Ultrafast hydrogen atom dynamics of small hydrocarbon molecules in intense laser fields - Ejection of H3+ and hydrogen migration
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In ultrashort intense laser fields, molecules are decomposed into fragments via a variety of dissociation pathways. Among them, ultrafast migration of hydrogen atoms within molecules as well as efficient ejection of H3+ molecular ions are noteworthy [1]. By referring to our recent studies on small hydrocarbon molecules in intense laser fields [2] by the coincidence momentum imaging method [3], I will show how ultrafast dynamics of hydrogen atoms are induced within duration of ultrashort intense laser pulses.