352. Title:Room-temperature terahertz oscillation of electron devices
Authors:Asada, Masahiro (1); Suzuki, Safumi (1)
Source title:IEEJ Transactions on Fundamentals and Materials
Volume:131
Issue:1
Issue date:2011
Publication year:2011
Pages:21-24
Language:Japanese
Document type:Journal article (JA)
Abstract:Compact and coherent light sources are key components for development of terahertz

frequency range in which various applications are expected. Recent progress in room-temperature terahertz oscillators using resonant tunneling diodes are shown here. Fundamental oscillation up to 1.04 THz has been achieved with a structure having short transit time of electrons. This is the first oscillation above 1 THz in room-temperature electronic single oscillators. Structures for high output power, frequency change with bias voltage, and spectral linewidth are also described.