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Optimized DMRG calculations for 2D interacting fermions JING CHEN, TAO XIANG, HAIDONG XIE, RUIZHEN HUANG, Chinese Academy of Sciences (CAS) — We proposed a scheme to optimize DMRG in the calculations of 2D interacting fermion system. We take Hubbard model of size up to 10*10 with periodic boundary condition as an example. In the optimized basis, the entanglement entropy is about half of real space. The optimized DMRG achieves much higher accuracy compared with real basis and momentum basis.

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