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Robust control by two chirped pulse trains in the presence of decoherence SVETLANA MALINOVSKAYA, Stevens Institute of Technology — We propose the adiabatic passage control method implementing chirped femtosecond laser pulses in the Raman configuration to optimize coherence in a selected vibrational mode. We investigate vibrational energy relaxation and collisional dephasing as factors of the coherence loss, and demonstrate the possibility for preventing decoherence by two pulse trains chirped in accordance with the proposed method.

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