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Accession number:20123715432077
Title:Wavelet-based autofocus algorithm for terahertz digital holographic imaging
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Source title:Zhongguo Jiguang/Chinese Journal of Lasers
Abbreviated source title:Zhongguo Jiguang
Volume:39
Issue:SUPPL.1
Issue date:June 2012
Publication year:2012
Article number:s111005
Language:Chinese
ISSN:02587025
CODEN:ZHJIDO
Document type:Journal article (JA)
Publisher:Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China
Abstract:Autofocus technique is one of the key techniques in digital hologram, which can achieve fast imagine capture and accurate reconstruction. A new wavelet-based autofocus algorithm for terahertz (THz) digital holographic imaging is proposed based on the analysis of focus and defocus characteristics, which mainly concentrates on coefficient of high frequency and low frequency wavelet transform. The new autofocus algorithm of this focus measure is compared with five classic digital hologram autofocus algorithms according to the THz image with and without noise, also comments are attached. The analysis and comparison of the simulation show that the new wavelet-based autofocus algorithm has the following features: a better unimodality, a fineness sharpness and a stronger performance of anti-noise.
Number of references:22
Main heading:Algorithms
Controlled terms:Computer generated holography - Holograms - Wavelet transforms
Uncontrolled terms:Anti noise - Auto-focus algorithm - Auto-focusing - Autofocus techniques - Defocus - Digital holograms - Digital holography - Focus algorithms - Focus measure - High frequency - Holographic imaging - Key techniques - Low frequency - Terahertz - Unimodality
Classification code:723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 743 Holography - 743.1 Holographic Techniques - 921 Mathematics - 921.3 Mathematical Transformations
DOI:10.3788/CJL201239.s111005
Database:Compendex