

**Erratum: Improved treatment of ground-state correlations:  
Modified random phase approximation  
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A factor 1/2 in front of the sum in Eq. (26) was missing. So were the factors  $\Omega_\lambda/\Omega_j$  and  $\Omega_\lambda/\Omega_{j'}$  ( $\Omega_\ell \equiv \ell + 1/2$ ) in Eq. (27) in front of  $\bar{D}_{jj''}$  and  $\bar{D}_{j''j'}$ , respectively. In the same way, the factors  $\Omega_\lambda/\Omega_{j_h}$  and  $\Omega_\lambda/\Omega_{j_p}$  were missing in Eq. (A7). These typing errors do not affect any other parts of the paper. The corrected expressions are given below.

$$\bar{M}_{\lambda i} = \left\{ \frac{1}{2} \sum_{jj'} [q_{jj'}^{(\lambda)}]^2 [\bar{u}_{jj'}^{(+)}]^2 \left[ \frac{1}{(\bar{\epsilon}_j + \bar{\epsilon}_{j'} - \omega_{\lambda i})^2} - \frac{1}{(\bar{\epsilon}_j + \bar{\epsilon}_{j'} + \omega_{\lambda i})^2} \right] \right\}^{-1/2}, \quad (26)$$

$$\begin{aligned} \bar{D}_{jj'} \equiv 1 - n_j - n_{j'} = 1 - \sum_{\lambda i} \Omega_\lambda \sum_{j''} \{ \Omega_j^{-1} \bar{D}_{jj''} [ \bar{Y}_{jj''}^{(\lambda i)} \sqrt{(1-n_j)(1-n_{j''})} + \bar{X}_{jj''}^{(\lambda i)} \sqrt{n_j n_{j''}} ]^2 \\ + \Omega_{j'}^{-1} \bar{D}_{j''j'} [ \bar{Y}_{j''j'}^{(\lambda i)} \sqrt{(1-n_{j''})(1-n_{j'})} + \bar{X}_{j''j'}^{(\lambda i)} \sqrt{n_{j''} n_{j'}} ]^2 \}, \end{aligned} \quad (27)$$

and

$$\begin{aligned} \bar{D}_{ph} = 1 - \sum_{\lambda i} \Omega_\lambda \left\{ \sum_{p'} \Omega_{j_h}^{-1} \bar{D}_{p'h} [ \bar{Y}_{p'h}^{(\lambda i)} \sqrt{(1-f_{p'})f_h} + \bar{X}_{p'h}^{(\lambda i)} \sqrt{f_{p'}(1-f_h)} ]^2 \right. \\ \left. + \sum_{h'} \Omega_{j_p}^{-1} \bar{D}_{ph'} [ \bar{Y}_{ph'}^{(\lambda i)} \sqrt{(1-f_p)f_{h'}} + \bar{X}_{ph'}^{(\lambda i)} \sqrt{f_p(1-f_{h'})} ]^2 \right\}. \end{aligned} \quad (A7)$$