$$-\frac{\hbar^2}{2m}\nabla^2\psi + V\psi = E_s\psi;\quad E_{kin} = \frac{1}{2}\Sigma\_k\psi(x)^\dagger\nabla^2\psi(x);\quad \nabla^2\phi(x) = -4\pi n;$$
$$\int dV\psi\_k(x)^\dagger\psi\_k'(x) = \delta\_kk';\ E = E_{ii} + E_{kin} + nU_{ei} + nU_{ee} + E_{xc}(n);\ E =$$
$$E\_ii + E\_kin + nU\_ei + nU\_ee + E\_xc(n); \Psi(x) = \int_V \Psi_\alpha b_\alpha(x)dV; O_{\alpha\beta} = \int b_\alpha b_\beta dV$$