

43. Title: THz Generation Characteristics of Low-temperature-grown InGaAs Emitters

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Abstract: Low-temperature grown (LTG) In GaAs emitters were prepared on semi-insulating InP substrates for investigating terahertz (THz) generation. The characteristics were first examined by using femtosecond (fs) laser excitation, and LTG InGaAs was applied to the emitter of the THz photomixer. The THz photocurrent generated by the fs-pulse laser had a peak at around 0.2 THz, which exponentially decayed with increasing frequency. The cw THz output power of the photomixer showed quadratic changes that increased with bias voltage and decreased with beat frequency.