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Erratum: A comparison of the rough sphere rotational diffusion model with experimental results for liquid methyl iodide

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Erratum: Unitary approach to capillary condensation and adsorption [J. Chem. Phys. 66, 5069 (1977)]

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Four corrigenda are noted:

In the abstract 0.98 should be 0.99.

In Eq. (8), $F(y) - \Psi_*$ should be $\Psi_* - F(y)$.

In Eq. (20), $+\frac{r''}{[1+(r')^2]^{3/2}}$ should be $-\frac{r''}{[1+(r')^2]^{3/2}}$.

On p. 5074, line 3, 10^{-6}m should be 10^{-8}m.

Erratum: A comparison of the rough sphere rotational diffusion model with experimental results for liquid methyl iodide [J. Chem. Phys. 65, 2033 (1976)]

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The theoretical values of τ_1 and τ_2 for $\tau_\omega < 1.5 \times 10^{-13}$ s shown in Fig. 1 are in error. The corrected figure is given below. For $\tau_\omega \simeq 4 \times 10^{-14}$ s, the theoretical τ_1 and τ_2 values are in agreement with the experimental infrared and Raman relaxation times. This τ_ω is an order of magnitude closer to the experimental angular momentum relaxation time but is still a factor of three too small. This τ_ω value also yields more physically reasonable values for the packing fraction and roughness. For a perfectly rough sphere of diameter 5.05 Å, the corresponding packing fraction is 0.68. The paper should conclude that Chandler's rough sphere rotational diffusion model gives a reasonable explanation of the motion of liquid methyl iodide.

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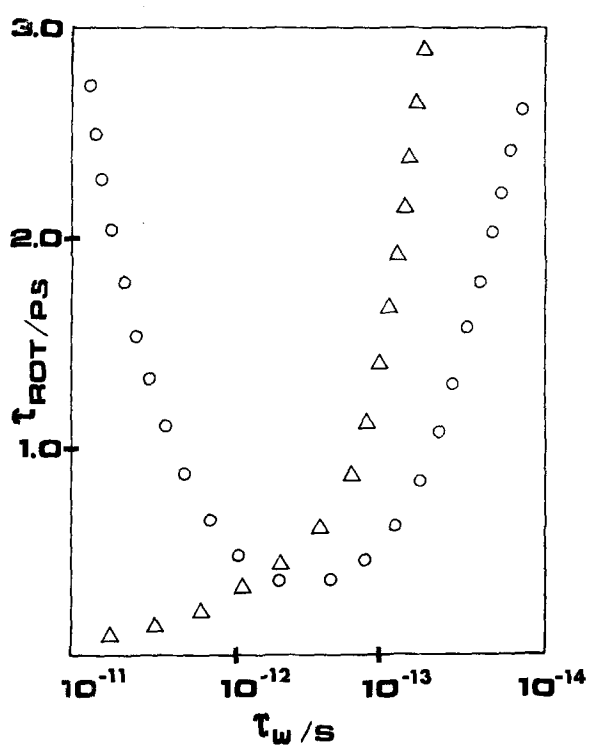

FIG. 1. Rotational relaxation times vs angular momentum relaxation time for methyl iodide at 283.7 K: △, τ_1 (infrared); ○, τ_2 (Raman).

