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Accession number:20114114407124
Title:Electromagnetic wave propagation close to microstructures studied by time and phase-resolved THz near-field imaging
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Source title:Journal of Infrared, Millimeter, and Terahertz Waves
Abbreviated source title:J. Infrared. Millim. Terahertz Waves
Volume:32
Issue:8-9
Issue date:September 2011
Publication year:2011
Pages:1020-1030
Language:English
ISSN:18666892
E-ISSN:18666906
Document type:Journal article (JA)
Publisher:Springer New York, 233 Springer Street, New York, NY 10013-1578, United States
Abstract:We demonstrate microscopic mapping of electromagnetic waves close to metal microstructures with sub-ps temporal and sub-wavelength spatial resolution by pulsed THz near-field imaging. The inherent phase-sensitivity of this technique allows mapping wavefronts of propagating modes and the measured amplitude distributions provide information on field concentration and localization close to the structures. Using this approach we investigate wave propagation through a sub-wavelength aperture, as well as the formation of traveling and standing surface waves along a metal microwire.
Number of references:23