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Title:Field-free molecular orientation by terahertz laser pulses at high temperature

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Abstract:We investigate to which extend a terahertz laser pulse can be used to produce field-free molecular orientation at high temperature. We consider laser pulses that can be implemented with the state of the art technology and we show that the efficiency of the control scheme crucially depends on the parameters of the molecule. We analyze the temperature effects on molecular dynamics and we demonstrate that for some molecules a noticeable orientation can be achieved at high temperature.

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