

Abstract Submitted
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Role of Vibrational Excitations in High-Order Harmonic Generation A.L. HARRIS, CHENG JIN, ANH-THU LE, C.D. LIN, Kansas State University — We carry out theoretical calculations to study the role of vibrational excitations in high-order harmonic generation of molecules by intense laser fields. The validity of the Franck-Condon Principle has been investigated in strong field ionization of molecules, as well as in the recombination step. We compare HHG yields of H₂ and D₂ using IR lasers with different wavelengths and peak intensities to uncover the dynamics of vibrational states, including their coherence, in the harmonic generation process.

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