

Strong-coupling limit in DFT and Hartree-Fock: kinetic correlation energy and dispersion

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The strong-coupling expansion of DFT provides mathematical insights on how to build approximations that can describe strong correlation. In this talk I will discuss some recent developments, particularly the extension of this limit to the case of Hartree-Fock theory and the inclusion of dispersion.

References

1. M. Seidl, S. Giarrusso, S. Vuckovic, E. Fabiano, P. Gori-Giorgi, *J. Chem. Phys.* **149** (2018), 241101.
2. D.P. Kooi, P. Gori-Giorgi, *J. Phys. Chem. Lett.* **10** (2019), 1537.