

Abstract Submitted  
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**Squeezing out the entropy of Fermions in an optical lattice.** QI ZHOU, TIN-LUN HO, Physics Department, The Ohio State University, Columbus, OH, 43210 — We point out a new scheme for achieving the strongly correlated system in an optical lattice. By turning the bulk of the trapped fermions into a band insulator, the entropy of the system is expelled to the surface and removed by various means. Our scheme also illustrates a general principle of cooling in a many body system. That is, one can use a gapped state to squeeze out the entropy and then turn it into the desired state after the entropy is removed.

Qi Zhou  
Physics Department, The Ohio State University, Columbus, OH, 43210

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