

$$\hat{\mathbf{f}}/\mathbf{n})\|\mathbf{r} + (\hat{\mathbf{d}}\mathbf{f}/\text{tr}[\mathbf{V}])\psi(\mathbf{r})\|^2/n + (\hat{\mathbf{d}}\mathbf{f}/\text{tr}[\mathbf{V}])^2\|\psi(\mathbf{r})\|^2/n + 2(\hat{\mathbf{d}}\mathbf{f}/\mathbf{n})\|\mathbf{r}\|^2/n - \|\boldsymbol{\epsilon}\|^2/n$$

