435. Title:Real-time line projection for fast terahertz spectral computed tomography
Authors:Abraham, Emmanuel (1); Ohgi, Yoshiyuki (2); Minami, Masa-Aki (2); Jewariya, Mukesh (3); Nagai, Masaya (2); Araki, Tsutomu (2); Yasui, Takeshi (2)
Source title:Optics Letters
Abbreviated source title:Opt. Lett.
Volume:36
Issue:11
Issue date:June 1, 2011
Publication year:2011
Pages:2119-2121
Language:English
Document type:Journal article (JA)
Abstract:We demonstrated fast terahertz spectral computed tomography by using real-time line projection of a terahertz beam. Two types of cross-sectional images of continuously rotating samples have been measured in only a few seconds. From temporal data, a peak-to-peak sinogram and cross sections have been reconstructed using a filtered backprojection algorithm. Using fast Fourier transform from temporal data, spectral cross sections of the sample have been obtained.