

oxidation at $E_{1/2} = +0.46$ V, and a quasi-reversible reduction at $E_{1/2} = -0.65$ V vs Ag/AgCl. This redox behavior suggests that the parent Rh(II) complex easily converts to stable Rh(I) and Rh(III) species and with minimal structural change or decomposition. We are investigating appropriate chemical routes in an effort to isolate these products.

The present study illustrates the ability of an alkoxide-substituted triphenylphosphine ligand to stabilize a rarely encountered oxidation state for mononuclear rhodium. The methoxy groups are capable of coordinating to the metal center through weak interactions, which helps to lightly stabilize low coordination numbers but does not render the molecule inert as is often the case with very bulky ligands and with cyclometalated groups possessing strong M-C bonds. Furthermore, the phosphine has a very flexible coordination mode in that it may behave as a mono-, bi-, or tridentate ligand depending on the electronic and geometric preferences of the metal center. Further work is underway to

elucidate the coordination geometry of TMPP with metals possessing d^n electronic configurations of $n = 2-10$.

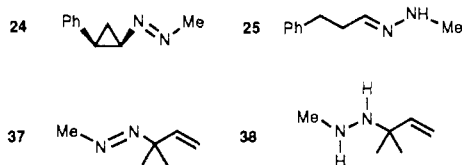
Acknowledgment. We thank Judith Eglin for help with the SQUID measurements and Chris Bender for his assistance in obtaining EPR data. We are grateful to the donors of the Petroleum Research Fund, administered by the American Chemical Society, and to Michigan State University for an All-University Research Initiation Grant. X-ray equipment was supported by a grant from the National Science Foundation (CHE-8403823).

Supplementary Material Available: Tables of crystallographic parameters and equivalent isotropic displacement parameters, bond distances and angles, and anisotropic thermal parameters (9 pages); table of observed and calculated structure factors (24 pages). Ordering information is given on any current masthead page.

Additions and Corrections

Reduction of Azoalkanes by Benzhydryl Radicals [*J. Am. Chem. Soc.* **1989**, *111*, 1830]. PAUL S. ENGEL* and WEN-XUE WU

Page 1831: In Table I, the structure (designated #It) accompanying product 25 is missing. It is located incorrectly immediately below the structure for the azoalkane 37. The correct sequence for the azoalkane/product combinations 24/25 and 37/38 follows.



Book Reviews

Vitamins. By Wilhelm Friedrich (Institut für Physiologische Chemie). Walter de Gruyter: Berlin and New York, 1988. 1060 pp. DM380. ISBN 3-11-010244-7.

Professor Wilhelm Friedrich was one of the pioneering and successful researchers with Professor K. Bernhauer in Stockstadt/Main/Germany on vitamin B₁₂ and particularly on the corrinoids. The expertise of Professor Friedrich on vitamin B₁₂ is also exemplified by his co-editorship with B. Zagalak on *Vitamin B₁₂*, 1979, which is the Proceedings of the Third European Symposium on Vitamin B₁₂, and the *Intrinsic Factor* in Zurich, March 1979.

His *Vitamins* of 1988 is encyclopedic although in one volume, and it is a monumental and extraordinarily useful book. This remarkable book includes the important historical aspects but emphasizes the basic information on vitamins. The book is divided into special chapters for the 13 vitamins: vitamin A and its provitamins; vitamin D; vitamin E; vitamin K; thiamin, vitamin B₁, aneurin; vitamin B₂: riboflavin and its bioactive variants; niacin: nicotinic acid, nicotinamide, NAD (P); vitamin B₆, folic acid and unconjugated pteridines; biotin; pantothenic acid; vitamin B₁₂; and vitamin C.

This book has an appendix that provides the more important publications, particularly those that are relevant to medicine, that appeared after the chapters had been written. This appendix extends to May 1986.

The scope of information in this book is truly extensive and embraces history, discovery, organic chemistry, physical characteristics, biochem-

istry, biological activities such as antitumor effects, distribution in tissues, absorption, transport, enzymes, proteins, deficiencies, and many other relevant aspects.

This comprehensive book should be in the personal library of all scientists, whether academic or otherwise, and all investigators and all physicians who have a responsibility depending upon knowledge of the vitamins.

Not many scientists have the painstaking and persevering skill and knowledge to create such a book. For his stupendous accomplishment, Professor Friedrich deserves congratulations by all concerned with vitamins.

The chapters are very extensive. For example, the chapter on vitamin D consists of 76 pages with 73 sections and 8 pages of references. The chapter on vitamin B₆ consists of 75 pages with 70 sections and 8 pages of references. The chapter on vitamin B₁₂ consists of 89 pages with 97 sections and 14 pages of references.

It is understandable that Professor Friedrich selected only the very well established vitamins for inclusion. Certain other nutritional entities were largely omitted on the basis of their "questionable vitamin character" but are cited in Table 1-34, which requires only half a page. Included in this table are lipoic acid, myo-inositol, and particularly ubiquinone or coenzyme Q. If Professor Friedrich publishes a future new edition of this book, surely he will include a chapter on coenzyme Q comparable in coverage to that for the majority of the 13 vitamins that are included.