Erratum: "Density-functional theory of the crystallization of hard polymeric chains" [J. Chem. Phys. 115, 7744 (2001)]

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LETTERS TO THE EDITOR

The Letters to the Editor section is divided into three categories entitled Notes, Comments, and Errata. Letters to the Editor are limited to one and three-fourths journal pages as described in the Announcement in the 1 January 2002 issue.

ERRATA

Erratum: "Density-functional theory of the crystallization of hard polymeric chains" [J. Chem. Phys. 115, 7744 (2001)]

Nazar Sushko,^{a)} Paul van der Schoot,^{a)} and M. A. J. Michels^{a)}
Dutch Polymer Institute, P.O. Box 902, 5600 AX Eindhoven, The Netherlands

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We have discovered a few minor errors in our article, which we would like to correct. The errors do not affect the results of our calculations, but might confuse readers wishing to verify our derivations. On the right side of Eq. (17) the pre-factor of 1/2 appearing in front of the second term should be dropped, so Eq. (17) should read

$$\Delta\tilde{\omega} \equiv \frac{\Delta\tilde{\Omega}}{\rho_L V} = \frac{1}{\rho_L V} \int d\mathbf{r} \{ \rho(\mathbf{r}) \ln \rho(\mathbf{r}) / \rho_L - \Delta \} \\ - \frac{1}{\rho_L V} \sum_{p=2}^{\infty} \frac{1}{p!} \int \dots \int C^{(p)} \\ \times (\mathbf{r}_1, \dots, \mathbf{r}_p) \prod_{i=1}^p d\mathbf{r}_i (\rho(\mathbf{r}_i) - \rho_L)$$

^{a)}Also at Polymer Physics Group, Department of Applied Physics, Eindhoven University of Technology, P.O. Box 513, 5600 MB Eindhoven, The Netherlands.

$$-(\mu_S - \mu_L) \frac{1}{\rho_L V} \int d\mathbf{r} \rho(\mathbf{r}) - \frac{1}{\rho_L V} \int d\mathbf{r} (\rho(\mathbf{r}) - \rho_L). \quad (17)$$

The final Eq. (22), derived from Eq. (17), is correct.

In Eqs. (20) and (21) all $\mathbf{k}_n$ should be substituted by $\mathbf{q}_n$. Eq. (20) becomes

$$\rho(\mathbf{r}) = \rho_L \left[1 + \eta + \sum_{\{\mathbf{q}_n\}} \zeta(\mathbf{q}_n) \exp i\mathbf{q}_n \cdot \mathbf{r} \right], \quad (20)$$

while Eq. (21) becomes

$$\zeta(\mathbf{q}_n) = (1 + \eta) \exp -\mathbf{q}_n^2 \epsilon^2 / 4. \quad (21)$$

Equation (B9) in Appendix B should read

$$\Lambda_0 \approx (MN)^{-1} \int d\mathbf{r} (\rho_L^2 + \Delta\rho(\mathbf{r}) \hat{g} \Delta\rho(\mathbf{r})) + \dots, \quad (B9)$$

but Eq. (B10), derived from it, is not affected by the typographical error in the article.