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Title:Widely linear and non-phase-matched optical-to-terahertz conversion on GaSe:Te crystals
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Abstract:We demonstrate the widely linear and broadband terahertz (THz) generation on GaSe:Te crystals by femtosecond laser pulses. It was found that the dopant, Te atoms, in GaSe crystals significantly enhances the efficiency of THz generation, and its central frequency can be tuned by varying the crystal thickness through non-phase-matched optical rectification. Moreover, the wide-ranging linearity for the optical-to-THz conversion and centralfrequency- tunable THz generation promise for GaSe:Te crystals to be potential materials for high-power (>1.36 μW) THz applications. © 2012 Optical Society of America.
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