

Abstract Submitted  
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**Quantum solvation in optical lattice** YOU WENLONG<sup>1</sup>, GU SHI-JIAN, LIN HAIQING, Department of Physics, The Chinese University of Hong Kong, Shatin, N. T., Hong Kong, CUHK TEAM — We have studied the ground state phase diagram of the one dimensional asymmetric t-J-Jz model at various filling by different methods. The reduced dimensionality and asymmetric hopping could lead to interesting dynamics which can be conjectured to demonstrate quantum solvation process with fermion character of the quantum solvent. The system potentially can be demonstrated in optical lattice.

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