

Abstract Submitted  
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**Floquet-Aubry-Andr Localization in Driven Quasiperiodic Optical Lattices**<sup>1</sup> TOSHIHIKO SHIMASAKI, PETER DOTTI, MAX PRICHARD, ENRIQUE MORELL, DAVID WELD, University of California, Santa Barbara — Optical lattice experiments are an ideal tool for exploring the interplay among disorder-induced localization, interaction-induced localization, and dynamical localization. We discuss experiments probing the response of a quantum gas in a tunable bichromatic lattice to strong phasonic [1] and dipolar modulation. Independent tuning of the quasi-disorder strength and the effective tunneling enables exploration of a wide parameter space lying between limiting cases such as Aubry-Andr localization (for zero drive strength) and dynamical localization (for a dipolar drive at zero quasi-disorder strength).

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