

carbene might thus provide a kinetically feasible way out of the thermodynamically quite unfavorable situation of titanium(II) in $(\pi\text{-C}_5\text{H}_5)_2\text{Ti}$.²⁵ We are pres-

(25) This analogy would require that $(\pi\text{-C}_5\text{H}_5)_2\text{Ti}$ be available in a singlet state. Such a low-lying singlet state has been claimed before, from a comparison of free ion states in titanium and other 3d transition metals (E. M. Shustorovich and M. E. Dyatkina, *Russ. J. Inorg. Chem.*, **4**, 251 (1959)). Experimentally, a singlet-triplet equilibrium has in fact been observed at room temperature in the complex $(\pi\text{-C}_5\text{H}_5)_2\text{Ti}\cdot\text{bipyridine}$ (ref 4 and 5).

ently investigating these possibilities in more detail experimentally.

Acknowledgment. Financial support for this investigation by the National Science Foundation (Grant GP8300) is gratefully acknowledged.

Hans H. Brintzinger, Lawrence S. Bartell

Department of Chemistry, The University of Michigan
Ann Arbor, Michigan 48104

Received December 18, 1969

Additions and Corrections

The Conformation of 1,4-Cyclohexadiene from Stereoisomeric Allylic-Allylic Proton Couplings [*J. Am. Chem. Soc.*, **90**, 3590 (1968)]. By E. W. GARBISCH, JR., and M. G. GRIFFITH, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota 55455.

The equation $\alpha \cong 180^\circ - \frac{1}{2}|60^\circ - \phi|$ is incorrect and should be replaced by $\alpha \cong 180^\circ - |60^\circ - \phi|$ [see D. J. Atkins and M. J. Perkins, *Tetrahedron Letters*, 2335 (1969)]. With this correction, $\alpha \cong 165^\circ$ rather than the reported value of 172° and is in qualitative agreement with the value of 159° determined by electron diffraction [H. Oberhammer and S. H. Bauer, *J. Am. Chem. Soc.*, **91**, 10 (1969)]. From the electron diffraction structure of 1,4-cyclohexadiene, the calculated value of ϕ is 41.3° which compares well with the value of 45° that was estimated from the allylic-allylic proton couplings.

Nuclear Magnetic Resonance Spectroscopy. Conformational Equilibria and Equilibration of 5,5-Difluoro-*cis*-hydrindan and 9-Methyl-5,5-difluoro-*cis*-hydrindan [*J. Am. Chem. Soc.*, **90**, 6997 (1968)]. By RUTH E. LACK and JOHN D. ROBERTS, Gates and Crellin Laboratories of Chemistry, California Institute of Technology, Pasadena, California 91109.

Some of the labels on the curves in Figure 1 are incorrect. The correct temperatures and τ_1 values are (temp, $^\circ\text{C}$; τ , sec): $-46, 0.000075$; $-78, 0.00008$; $-92, 0.0004$; $-105, 0.0014$; $-123, 0.0185$. The other data and conclusions remain unchanged.

Mechanism of Secoiridoid Monoterpene Biosynthesis [*J. Am. Chem. Soc.*, **91**, 204 (1969)]. By ROCCO GUARNACCIA, LUIGI BOTTA, and CARMINE J. COSCIA, Department of Biochemistry, St. Louis University School of Medicine, St. Louis, Missouri 63104.

In Table I, the last entry in the column headed ^{14}C should be 1.16×10^4 rather than 1.16×10^6 .

Chemistry in Super Acids. III. Protonation of Alkanes and the Intermediacy of Alkanonium Ions, Pentacoordinated Carbon Cations of the CH_5^+ Type. Hydrogen Exchange, Protolytic Cleavage, Hydrogen Abstraction, and Polycondensation of Methane, Ethane, 2,2-Dimethylpropane (Neopentane), and 2,2,3,3-Tetramethyl-

butane in $\text{FSO}_3\text{H-SbF}_5$ ("Magic Acid") Solution [*J. Am. Chem. Soc.*, **91**, 3261 (1969)]. By GEORGE A. OLAH, GILLES KLOPMAN, and RICHARD H. SCHLOSBERG, Department of Chemistry, Case Western Reserve University, Cleveland, Ohio 44106.

On page 3264, column 2, the last five lines of text should have been placed between the fourth and fifth lines at the top of the same column.

Addition of a Functionalized Isoprene Unit to an Allyl Alcohol. I. The Synthesis of β -Sinensal and Related Topics [*J. Am. Chem. Soc.*, **91**, 3281 (1969)]. By ALAN F. THOMAS, Research Laboratories, Firmenich Cie, Geneva, Switzerland.

In Scheme III, page 3283, the numbers 16, 21, and 24 should be placed under the third column of formulas leading to 2-*trans*,6-*trans* and not under the fourth column.

The Anisotropy Factor of Optically Active Ketones [*J. Am. Chem. Soc.*, **91**, 3709 (1969)]. By GLEN M. ROBINSON and OSCAR E. WEIGANG, JR., Richardson Chemical Laboratories, Department of Chemistry, Tulane University, New Orleans, Louisiana 70118.

The three perspective drawings of Figure 1, page 3710, are incorrect in that they show axial substitutions rather than the equatorial substitutions which were the basis for measurements and calculations.

Stereochemistry of Polynuclear Compounds of the Main Group Elements. IX. Structure of Bis(dimethylamino)beryllium and Its Reaction with Trimethylaluminum [*J. Am. Chem. Soc.*, **91**, 4426 (1969)]. By J. L. ATWOOD and G. D. STUCKY, Department of Chemistry and Chemical Engineering and the Materials Research Laboratory, University of Illinois, Urbana, Illinois 61801.

In the abstract, on line 6 the value of the b lattice parameter should read 14.073 (8) Å.

Syntheses via Dihydro-1,3-oxazines. VI. A Carboxyl Protecting Group Stable to the Grignard Reagent. A New Synthesis of Carboxylic Acids [*J. Am. Chem. Soc.*, **91**, 5886 (1969)]. By A. I. MEYERS, I. R. POLITZER,