

Abstract Submitted
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Single Photon Nonlinearity in Cold Polar Molecular Arrays: Controlled Phase Operation T. BRAGDON, R.M. RAJAPAKSE, University of Connecticut, A.M. REY, ITAMP, S.F. YELIN, University of Connecticut, ITAMP — As a potential application of single photon nonlinearities in cold polar molecules, we present a schema for controlled phase operation in quantum computation. We compare decoherence vs. gate times with previous work on site addressed molecular qubits as a function of lattice density. We propose coherent control via protected many-body symmetric manifold.

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