

gold atoms bonded to PPh_3 [10], the quadrupole pair at 0.91 mm/sec is assigned to peripheral gold coordinated to i-PrNC (see Table 1). The new cluster is clearly closely related to $[\text{Au}_9(\text{PPh}_3)_8]^{3+}$ with two PPh_3 ligands replaced by 2 i-PrNC. The formation of $[\text{Au}_9(\text{PPh}_3)_6(\text{i-PrNC})_2]^{3+}$ from $[\text{Au}_8(\text{PPh}_3)_7]^{2+}$ and i-PrNC looks somewhat puzzling, but the interconversion of Au_9 and Au_8 clusters is well known in other reactions [1].

The addition of primary amines to gold(I) isocyanide complexes leads to the formation of formamidine complexes [6–9]. The magnitude of the $\nu(\text{CN})$ shift is significant for the reactivity of the isocyanide ligand; although the shift of 60 cm^{-1} for the $[\text{Au}_9(\text{PPh}_3)_6(\text{i-PrNC})_2]^{3+}$ seems low, the compound reacts with primary amines to carbene cluster compounds. Further details of this reaction will be reported later.

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References

- 1 J.J. Steggerda, J.J. Bour and J.W.A. van der Velden, *Recl. Trav. Chim. Pays-Bas*, **101** (1982) 164 and ref. therein.
- 2 M.P.A. Viegers and J.M. Trooster, *Phys. Rev. B*, **15** (1977) 72.
- 3 M.P.A. Viegers, Ph.D. Thesis, University of Nijmegen, Nijmegen, The Netherlands, 1976.
- 4 F. Coriat and L. Naldini, *J. Chem. Soc. Dalton Trans.*, (1972) 2286; J.W.A. van der Velden, J.J. Bour, J.H. Noordijk and W.P. Bosman, *Inorg. Chem.*, to be published.
- 5 J.W.A. van der Velden, Ph.D. Thesis, University of Nijmegen, Nijmegen, The Netherlands, 1983.
- 6 J.E. Parks and A.L. Balch, *J. Organomet. Chem.*, **71** (1974) 453.
- 7 G. Minghetti, F. Bonati and G. Banditelli, *Inorg. Chem.*, **15** (1976) 1718.
- 8 J.A. Mc Cleverty and M.M.M. da Motta, *J. Chem. Soc. Dalton Trans.*, (1973) 2571.
- 9 R. Uson, A. Laguna, P. Brun, M. Laguna, and M. Abad, *J. Organomet. Chem.*, **218** (1981) 265.
- 10 F.A. Vollenbroek, J.W.A. van der Velden, J.J. Bour and J.M. Trooster, *Recl. Trav. Chim. Pays-Bas*, **100** (1981) 375.

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