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Title:Strong Nonlinear Optical Response of Bilayer Graphene in the Terahertz Regime

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Abstract:We demonstrate that bilayer graphene exhibits strong nonlinear optical response in the terahertz frequency regime. The electric field strength required to generate single-frequency and triple-frequency nonlinear optical responses comparable to the linear optical response is only moderate and can be easily achieved in laboratory. This strong nonlinear optical response persists even in room temperature. This suggests that bilayer graphene can potentially be utilized in nonlinear terahertz photonics.

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