

371. Title:Terahertz spectroscopy of Ni-Ti alloy thin films

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Abstract:We investigate the carrier dynamics in nickel-titanium (Ni-Ti) alloy thin films using terahertz transmission spectroscopy. Analyzing the power transmission data and the transmitted waveforms, we obtained the alloy resistivity as a function of Ti concentration. Sharp changes in the resistivity were observed at the Ti fractions of 22%, 44%, and 62%, indicating that structural disorder is greatly enhanced when the alloy undergoes a phase transition.