462. 9Title:Oscillatory excitation energy dependence of injection currents in GaAs/AlGaAs quantum wells

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Abstract:The injection of photocurrents by femtosecond laser pulses in (110)-oriented GaAs/AlGaAs quantum wells is investigated theoretically and experimentally. The roomtemperature measurements show an oscillatory dependence of the injection current amplitude and direction on the excitation photon energy. Microscopic calculations using the semiconductor Bloch equations that are set up on the basis of k&middotp band structure calculations provide a detailed understanding of the experimental findings.