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Simulating Thermopower in Mott-Hubbard Materials STANIMIR KONDOV, WILLIAM MCGEHEE, BRIAN DEMARCO, University of Illinois at Urbana-Champaign, DEMARCO GROUP TEAM — We report progress on a new project to simulate and understand thermopower in Mott-Hubbard materials. Ultra-cold ^{40}K atoms will be confined in an optical lattice. A temperature gradient applied across the lattice will induce mass transport, which can be resolved using time-of-flight imaging and employed to determine the Seebeck coefficient. The impact of Hubbard parameters, disorder, and lattice geometry on thermopower will be investigated.

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