

Abstract Submitted  
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**Energy relaxation and dephasing in CARS** SVETLANA MALINOVSKAYA, Department of Physics and Engineering Physics, Stevens Institute of Technology, Hoboken, NJ 07030 — We use the adiabatic passage control scheme developed for the CARS spectroscopy to investigate the energy and phase relaxation as factors of the optical polarization decay. We show that in strong fields the dynamics of induced polarization via adiabatic passage is dependent on phase relaxation, and to less extent on energy relaxation for characteristic times close to pulse duration. We justify our conclusions with the dressed state dynamics analysis.

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