be " $I\bar{4}$ " and not "I4". In ref 5j, "Mays, A. J." should be "Mayar, A. J.".

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