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Typ: **Poster**

Lattice models of fluids with Density Functional Theory

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We use lattice models of particles with hard core repulsion and a short-ranged attraction to describe fluids. Density functionals for such models are introduced and the construction of a dynamic density functional theory is explained.

Previous work in a simple lattice gas model [1] has shown that droplet evaporation and the "coffee ring effect" can be described even though the dynamics neglects hydrodynamic effects. We further discuss improvements and generalizations of the above mentioned model.

[1] Chalmers, C. and Smith, R. and Archer, A.J., Dynamical Density Functional Theory for the Evaporation of Droplets of Nanoparticle Suspension, *Langmuir*, (33,14490–14501),(2017).

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