

Additions and Corrections

The Stereochemistry of 9-Decalyl Free Radicals [*J. Amer. Chem. Soc.*, **87**, 2590 (1965)]. By PAUL D. BARTLETT,* RICHARD E. PINCOCK, JOHN H. ROLSTON, W. G. SCHINDEL, and L. A. SINGER, Department of Chemistry of Harvard University, Cambridge, Massachusetts 02138, and of the University of British Columbia, Vancouver 8, British Columbia.

In Table II, the column headings *cis* and *trans* should be interchanged.

Oxygen and Sulfur Chemistry of Methyltrifluoromethylphosphines [*J. Amer. Chem. Soc.*, **92**, 1901 (1970)]. By ANTON B. BURG* and DAE-KI KANG, Department of Chemistry, University of Southern California, Los Angeles, California 90007.

Dr. R. G. Cavell has noticed in our ^{19}F nmr spectra some discrepant chemical shifts, for the measurement of which the reference side bands were indeed misjudged by multiples of 21 ppm. Table I presents the

Table I. Revised Nmr Parameters for $\text{CH}_3\text{CF}_3\text{P}$ Compounds

Compd (R = $\text{CH}_3\text{CF}_3\text{P}$)	δ_{F} (J)	δ_{P} (J)	δ_{H} (J)
RCl	68.5 (73)	-76.2 (73.6)	1.5 (10, 40.5)
RI	61 (60)	-20.6 (59.6)	2.3 (11, 40.4)
ROCH ₃	71.4 (68)	-118.6 (68.7, 13.6, 6.8)	1.0 (6.8) 3.0 (13.5)
ROC(CH ₃) ₃	71.6 (74)	-93.0 (73.6)	1.01 (6.8, 40.64) 1.02 (0.59)
RSCH ₃	64.1 (65)	-11.3 (65, 12.8, 7.3)	1.3 (7.3) 2.1 (12.7)
RSC(CH ₃) ₃	63 (67)	-7.7 (66, 7.7)	1.21 (7.7, 40.4) 1.19 (0.9)
HRO	75.7 (91)	34.7 (90, 2515)	1.4 (15.7) 6.9 (516, 45.4, 43.4)
DRO	76 (92)		
CH ₃ RO	76 (84, 70.8)	-38.6 (83, 713.8)	2.0 (13.9, 40.8)
CH ₂ RS	75 (85)	-44.3 (84, 713.8)	1.9 (13.8)
R-R	53.2, 54.7	22.1, 30.1	1.2 asymm
RSR	61.8, 62.3		1.7 asymm
RSR-d ₈	61.6, 62.1	-27 ("36")	

results of a thorough restudy, with amended or additional results as well as corrected values. The chemical shifts (δ , ppm) were measured by substitution (HA-100, HR mode), upfield from Cl_3CF or H_3PO_4 , or downfield from TMS. The coupling constants (J , sec^{-1}) are given in parentheses, and refer to doublets for ^{19}F or ^1H and to quartets for ^{31}P , unless otherwise specified by superscripts. For the R-R and RSR compounds, the δ values represent optical and meso isomers; for J values, cf. D-K. Kang, *et al.*, *Org. Magn. Resonance*, 101 (1971).

The observed wide range of δ_{P} is not unusual. Most of the δ_{H} values are averages of old and new data, probably with smaller systematic errors arising from diamagnetism.

Photochemical Reactivity of Some Benzoylthiophenes. I. Electronic Absorption and Emission Spectra [*J. Amer. Chem. Soc.*, **95**, 4599 (1973)]. By D. R. ARNOLD* and R. J. BIRTWELL, The Photochemistry Unit, Department of Chemistry, University of Western Ontario, London, Ontario, Canada, N6A 3K7.

Errors which occur in Tables I and II are corrected here.

Table I. Chemical Shifts (ppm) and Coupling Constants (Hz) for the Protons on Thiophene of Some 2-Benzoylthiophenes

	Ia (X = H)	Ib (X = OCH ₃)	Ic (X = CN)
H ₃	7.59	7.60	7.61
H ₄	7.14	7.11	7.18
H ₅	7.64	7.62	7.78
J _{3,4}	4.0	4.0	4.0
J _{3,5}	1.5	1.2	1.2
J _{4,5}	5.0	5.0	4.2

Table II. Chemical Shifts (ppm) and Coupling Constants (Hz) for the Protons on Thiophene of Some 3-Benzoylthiophenes

	IIa (X = H)	IIb (X = OCH ₃)	IIc (X = CN)
H ₂	7.86	7.86	8.18
H ₄	7.56	7.54	7.77
H ₅	7.31	7.33	7.76
J _{2,4}	1.4	1.5	1.4
J _{2,5}	3.0	3.3	3.3
J _{4,5}	5.2	5.0	5.4

Properties of the [4]Annulene System. Induced Paramagnetic Ring Current [*J. Amer. Chem. Soc.*, **95**, 8481 (1973)]. By S. MASAMUNE,* NOBUO NAKAMURA, M. SUDA, and H. ONA, Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada.

On page 8482, column 2 line 4 from bottom, "1.22 (18 H) and 1.05 (9 H)" should be replaced by "1.12 (9 H) and 1.05 (18 H)." Table I should be corrected accordingly.

The Photochemistry of 3-Alkylidenecyclohexanones. The Role of Olefin Geometrical Isomerization in the Triplet-State Reactivity of β,γ -Unsaturated Ketones [*J. Amer. Chem. Soc.*, **96**, 1158 (1974)]. By KENNETH G. HANCOCK* and RONALD O. GRIDER, Department of Chemistry, University of California at Davis, Davis, California 95616.

In Table I, Φ_{direct} and Φ_{quenched} for $9 \rightarrow 4$ should read 0.08 (and not 0.18 as reported).

Photoequilibrium ratios predicted by eq 1 using quantum yields from Table I and ϵ_{300} 's from Table II were within ca. 5% (and not 2% as reported) of ratios observed at 300 nm.

The statement following structure 26 on page 1164 should be deleted and replaced with: "The ordering of the quantum yields ($14 \rightarrow 5 > 5 \rightarrow 14$, but $4 \rightarrow 9 >$