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Title:Polarization property of the THz wave generated from a two-color laser-induced gas plasma

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Abstract:The recent experiments show that the polarization of the terahertz (THz) wave generated from two-color laser-induced gas plasma is a linear polarization, and the polarization angle of the THz wave can be controlled by the optical delay of the two laser beams. In this paper, the polarization property of the THz wave is studied theoretically via a classical and a quantum model, respectively. An analytical expression is obtained to reflect the relationship between the polarization angle of the THz wave and the relative phase of the two-color lasers. © 2012 American Physical Society.

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