

# Erratum: Theory and simulation of polar and nonpolar polarizable fluids [J. Chem. Phys. 99, 6998 (1993)]

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Aside from Fig. 1 all of the figures appeared erroneously. For the sake of clarity, we list the correct sequence of figures here.

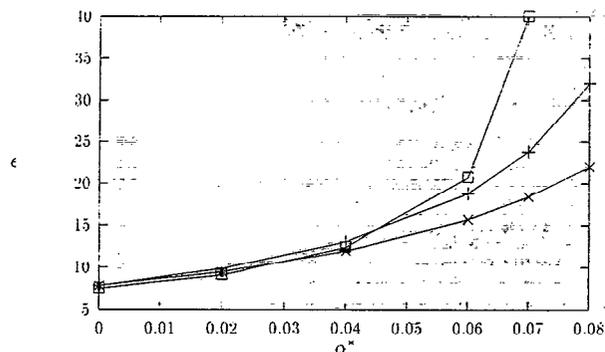


FIG. 1. The dielectric constant of a polar polarizable fluid plotted as a function of the reduced polarizability  $\alpha^*$ . The parameters of the fluids are given in the text. (a)  $\square$ , the Monte Carlo simulation result for a spherical polarizable fluid with  $\theta=1.0$  and  $\rho^*=0.8$ , (b)  $\times$ , the MSA result for the same isotropic fluid as in curve (a); (c)  $+$ , the MSA result for the anisotropic fluid with  $\theta=1.0$  and  $\rho^*=0.8$  but with  $\alpha_{\parallel}/\alpha_{\perp}=1.44$  where  $(\alpha_{\parallel} + 2\alpha_{\perp})/3$  is the same as the spherical polarizability used in curve (a).

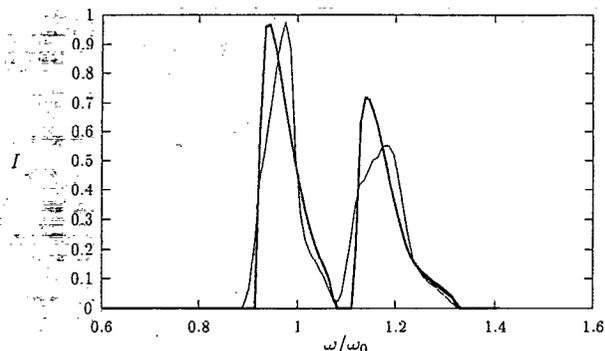


FIG. 3. The power spectrum of a hard sphere mixture containing equal size sphere at a reduced density of  $\rho^*=0.384$ . The mole fractions of the two components are the same, that is,  $X_1=X_2=0.5$ . The polarizability is the same for the two components,  $\alpha^*=0.06$ , but the frequencies are different,  $\omega_1=\omega_0$ ,  $\omega_2=1.2\omega_0$ . The solid curve is the simulation result and the bold curve is the MSA result.

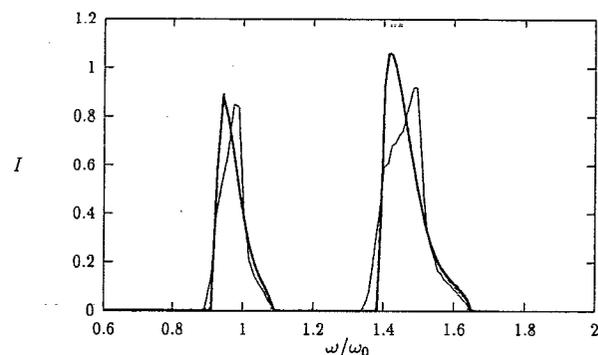


FIG. 4. The same plot as Fig. 3 except for  $\omega_1=\omega_0$  and  $\omega_2=1.5\omega_0$ .

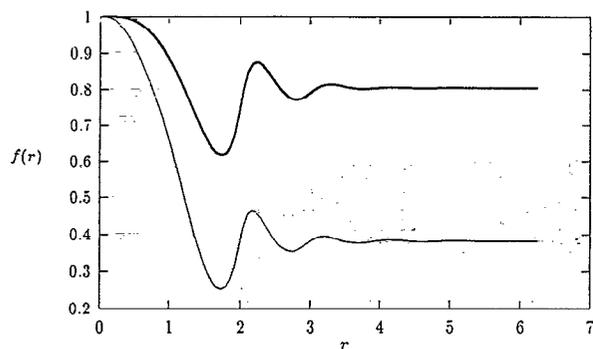


FIG. 2. The screening function defined by Eq. (5.20) for (a) a permanent point charge (the solid curve) and (b) a permanent point dipole (the bold curve) in a polarizable hard sphere fluid of reduced density  $\rho^*=\rho\sigma^3=0.8$  and reduced polarizability  $\alpha^*=\alpha/\sigma^3=0.2$ . ( $\sigma$  is the hard sphere diameter.)

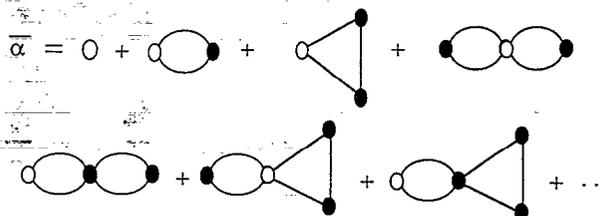


FIG. 5. The Taylor expansion of the renormalized polarizability  $\bar{\alpha}$ . The white circle represents the tagged particle, each black circle represents a dummy particle being integrated, and lines connecting the circles represent dipolar propagator.

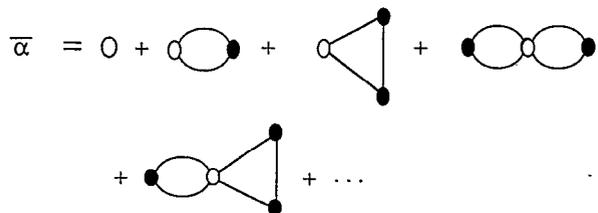


FIG. 6. The topological reduction of Fig. 5. Each black circle now represents the summation of diagrams in Fig. 5.

$$\bar{\alpha} = \frac{\alpha}{1 - (\text{circle} + \text{circle with black dot} + \text{triangle} + \dots)}$$

FIG. 7. Further reduction of Fig. 6 which leads to the self-consistent equation (A12).

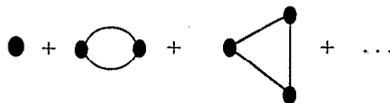


FIG. 8. The infinite series of the simple connected diagrams which defines  $\Sigma$  used in Eq. (A12).