

Abstract Submitted
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Atomic single-active-electron potential and application to intense field processes¹ RAN REIFF, TENNESSE JOYCE, MICHELLE MILLER, EREZ SHANI, AGNIESZKA JARON-BECKER, ANDREAS BECKER, Univ of Colorado - Boulder — Simulations of interaction of multielectron atoms with intense laser fields are computationally expensive. Therefore, often the single-active electron (SAE) approximation is used. We present a method for generating SAE potentials for atoms and ions, based on density functional theory calculations. Exact potentials are fit to physically-motivated analytic forms dependent on the orbital structure. Applications to simulation of high harmonic generation will be presented.

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