Additions and Corrections

Kinetic Studies of Hydrogen Bonding. 1-Cyclohexyluracil and 9-Ethyladenine [*J. Am. Chem. Soc.*, **90,** 4151 (1968)]. By GORDON G. HAMMES and ANDREW C. PARK, Department of Chemistry, Cornell University, Ithaca, New York 14850.

Equations 12 and A-7 should read

$$\begin{aligned}\Gamma = \Gamma_2 = {} & \Biggl\{\frac{1/\tau_1 - 1/\tau_2}{a_{11}{}^2}\Biggr\}\Biggl\{\Biggl[\frac{1}{(\mathrm{AU})(1/\tau_1 + a_{11})} + \\ & \frac{1}{(\mathrm{A})(1/\tau_1 + a_{11})} + \frac{(1/\tau_1 + a_{11})}{(\mathrm{U_2})a_{21}{}^2} + \\ & \frac{(2/\tau_1 + 2a_{11} + a_{21})^2}{(\mathrm{U})a_{21}{}^2(1/\tau_1 + a_{11})}\Biggr]^{-1} - \Biggl[\frac{1}{(\mathrm{AU})(1/\tau_2 + a_{11})} + \\ & \frac{1}{(\mathrm{A})(1/\tau_2 + a_{11})} + \frac{(1/\tau_1 + a_{11})^2}{(\mathrm{U_2})a_{21}{}^2(1/\tau_2 + a_{11})} + \\ & \frac{(2/\tau_1 + 2a_{11} + a_{21})^2}{(\mathrm{U})a_{21}{}^2(1/\tau_2 + a_{11})}\Biggr]^{-1}\Biggr\} \qquad (12)\end{aligned}$$

$$\begin{aligned}\Gamma_1 = {} & -RT\left(\frac{\partial y_1}{\partial A_1}\right)_{\mathrm{T,P},y_2} = \\ & \Biggl\{\frac{1/\tau_2 - 1/\tau_1}{a_{21}{}^2}\Biggr\}\Biggl\{\Biggl[\frac{1}{(\mathrm{AU})(1/\tau_2 + a_{11})} + \frac{1}{(\mathrm{A})(1/\tau_2 + a_{11})} + \\ & \frac{(2/\tau_2 + 2a_{11} + a_{21})^2}{(\mathrm{U})a_{21}{}^2(1/\tau_2 + a_{11})} + \frac{(1/\tau_2 + a_{11})}{(\mathrm{U_2})a_{21}{}^2}\Biggr]^{-1} - \\ & \Biggl[\frac{1}{(\mathrm{AU})(1/\tau_1 + a_{11})} + \frac{1}{(\mathrm{A})(1/\tau_1 + a_{11})} + \\ & \frac{(2/\tau_2 + 2a_{11} + a_{21})^2}{(\mathrm{U})a_{21}{}^2(1/\tau_1 + a_{11})} + \frac{(1/\tau_2 + a_{11})^2}{(\mathrm{U_2})a_{21}{}^2(1/\tau_1 + a_{11})}\Biggr]^{-1}\Biggr\} \qquad (\text{A-7})\end{aligned}$$

We are indebted to Drs. Lang and Zana for pointing out the errors in the originally published equations.

Low-Temperature Photolysis of Bicyclo[6.2.0]deca-2,4,-6,9-tetraene and *trans*- and *cis*-9,10-Dihydronaphthalenes. Tetracyclo[4.4.0.0^{2,10}.0^{5,7}]deca-3,8-diene [*J. Am. Chem. Soc.*, **90,** 5286 (1968)]. By S. MASAMUNE, R. T. SEIDNER, H. ZENDA, M. WIESEL, N. NAKATSUKA, and G. BIGAM, Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada.

On page 5286, footnote 1, line 24, the ratio 3.64 ± 0.05 should read 4.63.

The Structure of Krypton Difluoride [*J. Am. Chem. Soc.*, **90,** 5690 (1968)]. By CRAIG MURCHISON, SANDOR REICHMAN, DENNIS ANDERSON, JOHN OVEREND, and FELIX SCHREINER, Molecular Spectroscopy Laboratory, School of Chemistry, University of Minnesota, Minneapolis, Minnesota 55455, and Argonne National Laboratory, Argonne, Illinois 60439.

The normal coordinate force constants, K_{2233}, K_{133}, and the Morse parameter, a, reported in this paper are incorrect, due to a program error. In repeating this calculation we found it necessary to include the stretch–stretch interaction force constant, k_{133}, in the potential energy. With a value of the Morse parameter a = 3.82 Å^{-1}, calculated from the bond energy E(Kr–F) = 12.0 kcal/mol [S. Gunn, *J. Am. Chem. Soc.*, **88,** 5924 (1966)], and the quadratic force constants of H. H. Claasen, G. L. Goodman, J. G. Malin, and F. Schreiner, *J. Chem. Phys.*, **42,** 1229 (1965), we calculated $k_{133} = -8.69$ mdyn/Å by adjusting k_{133} to our observed α_3. This results in $K_{2233} = -2.05$ cm^{-1}, $K_{133} = -53.6$ cm^{-1}, and $X_{23} = -0.61$ cm^{-1}. In addition the calculated $\alpha_2 = -7 \times 10^{-7}$ cm^{-1}. To obtain better agreement with our observed $X_{23} = -3.17$ cm^{-1} we include $k_{122} = -0.67$ mdyn/rad^2 in the potential which makes $K_{122} = 0.0$ cm^{-1} and $X_{23} = -1.68$ cm^{-1}. It should also be noted that in the expression for X_{23} given in the paper there is an erroneous extra factor of 2 in the second term.

Pyrroles from Azaindoles. A Synthesis of Porphobilinogen and Related Pyrroles [*J. Am. Chem. Soc.*, **91,** 2338 (1969)]. By BENJAMIN FRYDMAN, SANTIAGO REIL, MARIA E. DESPUY, and HENRY RAPOPORT, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, Buenos Aires, Agentina, and the Department of Chemistry, University of California, Berkeley, California.

On page 3342, the experimental procedure for the preparation of porphobilinogen (XXVIII) should read: "Two grams of porphobilinogen lactam XXV was dissolved in 30 ml of 2 *N* potassium hydroxide. . ."

Solvolysis and Thermolysis of *exo*-Bicyclo[2.1.1]hex-2-en-5-ol Derivatives [*J. Am. Chem. Soc.*, **91,** 4322 (1969)]. By S. MASAMUNE, S. TAKADA, N. NAKATSUKA, R. VUKOV, and E. N. CAIN, Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada.

On page 4323, Chart I, the relative solvolysis rate of *exo*-bicyclo[2.1.1]hex-2-en-5-ol derivative should read (5×)10^{14} instead of (5×)10^{-4}.

Origin of Linearity of Carbon-13 Shift with Charge. Calculations for the Azines [*J. Am. Chem. Soc.*, **91,** 5005 (1969)]. By TADASHI TOKUHIRO and GIDEON FRAENKEL, Department of Chemistry, The Ohio State University, Columbis, Ohio 43210.

The observed chemical shifts in Table III have been inadvertently scrambled. They are listed correctly in Table II.

Photocycloaddition of Thiocarbonyl Compounds to Olefins. The Reaction of Thiobenzophenone with Various Types of Olefins [*J. Am. Chem. Soc.*, **91,** 5038 (1969)]. By A. OHNO, Y. OHNISHI, and G. TSUCHIHASHI, Sagami Chemical Research Center, Onuma, Sagamihara-shi, Kanagawa, 229, Japan.

Throughout the paper **16** and **17** should be interchanged.

In Table VII, column 7, line 13, 71.16 should read 71.66.