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(54) **Title:** SYSTEM AND METHOD FOR CALIBRATED SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY AND LOW COHERENCE INTERFEROMETRY

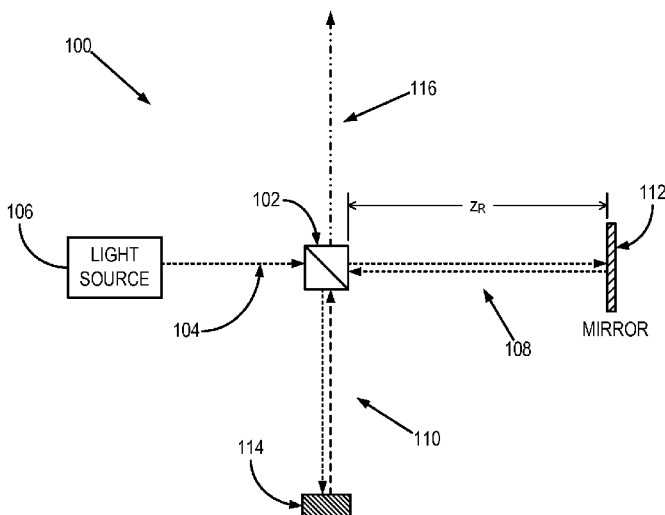


FIG. 1

(57) **Abstract:** Systems and methods for enhancing spectral domain optical coherence tomography (OCT) are provided. In particular, a system and method for calibration of spectral interference signals using an acquired calibration signal are provided. The calibration signal may be logarithmically amplified to further improve the accuracy of the calibration. From the calibration signal, a series of more accurate calibration data are calculated. An acquired spectral interference signal is calibrated using these calibration data. Moreover, systems that include logarithmic amplification of the spectral interference signal and variable band-pass filtering of the spectral interference signal are provided. Such systems increase the dynamic range and visualization capabilities relative to conventional spectral domain OCT systems.



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INTERNATIONAL SEARCH REPORT

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G01N 21/17; H01S 3/10; G01N 21/21; G01N 21/27; A61B 3/00; H01S 5/00; G01B 9/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords:OCT,optical coherence tomography,swept source,calibration,compensation,Logarithmic Amplifier

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2007-0268456 A1 (KOHJI OHBAYSHI et al.) 22 November 2007 See pages 7-9, figs. 1,2.	14, 18 1-13, 15-17, 19-45
X A	JP 2007-298461 A (UNIV. OF TSUKUBA) 15 November 2007 See pages 1,5,6, fig. 1.	43 1-42, 44, 45
A	US 7359062 B2 (ZHONGPING CHEN et al.) 15 April 2008 See the abstract, columns 13,14, fig. 8.	1-45
A	JP 2007-101365 A (UNIV. OF TSUKUBA) 19 April 2007 See pages 1,6,7, fig. 1.	1-45
A	US 2008-0037608 A1 (YAN ZHOU et al.) 14 February 2008 See the abstract, pages 3,4, figs. 2,5.	1-45

 Further documents are listed in the continuation of Box C. See patent family annex.

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Information on patent family members

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