

# **Detection of individual terahertz pulses at 80 MHz repetition rate**

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## **Abstract**

We present a novel technique to detect individual terahertz pulses at a repetition rate of 80 MHz. Our setup combines a femtosecond fiber laser, an InGaAs-based terahertz emitter, a zero-bias Schottky detector, and a high-speed data acquisition unit. The detected pulses consist of two lobes with half-widths of 1-2 ns, which is much shorter than the inverse repetition rate of the laser. The system lends itself for high-speed terahertz transmission measurements, e.g. to study wetting dynamics in real time.