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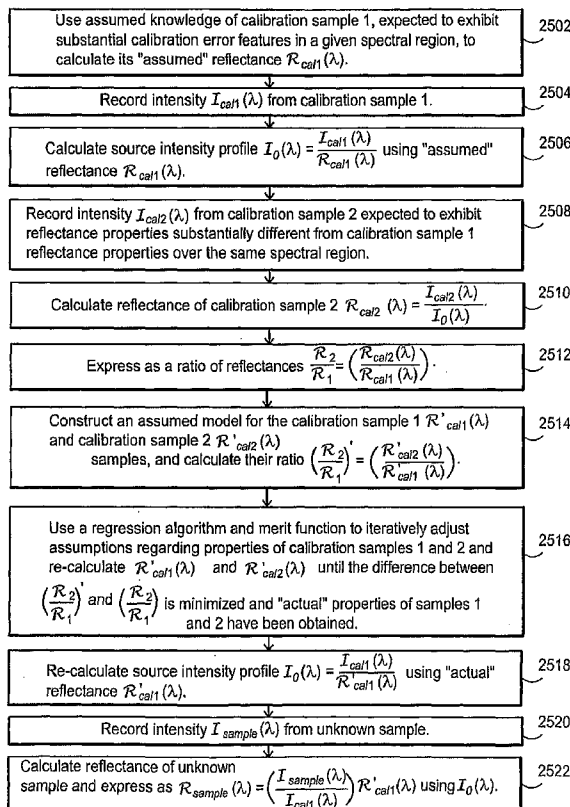
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR ACCURATE CALIBRATION OF A REFLECTOMETER BY USING A RELATIVE REFLECTANCE MEASUREMENT



(57) Abstract: A reflectometer calibration technique is provided that may include the use of two calibration samples in the calibration process. Further, the technique allows for calibration even in the presence of variations between the actual and assumed properties of at least one or more of the calibration samples. In addition, the technique utilizes a ratio of the measurements from the first and second calibration samples to determine the actual properties of at least one of the calibration samples. The ratio may be a ratio of the intensity reflected from the first and second calibration samples. The samples may exhibit relatively different reflective properties at the desired wavelengths. In such a technique the reflectance data of each sample may then be considered relatively decoupled from the other and actual properties of one or more of the calibration samples may be calculated. The determined actual properties may then be utilized to assist calibration.

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USPC - 250/252.1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
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USPC - 250/252.1; 356/630, 632

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patent Search, IP.com, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 3,751,643 A (Dill et al) 07 August 1973 (07.08.1973) entire document	1, 6, 15-29, 33-43, 47-71, 78-107, and 114-132 ----- 2-5, 7-14, 30-32, 44-46, 72-77, 108-113
Y	Field, G.R. et al. "Method of Using the Reflectance Ratios of Different Angles of Incidence for the Determination of Optical Constants". June 1971. Applied Optics. Vol. 10, No. 6.	2-5, 14
Y	US 4,029,419 A (Schumann, Jr. et al) 14 June 1977 (14.06.1977) entire document	2-5, 12, 14
Y	US 6,525,829 B1 (Powell et al) 25 February 2003 (25.02.2003) entire document	3-5, 7-13, 30-32, 44-46, 72-77, and 108-113

Further documents are listed in the continuation of Box C.

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