ERRATA

Erratum: Origin of depolarized light scattering in supercooled liquids: Orientational fluctuation versus induced scattering mechanisms [Phys. Rev. E 53, 896 (1996)]

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[S1063-651X(97)07501-6]

PACS number(s): 64.70.Pf, 78.35.+c, 61.25.Em, 99.10.+g

The mean molecular polarizability α of salol estimated via the Lorentz-Lorenz equation was incorrectly given in Table I of the original paper as 2.24×10^{-24} rather than 2.24×10^{-23}. Consequently, the theoretical cross section per unit volume for salol DID scattering $R_{\mathrm{VH}}^{\mathrm{DID}}$, which is proportional to α^4 [Eq. (2.20b)], was given as 5.83×10^{-11} but should be 5.83×10^{-7}. The ratio $\frac{4}{3}R_{\mathrm{VH}}^{\mathrm{DID}}/R_{\mathrm{iso}}$ for salol is therefore 0.2 rather than 2×10^{-5} as shown.

In Table II of the original paper, the ratio $R_{\mathrm{VH}}^{\mathrm{EXPT}}/R_{\mathrm{VH}}^{\mathrm{DID}}$ for salol, given as 3.0×10^5, is therefore reduced to 30. While this value still indicates that orientational fluctuations are the dominant light scattering mechanism in salol, our conclusion that ''the integrated anisotropic scattered intensity is overwhelmingly due to orientational fluctuations'' was overstated. Furthermore, in analyzing the salol-CCl_4 dilution experiments, we relied on the small computed salol DID cross section in combination with the observed increase in scattered intensity at all frequencies when salol is added to CCl_4 to argue that salol orientational fluctuations dominate at all frequencies. However, since with the corrected value of α, $R_{\mathrm{VH}}^{\mathrm{DID}}$ for salol is approximately four times larger than for CCl_4, this experiment cannot rule out the possibility of a crossover from low-frequency orientational scattering to high-frequency DID scattering for salol. We must therefore withdraw that conclusion.

Also, in the same Table I, the compressibility values reported had mixed origins, some originating from old isothermal susceptibilities, and others from isentropic measurements. We have systematically recomputed those values using the sound velocities deduced from Figs. 1(a)–1(d) and the zero frequency sound velocity of salol determined in [1], to obtain χ_S, the isentropic compressibility, and then χ_T, the isothermal compressibility, from $\chi_T/\chi_S=C_P/C_V=\gamma$ and $\gamma-1=T(\alpha_P)^2/(\chi_S C_P/V)$, where C_P/V is the specific heat per unit volume at constant pressure [2,3] and α_P is the isobaric volume expansion coefficient [4]. Table I below presents the revised input data, the modified χ_T, and the corrected R_{iso}^{fl} values.

TABLE I. Recomputed R_{iso}^{fl} values.

	CCl_4	$CHCl_3$	CH_2Cl_2	CS_2	Salol
C_P (cal g^{-1} T^{-1})	0.203[2,3]	0.234 [2,3]	0.288 [2]	0.372 [3]	0.391 [2]
$\alpha_P(10^{-3}\ \mathrm{T}^{-1})$	1.18 [2]	1.11 [2]	1.1 [a]	1.14 [2]	1.1[a]
$\chi_S(10^{-12}\ \mathrm{cm}^2\ \mathrm{dyn}^{-1})$	56	58	58	49	35
$\chi_T(10^{-12}\ \mathrm{cm}^2\ \mathrm{dyn}^{-1})$	86	83	80	68	52
$R_{\mathrm{iso}}^{fl}(10^{-6})$	7.7	6.9	5.9	13.2	8.7

[a] Extrapolated value.

[1] C. Dreyfus, M. J. Lebon, H. Z. Cummins, J. Toulouse, B. Bonello, and R. M. Pick, Phys. Rev. Lett. **69**, 3666 (1992).

[2] *Handbook of Chemistry and Physics*, 30th ed. (CRC Press, Boca Raton, 1946), pp. 1783–1787.

[3] *Handbook of Chemistry and Physics*, 59th ed. (CRC Press, Boca Raton, 1978), p. D-212.

[4] *Handbook of Chemistry and Physics*, 30th ed. (CRC Press, Boca Raton, 1946), p. 1753.