

Title (en)

METHOD FOR CHARACTERIZING SAMPLES USING NEURAL NETWORKS

Title (de)

VERFAHREN ZUR CHARAKTERISIERUNG VON PROBEN MITTELS NEURONALER NETZE

Title (fr)

PROCEDE DE CARACTERISATION D'ECHANTILLONS UTILISANT DES RESEAUX DE NEURONES

Publication

**EP 3717877 A2 20201007 (FR)**

Application

**EP 18814839 A 20181130**

Priority

- FR 1761522 A 20171201
- EP 2018083210 W 20181130

Abstract (en)

[origin: WO2019106179A2] The present invention relates to a method for characterizing a sample using a set of spectral images of the sample to be characterized, which have been previously acquired, in particular by infrared thermography or spectral imaging, and to at least one neural network, the method comprising the steps of: - generating at least one volume of values of a parameter observed from said spectral images for a plurality of coordinates of the pixels of the images and a plurality of acquisitions, - extracting at least one set of input data from said data volume, said input data corresponding to the values of the observed parameter for a pixel of the same coordinates according to different acquisitions, wherein at least one transformation function has been applied to said values, - training said at least one neural network using the input data to extract at least one characteristic of the sample to be characterized.

IPC 8 full level

**G01J 3/28** (2006.01)

CPC (source: EP US)

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**G06N 3/08** (2013.01 - EP US); **G06T 7/0004** (2013.01 - EP US); **G01J 2003/2826** (2013.01 - US); **G01N 2021/8883** (2013.01 - EP US);  
**G01N 2021/8887** (2013.01 - EP US); **G06N 3/048** (2023.01 - EP); **G06N 20/10** (2018.12 - EP); **G06T 2207/10024** (2013.01 - EP US);  
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**G06T 2207/30188** (2013.01 - EP US)

Citation (search report)

See references of WO 2019106179A2

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2019106179 A2 20190606; WO 2019106179 A3 20190725;** CA 3083079 A1 20190606; CN 111630356 A 20200904;  
CN 111630356 B 20231003; EP 3717877 A2 20201007; FR 3074596 A1 20190607; FR 3074596 B1 20191206; JP 2021504864 A 20210215;  
US 11828652 B2 20231128; US 2020333185 A1 20201022

DOCDB simple family (application)

**EP 2018083210 W 20181130;** CA 3083079 A 20181130; CN 201880077916 A 20181130; EP 18814839 A 20181130; FR 1761522 A 20171201;  
JP 2020547304 A 20181130; US 201816768573 A 20181130