Erratum: Free-energy density functional for hard spheres [Phys. Rev. A 31, 2672 (1985)]

P. Tarazona

There is a mistake in the transcription of the formula for the weight functions w_1 and w_2, so that several factors $\pi/6$ are missing. Equation (2.16) should read

$$20w_0(r)+(4\pi/3)w_1(r)+10\int d\mathbf{r}'\, w_0(r)w_0(|\mathbf{r}+\mathbf{r}'|) +(4\pi/3)\int d\mathbf{r}'\, w_0(r')w_1(|\mathbf{r}+\mathbf{r}'|)=\frac{6}{\pi}\left[8-6\frac{r}{\sigma}+\frac{1}{2}\left[\frac{r}{\sigma}\right]^3\right]\Theta(\sigma-r)\ ; \qquad (2.16)$$

Eq. (2.21) should read

$$w_2(r)=\frac{5}{4\pi}\left[\frac{6}{\pi}\right]^2\left[6-12\frac{r}{\sigma}+5\left[\frac{r}{\sigma}\right]^2\right]\Theta(\sigma-r)\ ; \qquad (2.21)$$

and, in the Appendix, Eqs. (A1), (A3), and (A4) should read

$$w_1(q)=\frac{6}{\pi}\frac{f(q)+20w_0(q)+10[w_0(q)]^2}{8[1+w_0(q)]}\ , \qquad (A1)$$

$$w_1(x)=\frac{6}{\pi}(a_0+a_1x+a_2x^2),\quad x=r/\sigma\le 1\ , \qquad (A3)$$

and

$$w_1(x)=\frac{6}{\pi}\{ce^{-\beta_1(x-1)}\sin[\alpha(x-1)]+e^{-\beta_2(x-1)}(b_0+b_1x+b_2x^2+b_3x^3)\},\quad x=r/\sigma>1\ . \qquad (A4)$$

The correct formulas have been used for all the calculations.

The Percus-Yevick (PY) structure factor in Fig. 5 is erroneous. The correct $S_{\text{PY}}(q)$ has a higher first peak, similar to the one obtained in the density-functional model, and so the corresponding comment at the end of Sec. IV is unfounded.

The author is grateful to Dr. R. Evans, Dr. M. Baus, and Professor G. L. Jones for pointing out this mistake.

Erratum: Magnetic-field-enhanced and -suppressed intrinsic optical bistability in nematic liquid crystals [Phys. Rev. A 31, 3450 (1985)]

Hiap Liew Ong

On p. 3450, the first line of the second column should read "Known thermotropic NLC's are diamagnetic and mostly with positive diamagnetic anisotropy . . . ."

Equation (3) should read

$$\theta_m(I)\cong\sqrt{(I_{\text{th}}/I_0)(I/I_{\text{th}}-1)/2B}\ .$$

After Eq. (4), the variable A should read $A=(I_{\text{th}}/I_0)(\sqrt{I/I_{\text{th}}}-1)\cong=(I_{\text{th}}/I_0)(I/I_{\text{th}}-1)/2$.

On p. 3451, second column, line 3, the falling threshold intensity should read $I'_{\text{th}}=I_{\text{th}}[1-(I_0/I_{\text{th}})(B^2/4G)]^2$.

On p. 3451, second column, lines 11 and 12 should read "Here the transition is second order with $\theta_m=[(I_{\text{th}}/I_0)(I/I_{\text{th}}-1)/2G)]^{1/4}$."