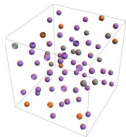


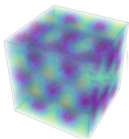
point cloud

atomic density mixture

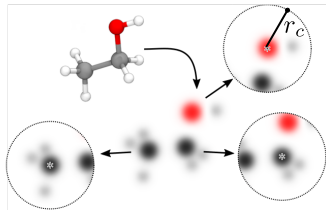
environmental densities



structure A



$$\sum_{i \in A} \rho(\mathbf{r} - \mathbf{r}_i)$$



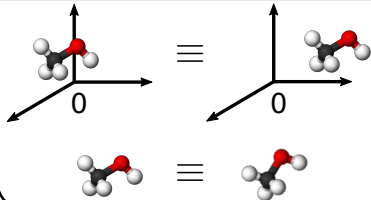
$$\rho_i(\mathbf{r}) = \sum_{j \in A_i} \rho(\mathbf{r} - \mathbf{r}_{ji})$$



$$c_k^i = \int_{\mathbb{R}^3} d\mathbf{x} \rho_i(\mathbf{x}) b_k(\mathbf{x})$$

basis expansion coefficients
for a basis $\{b_k\}_{k=1}^M$

Symmetries



c_1

c_2

\vdots

\vdots

c_M