

The Variational Calculation of Bulk Moduli for Liquid Binary Alloys of Alkali Metals

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The bulk moduli of the Na–K, Na–Cs, and K–Rb liquid equiatomic alloys at $T = 373$ K are calculated by the variational method with the hard-sphere reference system. The local Animalu–Heine model pseudopotential and Toigo–Woodruff exchange-correlation function are used for the calculation. A good agreement with experimental data is achieved.

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This article was originally published on February 2017 with some mistakes in Eqs. (4) and (7). In corrected form these equations must be rewritten as follows:

$$\phi_{\text{NFE}}(r) = \frac{z^2}{r} + \frac{\Omega}{\pi^2} \int_0^{\infty} F(q) \frac{\sin(qr)}{qr} q^2 dq, \quad (4)$$

$$\phi_{\text{NFE}ij}(r) = \frac{z_i z_j}{r} + \frac{\Omega^{\text{bin}}}{\pi^2} \int_0^{\infty} F_{ij}(q) \frac{\sin(qr)}{qr} q^2 dq. \quad (7)$$

Author apologizes for this error.

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