Abstract Submitted
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Density functional theory for strongly-correlated ultracold dipolar gases[1] FRANCESC MALET GIRALT, Vrije Univ (Free Univ), STEPHANIE REIMANN, Lund University, PAOLA GORI-GIORGI, Vrije Univ (Free Univ), LUND UNIVERSITY COLLABORATION — We address quasi-one-dimensional strongly-correlated dipolar ultracold gases by means of density functional theory. We make use of an approximation for the Hartree-exchange-correlation that has been shown to be very accurate for electronic systems with coulombic interactions. We show that this approach allows to treat systems with very large particle numbers at relatively low computational cost.

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