

$$V(\mathbf{R}, \mathbf{r}) = \sum_{i < j} \frac{Z_i Z_j e^2}{4\pi\epsilon_0} \frac{1}{|\mathbf{R}_i - \mathbf{R}_j|} + \sum_{\alpha < \beta} \frac{e^2}{4\pi\epsilon_0} \frac{1}{|\mathbf{r}_\alpha - \mathbf{r}_\beta|} - \sum_{i, \alpha} \frac{Z_i e^2}{4\pi\epsilon_0} \frac{1}{|\mathbf{R}_i - \mathbf{r}_\alpha|} =$$