

Title: Frozen core coupled cluster calculations on finite electron gases

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We use finite coupled cluster calculations of the uniform electron gas to study the effect of orbital freezing on the correlation energy in solids. Taking a finite electron gas and freezing out core electrons starting from the orbitals with the lowest kinetic energy, we show that the fraction of energy lost is approximately linear in the number of frozen orbitals. This could be of interest to those practitioners applying coupled cluster theory to solids.