

Abstract Submitted
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High Harmonic Generation in Laser-Assisted Radiative Attachment or Recombination Processes¹ ALEXANDER V. FLEGEL, Department of Physics and Astronomy, University of Nebraska, Lincoln, USA, ALEXANDER N. ZHELTUKHIN, MIKHAIL V. FROLOV, NIKOLAI L. MANAKOV, Department of Physics, Voronezh State University, Voronezh, Russia, ANTHONY F. STARACE, Department of Physics and Astronomy, University of Nebraska, Lincoln, USA — Resonant enhancements are predicted in cross sections σ_n for laser-assisted radiative attachment or electron-ion recombination accompanied by absorption of n laser photons. These enhancements occur for incoming electron energies at which the electron can be attached or recombined by emitting μ laser photons followed by emission of a spontaneous photon upon absorbing $n + \mu$ laser photons. The close similarity between rescattering plateaus in spectra of resonant attachment/recombination and of high-order harmonic generation is shown based on a general parametrization for σ_n and on numerical results for $e - H$ attachment.

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