Solving the electronic Schrödinger equation holds the key to understanding the underlying electronic structure, especially for molecules in which the wavefunction is highly entangled and cannot even qualitatively described at the level of a single configuration, such as Hartree-Fock theory or Kohn-Sham density functional theory. We have been developing stochastic methods to deal with such situations, which offer considerable promise in being able to extend the range of applicability of quantum chemical methods into this difficult regime. I will outline the core algorithm of these stochastic methods, and show examples of applications to cuprates.