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标题: Enhancement of molecular field-free orientation by utilizing a modulated two-color laser field

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摘要: We investigate theoretically the field-free molecular orientation driven by a modulated two-color laser pulse together with a delayed half-cycle THz pulse, with the LiH molecule as an example. The field-free molecular orientation and the population of the target state ($v = 1$, $J = 1$) are controlled by adjusting the phase of envelope ϕ and the period T_p of the modulated two-color laser field. At $T_p = 7$ ps, more molecules are populated to the target state and more efficient molecular orientation is achieved. The effect of temperature on molecular orientation is also discussed. (C) 2012 Elsevier B.V. All rights reserved.

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