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标题: Coherent phonon dynamics at the martensitic phase transition of Ni2MnGa
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摘要: We use time-resolved optical reflectivity to study the laser stimulated dynamics in the magnetic shape memory alloy Ni2MnGa. We observe two coherent optical phonons, at 1.2 THz in the martensite phase and at 0.7 THz in the pre-martensite phase, which we interpret as a zone-folded acoustic phonon and a heavily damped amplitudon, respectively. In the martensite phase the martensitic phase transition can be induced by a fs laser pulse on a timescale of a few ps.

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