

Erratum: "Statistical Thermodynamics of Polymer Solutions. V. Interactions between Geometrically Dissimilar Polymer Chains in a Poor Solvent"

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due to wall losses it was not possible to correlate it with the decay of N atoms.

The experimental points from this study are listed in Table I and are shown in Fig. 1, along with results from three other studies. Kistiakowsky and Volpi³ obtained $k = 2 \times 10^{12} \exp(-6200/RT)$ (all values in $\text{cm}^3 \text{ mole}^{-1} \text{ sec}^{-1}$ units) over the temperature range 394–517°, using a stirred reactor and a mass spectrometer for the determination of N atoms. Clyne and Thrush⁴ obtained $8.3 \times 10^{12} \exp(-7100/RT)$ between 412° and 755°K using a fast-flow system and titration with NO to determine N atoms. A study by Kaufman and Decker⁵ of the reverse reaction, i.e., the O_2 -sensitized decomposition of NO between 1500° and 1700°K, give $1.7 \times 10^{13} \exp(-7500/RT)$. The present study gives $k = 1.41 \pm 0.07 \times 10^{13} \exp(-7900 \pm 200/RT)$ between 300° and 910°K. The uncertainty in the frequency factor is the reproducibility of k at any given temperature, while that in the activation energy represents the limits in the variation of the slope of the line in Fig. 1. This value is in reasonable agreement with the previous work and provides a transition between the high- and low-temperature studies. The experimental data may be described equally well in the form $k = 3 \times 10^{11} T^{1/2} \exp(-7130/RT)$.

The production of N atoms in a discharge is greatly increased by impurities which are either present in the N_2 or enter through leaks in the flow system.⁶ For the measurement of N decay at low temperatures a relatively high pressure and low flow rate are necessary to obtain sufficient reaction. Under these conditions wall losses are high and additional impurity may be needed to give sufficient N-atom signal. Normally this is accomplished by adding an air leak before the discharge. However, it has been discovered that O_2 passing through the discharge causes an increase in the measured rate of N decay at low temperatures and a decrease at higher temperatures. For example, at 586°K an O_2 leak of $\approx 0.1\%$ led to $\approx 5\%$ decrease in the rate and a leak of $\approx 0.5\%$ to $\approx 20\%$ decrease. At 360°K, however, a leak of $\approx 0.2\%$ caused $\approx 20\%$ increase in the rate. At room temperature the effect is even greater—increasing the leak from $\approx 0.1\%$ to $\approx 0.5\%$ doubles the measured rate. Thus even a small amount of O_2 impurity would tend to decrease the measured activation energy, which may account for the lower values reported in Refs. 3 and 4.

The addition of O_2 after the discharge increases the N-atom signal to a lesser degree.⁶ The 408° and 353°K points were determined with no O_2 leak before the discharge but adding $[\text{O}_2]_1 \gg [\text{N}]$ immediately after the discharge. Since the rate of N loss was low, there was still sufficient N at the cavity so that additional $[\text{O}_2]_2 \gg [\text{N}]$ could be added through the movable tube and the decay of N due to $[\text{O}_2]_2$ measured. The 353°K point (no leak) and the 360°K point (leak) may be compared in Fig. 1.

The assistance of A. A. Westenberg and N. de Haas in developing the experimental technique and of J. T. O'Donovan in helping with the experimental work is gratefully acknowledged.

¹ A. A. Westenberg and N. de Haas, J. Chem. Phys. **46**, 490 (1967).

² A. A. Westenberg and N. de Haas, J. Chem. Phys. **40**, 3087 (1964).

³ G. B. Kistiakowsky and G. G. Volpi, J. Chem. Phys. **27**, 1141 (1957).

⁴ M. A. A. Clyne and B. A. Thrush, Proc. Roy. Soc. (London) **A261**, 259 (1961).

⁵ F. Kaufman and L. J. Decker, Symp. Combust. 7th London, Oxford 1958, 57 (1959).

⁶ J. T. Herron, J. Res. Natl. Bur. Std. U.S. **69A**, 287 (1965).

Errata

Erratum: "Dielectric Relaxation in the Electric Double Layer"

[J. Chem. Phys. **44**, 1445 (1966)]

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THE caption of Fig. 6, p. 1451, in this article should read:

FIG. 6. Effect of dielectric relaxation of solvent dipoles in the double layer. Parameters [cf. Eqs. (14) and (15)]: $\tau_0 = 10^{-8}$ sec, $\Delta\epsilon C_0 = 3 \mu\text{F cm}^{-2}$, $\beta = 0.33$ (distribution of relaxation times present: solid lines) or $\beta = 0$ (no distribution of relaxation times: broken lines), $C^d = 30 \mu\text{F cm}^{-2}$.

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[J. Chem. Phys. **45**, 2811 (1966)]

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ERRORS in transcription confused the sense of the caption to Fig. 2. It should read as follows:

FIG. 2. Interaction of straight chain (Subscript 1) and regular star molecules (Subscript 2). The dashed curves represent B_{12} ; the solid curves, $B_{22}e^{1/2}$. The horizontal solid line is $B_{11} = 2.865$. Curves are shown for f_2 equal to 1 (straight chain), 3, 5, 8, as indicated on the plots. The height of the shaded areas indicates the deviation of B_{12} from the boundary of the region lying between B_{11} and the curve $B_{22}e^{1/2}$.