

Title (en)
APPARATUS AND METHOD FOR REAL-TIME IR SPECTROSCOPY

Title (de)
VORRICHTUNG UND VERFAHREN ZUR ECHTZEIT-IR-SPEKTROSKOPIE

Title (fr)
APPAREIL ET PROCEDE DE SPECTROSCOPIE INFRAROUGE EN TEMPS REEL

Publication
EP 1434975 A1 20040707 (EN)

Application
EP 01979366 A 20011001

Priority
US 0130724 W 20011001

Abstract (en)
[origin: WO03029769A1] An apparatus and method capable of providing IR spectral information using IR absorption phenomena requires no moving parts or Fourier Transform during operation. IR spectral information and chemical analysis of a sample in a sample containing functional groups is determined by using an IR source (310), a sampling accessory (330) for positioning the sample volume, an optically dispersive element (350), a focal plane array (FPA) arranged to detect the dispersed light beam, and a processor (380) and display (390) to control the FPA, and display an IR spectrograph. Fiber-optic coupling allows remote sensing, and portability, reliability, and ruggedness is enhanced due to the no-moving part construction. Use of the apparatus and method has broad industrial and environmental application, including measurement of thickness and chemical composition of various films, coatings, and liquids, and may also be used in a real-time sensing of hazardous materials, including chemical and biological warfare agents.

IPC 1-7
G01J 3/44; **G01J 3/42**

IPC 8 full level
G01J 3/14 (2006.01); **G01J 3/18** (2006.01); **G01J 3/36** (2006.01); **G01J 3/42** (2006.01); **G01N 21/35** (2006.01)

CPC (source: EP KR)
G01J 3/42 (2013.01 - EP); **G01J 3/44** (2013.01 - KR); **G01N 21/3563** (2013.01 - EP); **G01N 21/3577** (2013.01 - EP)

Cited by
JP2019537014A; DE102008035532A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 03029769 A1 20030410; AU 2002211338 B2 20050929; CA 2462496 A1 20030410; CA 2462496 C 20051220; EP 1434975 A1 20040707; EP 1434975 A4 20050112; JP 2005504313 A 20050210; KR 100612531 B1 20060811; KR 20040037195 A 20040504

DOCDB simple family (application)
US 0130724 W 20011001; AU 2002211338 A 20011001; CA 2462496 A 20011001; EP 01979366 A 20011001; JP 2003532934 A 20011001; KR 20047004617 A 20011001