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# Normal form approach for laser-driven chemical reactions

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## Abstract

Recent laser technology has enabled to control the molecular motions like chemical reactions. To obtain theoretical understanding of the controlling, we use time-dependent normal form theory to extract a reaction coordinate buried in classical phase space. The conservation of the associated action enables one to construct time-dependent invariant manifolds that act as separatrices between reactive and non-reactive trajectories and thus make it possible to predict the fate of a trajectory.