757. 标题: Optical modulation of permittivity for different doped near-stoichiometric lithium niobate in the terahertz range
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摘要: The dielectric properties of near-stoichiometric LiNbO3:Fe and LiNbO3:Ce single crystals have been investigated by using a terahertz time domain spectroscopy (THz-TDS) in a frequency range of 0.4-1.8 THz at room temperature. When coupled with an applied external optical field, obvious photorefractive effects were observed, resulting in the modulation of the complex dielectric constant for the crystals, and reached up to 3%. However, the dielectric loss does not change appreciably. These findings were attributed to the change of spontaneous polarization in the crystals caused by the internal space charge field of photorefraction.
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