

noncoordinating ether function occurs at higher wavenumbers; the less intense band is caused by a chelating ether phosphine.

Complex **2** does not react with H<sub>2</sub> at atmospheric pressure,<sup>12</sup> the proton NMR spectrum of the complex dissolved in acetone remaining virtually unchanged after 20 min of hydrogen flushing. However, activation of the ruthenium-oxygen bond proceeds with addition of another 1 equiv of Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>, yielding the hydrido compound *cis*-H<sub>2</sub>Ru(P~O)<sub>4</sub> (**3**). The *cis* configuration is obvious in the <sup>31</sup>P{<sup>1</sup>H} NMR spectrum: two identical triplets

for pairs of *cis* and *trans* phosphorus nuclei appear.

In conclusion, **2** represents an excellent model complex to demonstrate the opening and closing mechanism of the P,O ligands under very mild conditions.

**Acknowledgment.** We are grateful to the Bundesministerium für Forschung und Technologie, the Deutsche Forschungsgemeinschaft, and the Verband der Chemischen Industrie e. V., Fonds der Chemischen Industrie, for financial support and also to Degussa AG for a gift of RuCl<sub>3</sub>·3H<sub>2</sub>O. We thank M. Stängle for NMR measurements.

(12) Knoth, W. H. *J. Am. Chem. Soc.* **1972**, *94*, 104.

Registry No. **1**, 109011-62-3; **2**, 111557-09-6; **3**, 111557-10-9.

## Additions and Corrections

1987, Volume 26

**Laurence D. Rosenhein and John W. McDonald\***: Synthesis and Characterization of the [(CO)<sub>4</sub>MoS<sub>2</sub>MS<sub>2</sub>]<sup>2-</sup> and [(CO)<sub>4</sub>MoS<sub>2</sub>MS<sub>2</sub>Mo(CO)<sub>4</sub>]<sup>2-</sup> Ions (M = Mo, W): Species Containing Group VI (6) Metals in Widely Separated Formal Oxidation States.

Page 3414. At the end of the introduction section, we should have quoted the following reference as a prior example of a dinuclear complex containing group 6 metals in widely separated oxidation states: Cotton, F. A.; Schwotzer, W. *J. Am. Chem. Soc.* **1983**, *105*, 5639.—John W. McDonald