

Title (en)
SPECTROMETER WITH A TWO-DIMENSIONAL SPECTRUM

Title (de)
SPEKTROMETER MIT ZWEIDIMENSIONALEM SPEKTRUM

Title (fr)
SPECTROMÈTRE À SPECTRE BIDIMENSIONNEL

Publication
EP 3403061 A1 20181121 (DE)

Application
EP 16825730 A 20161220

Priority
• DE 102016100580 A 20160114
• EP 2016081932 W 20161220

Abstract (en)
[origin: WO2017121583A1] A spectrometer assembly (10) with a two-dimensional spectrum comprising a first dispersing element (31) for the spectral decomposition of radiation in a main dispersion direction, an imaging optical system (17) for imaging in an image plane the radiation penetrating through an inlet gap (15) in the spectrometer arrangement (10) and enabling a two-dimensional spectrum to be produced, and a surface detector (39) with a two-dimensional arrangement of a plurality of detector elements in the image plane. Said spectrometer assembly is characterized in that a reflector, a refractor, a lens array or another optical element is arranged in the beam path at a point where the dispersed, monochromatic bundles are present in a separated manner, and the reflector, the refractor, the lens array or the other optical element have a surface in the form of a free-form surface wherein the surface occupied by the selected images of the inlet gap at different wavelengths in the image plane is optimised over a selected spectral range of the two-dimensional spectrum.

IPC 8 full level
G01J 3/14 (2006.01); **G01J 3/02** (2006.01); **G01J 3/18** (2006.01); **G01J 3/28** (2006.01)

CPC (source: EP US)
G01J 3/0208 (2013.01 - EP US); **G01J 3/14** (2013.01 - EP US); **G01J 3/1809** (2013.01 - EP US); **G01J 3/2803** (2013.01 - EP US); **G01J 3/2823** (2013.01 - US); **G01J 2003/1828** (2013.01 - EP US)

Citation (search report)
See references of WO 2017121583A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2017121583 A1 20170720; CN 108738335 A 20181102; CN 108738335 B 20210316; DE 102016124980 A1 20170803; EP 3403061 A1 20181121; US 10488254 B2 20191126; US 2019025121 A1 20190124

DOCDB simple family (application)
EP 2016081932 W 20161220; CN 201680078796 A 20161220; DE 102016124980 A 20161220; EP 16825730 A 20161220; US 201616069912 A 20161220