

Abstract Submitted
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On nearest-neighbor interactions of cold polar molecules in two-color arrays T. BRAGDON, University of Connecticut, Storrs CT 06269, S.F. YELIN, University of Connecticut, Storrs CT 06269; ITAMP at Harvard Smithsonian CfA, Cambridge MA 02138; Harvard-MIT CUA, Cambridge MA 02139 — We analyze the interaction dynamics of polarized molecules excited from ground rot.-vib. states in two-color optical arrays as a periodic structure of two interacting dipoles with the aim of improved interaction clarity, namely, where nearest-neighbor interactions predominate. We also discuss connections to emergent many-body dynamics and enhanced optical nonlinearity in these arrays.

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