

# Laser-induced electron dynamics including photoionization: A heuristic model within TD-CI theory

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We report simulations of laser-pulse driven many-electron dynamics by means of a simple, heuristic extension of the time-dependent configuration interaction singles (TD-CIS) approach. The extension allows for the treatment of ionizing states as non-stationary states with a finite, energy-dependent lifetime to account for above-threshold ionization losses in laser-driven many-electron dynamics. The extended TD-CIS method is applied to the following specific examples: (i) State-to-state transitions in the LiCN molecule which correspond to intramolecular charge transfer and (ii) creation of electronic wavepackets in LiCN including wavepacket analysis by pump-probe spectroscopy.

## Literature:

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