Optimal Control of Dissipative Molecular Dynamics

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Abstract. First I will briefly summarize an optimal control procedure within the density matrix formalism and numerical techniques for solving coupled pulse design equations. Then I will examine dissipation effects on control, and propose an utilization of dissipation processes in control and a possible way for controlling dissipation. These topics will be discussed using numerical results, which include wave packet shaping, femtosecond desorption dynamics, predissociation of a diatomic molecule.