variable field magnet); Professor T. J. Katz (loan of a minigrator); Professors G. Flynn (loan of a Varian-Aerograph VPC); Professor B. P. Dailey (loan of the space beside a supercon magnet); and Professor S. Hartmann (loan of a Hall gauss meter). We especially thank Professor R. Bernstein for enlightening discussions and variable advice concerning the relationship of α to quantum yield data. The assistance of Mr. Chao Chung in identifying the products of Cu²⁺ scavenging and of Dr. Ming-Fea Chow and Mr. Gregory Weed in refining some data in Table I is gratefully noted. We thank the Francis Bitter National Magnet Laboratory at the Massachusetts Institute of Technology for access to and use of a 100 000 G magnet. Support of this work by tha National Science Foundation and the Department of Energy is gratefully acknowledged. B.K. thanks the Swiss National Science Foundation for a Postdoctoral Fellowship.

References and Notes

- (1) Engel, P. S. J. Am. Chem. Soc. 1970, 92, 6074. Robbins, W. K.; Eastman, R. H. Ibid. 1970, 92, 6076, 6077. Quinkert, G.; Opitz, K.; Wiersdorff, W.; Weinlich, J. Tetrahedron Lett. 1963, 1863.
- Turro, N. J.; Cherry, W. R. J. Am. Chem. Soc. 1978, 100, 7431. Turro, N. J.; Kraeutler, B. J. Am. Chem. Soc. 1978, 100, 7432. Discussions of magnetic field effects on chemical reactions: (a) Atkins, P. Chem. Br. 1976, 214. Lambert, T. P. Annu. Rep. Chem. Soc. A 1975. 67. (b) Buchachenko, A. L. Russ. Chem. Rev. 1976, 45, 375. (c) Sagdeev, R. Z.; Salikhov, K. M.; Molin, Y. M. Ibid. 1977, 46, 297.

- (5) Discussions of magnetic isotope effects on chemical reactions: (a) Buchachenko, A. L. *Russ. J. Phys. Chem.* **1977**, *51*, 1445. (b) Buchachenko, A. L.; et al. *Dokl. Akad. Nauk SSSR* **1976**, *228*, 379.
- Bernstein, R. B. J. Phys. Chem. 1952, 56, 893; Science 1957, 126,
- (7) In a previous publication² it was noted that micelles inhibited cross coupling of radicals produced by photolysis of asymmetrical ketones. The low yield of cross coupling was due not only to an enhanced "cage" effect due to sequestering of the geminate radical pair by micelles, but also to scavenging by O2; i.e., since the systems were air saturated, escaping radicals were trapped by O_2 in the aqueous phase. In the present work, the systems were deoxygenated by N_2 purging before photolysis. The onset of significant external magnetic field effects on α occurs at
- relatively low magnetic fields (<1000 G). A detailed report of the magnetic field dependence of α will be reported in due course.
- (a) Kaptein, R. Adv. Free Radical Chem. 1975, 5, 381. (b) Closs, G. Proc. Int. Cong. Pure Appl. Chem., 23rd, 1971 1971, 4, 19. (c) Lawler, R. G. Acc. Chem. Res. 1972, 5, 25.
- (10) Schuh, H.; Hamilton, E. J.; Paul, H.; Fischer, H. Helv. Chim. Acta 1974, 57, 2011. Perkins, M. J.; Roberts, B. P. J. Chem. Soc., Perkin Trans. 2 1974, 297; 1975, 77. Brenton, G.; McBay, H. C.; Ingold, K. U. J. Am. Chem. Soc. 1977, 99, 4447.
- (11) Almgren, M.; Grieser, F.; Thomas, J. K. J. Am. Chem. Soc. 1979, 101,
- (12) Landolt-Börnstein "Organic C-Centered Radicals", Berndt, A., Fischer, H., Paul, H., Eds.; Springer-Verlag; New York, 1977; part B.

Nicholas J. Turro,* Bernhard Kraeutler **David Richard Anderson**

Department of Chemistry, Columbia University New York, New York 10027 Received July 17, 1979

Additions and Corrections

Crystal and Molecular Structure of the Free Base Porphyrin, Mesoporphyrin IX Dimethyl Ester [J. Am. Chem. Soc., 97, 5363 (1975)]. By ROBERT G. LITTLE and JAMES A. IBERS,* Department of Chemistry, Northwestern University, Evanston, Illinois 60201.

On p 5365 structures for 1 and 2 should be interchanged. In Table VI the coefficient A for the least-squares planes 1 through 6 should be multiplied by 10. A corrected Table VII is given below. The transannular separations for the title compound are no longer significantly different from those in other free base porphyrins. Thus the discussion of these differences, both in this paper and in Caughey, W. S.; Ibers, J. A. J. Am. Chem. Soc. 1977, 99, 6639-6645, is no longer applicable.

Table VII, Transannular Distances (Å) in Three Free-Base Porphyrins

Atoms	OEP ^a	Porphine ^b	MP-IX DME ^c
HN(1)-HN(3)	2.36 (4)	2.41 (4)	2.28 (10)
N(1)-N(3)	4.195	4.112	4.181
N(2)-N(4)	4.052	4.058	4.060
N(1)-N(2)	2.917	2.886	2.894
N(2)-N(3)	2.916	2.889	2.937
N(3)-N(4)	2.917	2.901	2.893
N(4)-N(1)	2.916	2.879	2.932
C(5)-C(15)	6.841	6.853	6.859
C(10)-C(20)	6.844	6.834	6.811
C(5)-C(10)	4.828	4.814	4.815
C(10)-C(15)	4.849	4.862	4.844
C(15)-C(20)	4.828	4.822	4.825
C(20)-C(5)	4.849	4.860	4.848

a Reference 13, the errors on the C-C and N-N distances are ±0.002 Å. b Reference 11, estimated errors ±0.007 Å. c This work, estimated errors ±0.004 Å.

Ion-Solvent Interaction. Effects of Added Polar Compounds on the Conductances of Several Alkali Metal Salts in 2-Butanone at 25 °C [J. Am. Chem. Soc., 101, 328 (1979)]. By M. D. JACKSON and W. R. GILKERSON,* Department of Chemistry, University of South Carolina, Columbia, South Carolina 29208.

Page 333: The scale on the abscissa of Figure 6 is incorrect, as well as one point having been added inadvertently. The correct Figure 6 is below,

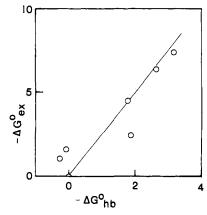


Figure 6. The free energy of exchange, ΔG°_{ex} , for the displacement of THF by ligand on lithium cation as a function of ΔG°_{HB} , the free energy of hydrogen-bond formation of the ligand with p-fluorophenol, both in keal mol-1.

Specific Inclusion Catalysis by β -Cyclodextrin in the One-Step Preparation of Vitamin K₁ or K₂ Analogues [J. Am. Chem. Soc., 101, 1019 (1979)]. By IWAO TABUSHI,* KAZUO YA-MAMURA, KAHEE FUJITA, and HIROMU KAWAKUBO, Department of Synthetic Chemistry, Kyoto University, Yoshida, Kyoto 606, Japan.