

Erratum: Transient birefringence of liquids induced by terahertz electric-field torque on permanent molecular dipoles

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This Article contains typographical errors in six instances in which the convolution symbol ‘*’ was mistakenly omitted from six equations during the production stage. Each instance is described below.

The penultimate sentence of the first paragraph of the Results subsection titled ‘Model’ should read:

‘Therefore, Δf_1 does not yet cause optical birefringence but is accompanied by a time-dependent dielectric polarization $\mathbf{P} = \chi^{\mu_0} * \mathbf{E}$.’

The correct form of equation (3) is:

$$\Delta n(t) \propto R_2 * [E \cdot (N\Delta\alpha E + 3\chi^{\mu_0} * E)]. \quad (3)$$

In the second paragraph after equation (3), the first sentence should read:

‘Note that equation (3) reveals an analogy of the μ_{ind} - and μ_0 -related coupling mechanisms: the first field interaction generates an effective electronic ($N\Delta\alpha E$) and orientational polarization ($\chi^{\mu_0} * E$) which, in turn, serves as a handle for the second field interaction to generate a P_2 -like perturbation (square bracket in equation (3)).’

In the paragraph preceding equation (11), the second sentence should read:

‘This polarization is usually expressed by the convolution $P = \chi^{\mu_0} * E$ where χ^{μ_0} is the contribution of the permanent electric dipole moment μ_0 to the familiar total dielectric susceptibility χ .’

The correct form of equation (11) is:

$$\Delta f_1(u, t) \propto P_1(u) \cdot (\chi^{\mu_0} * E)(t). \quad (11)$$

The correct form of equation (12) is:

$$\Delta f_2(u, t) \propto P_2(u) \cdot \{R_2 * [E \cdot N\Delta\alpha E + 3E \cdot (\chi^{\mu_0} * E)]\}(t) \quad (12)$$



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