

Correction to Three-Coordinate and Four-Coordinate Cobalt Hydride Complexes That React with Dinitrogen

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Page 10804. In this paper, we reported that the cobalt(II) complex $[LCo(\mu-H)]_2$ (L = 2,2,6,6-tetramethyl-3,5-bis(2,6diisopropylphenylimido)hept-4-yl) reacts with cyclohexene to give LCo(cyclohexyl) and with N2 to give LCoNNCoL. In further studies, we have found an improved synthesis that gives [LCo(μ -H)]₂ in high purity and discovered that the high-purity material undergoes neither of these reported reactions. Therefore, Scheme 1a is in error: the addition of N2 and elimination of H₂ does not occur with high-purity starting material. The details of the new experiments and a corrected description of the reactivity of $[LCo(\mu-H)]_2$ are in the following paper: Dugan, T.R.; Goldberg, J. M.; Brennessel, W. W.; Holland, P. L. Organometallics 2012, 31, 1349-1360. Please note that the reaction of the cobalt(I) compound [KLCoH]₂ with N₂ (Scheme 1b) has been reproducible in continued studies, and we have no reason to doubt the accuracy of the results originally reported for the cobalt(I) compound.