

Abstract Submitted
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A Study of Excitation Dynamics of LT-GaAs by Chirp-Controlled Pump-Probe Technique CHAO-KUEI LEE, C.K. HUANG, L.Y. LIAO, IEO, NSYSU, IEO, NSYSU TEAM — In this work, a home made chirp-controlled pump-probe measurement system has been developed and the chirp-controlled pump-probe measurement system with temporal resolution of around 100 femtosecond and chirp parameter tuning from -350 fs^2 to $+650 \text{ fs}^2$ was demonstrated. Meanwhile, using chirp-controlled pump-probe measurement system, ultrafast dynamics of photogenerated carrier in low-temperature growth GaAs in different chirp by was characterized. The shorter relaxation time of low-temperature growth GaAs in positive chirp pump pulse was observed and the result was explained by the Pump-Dump process in negative chirp pump pulse and similar band-filling effect in positive chirp pump pulse.

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