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**Transport Measurements in the Disordered Bose-Hubbard Model**[1]

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We experimentally realize the disordered Bose-Hubbard model by introducing fine-grained disorder to ultra-cold atoms confined in an optical lattice. Transport measurements reveal that the equivalent of resistivity is unaffected in the quantum critical regime if the disorder strength is less than or comparable to the Hubbard interaction energy $U$. For extreme disorder, i.e., much greater than $U$, we observe a disorder-induced superfluid-to-insulator transition.

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