Abstract Submitted for the TSS13 Meeting of The American Physical Society

Effects of coherent population trapping on Raman scattering MARSHALL ROGERS, STEPHEN SCHILLER, YURI ROSTOVTSEV, Department of Physics, University of North Texas — We study Raman scattering in molecular media by applying two laser fields in a two-photon resonance with vibrational transition. The role of rotational levels has been investigated. It is shown that the molecular vibrational coherence strongly depends on the effect of coherent population trapping for rotational levels. The obtained results are important for application of Raman spectroscopy to molecular detection for engineering, chemical, and biological applications.

Yuri Rostovtsev Department of Physics, University of North Texas

Date submitted: 10 Mar 2013

Electronic form version 1.4