

Abstract Submitted
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Multi-band Hubbard Model Simulation for Unconventional Superconducting System¹ SHI-QUAN SU, MICHAEL S. SUMMERS, THOMAS A. MAIER, Oak Ridge National Lab — To simulate the new experiment findings on unconventional superconductor materials such as Cuprates and iron pnictides, it is inevitable to go beyond single-band model and capture the physics from multi-band effects. We carried out a novel Dynamical Cluster Quantum Monte Carlo study on multi-band Hubbard model, implementing the Continuous Time Quantum Monte Carlo algorithm as quantum solver. We studied various of single-particle properties aiming to observe the experiment concerned issues such as the spontaneous symmetry breaking to nematic order.

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