

Abstract Submitted
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Triatomic molecular ionization and dissociation in strong laser fields LINSEN PEI, CHUNLEI GUO, The Institute of Optics, University of Rochester, Rochester, NY 14627 — We extend molecular ionization and dissociation studies in strong laser fields from diatomic molecules to triatomic molecules. In this work, we study two dissociation pathways in double ionized triatomic molecule, CO_2 , one two-body dissociation channel, $\text{CO}^+ + \text{O}^+$, and the other three-body dissociation channel, $\text{C} + 2\text{O}^+$. The two-body dissociation channel shows a stronger nonsequential rate than the three-body dissociation channel. We found that electronic structure plays a key role on the dissociation process, in consistent with our previously established work in diatomic molecules.

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