

Title (en)

VALUE DOCUMENT HAVING SECURITY MARKING AND METHOD FOR IDENTIFYING THE SECURITY MARKING

Title (de)

WERTDOKUMENT MIT SICHERHEITSMARKIERUNG UND VERFAHREN ZUR IDENTIFIKATION DER SICHERHEITSMARKIERUNG

Title (fr)

DOCUMENT DE VALEUR COMPORTANT UN MARQUAGE DE SÉCURITÉ ET PROCÉDÉ D'IDENTIFICATION DU MARQUAGE DE SÉCURITÉ

Publication

EP 3512713 B1 20201216 (DE)

Application

EP 17767996 A 20170914

Priority

- DE 102016011180 A 20160914
- EP 2017001087 W 20170914

Abstract (en)

[origin: WO2018050283A1] The invention relates to a value document having a security marking in the form of at least two luminescent substances, which are present in a defined relative quantity proportion and can be excited together by an excitation pulse. The time curves of the intensities are different and at least one luminescent substance has a non-monoexponential time curve. In a method for identifying the security marking, the time curve of the common intensity is detected and a linear combination of formula (I) is adapted, wherein $li(t)$ are time curves of the intensities of the luminescent substances. The security marking is identified based on the linear coefficients Ci .

IPC 8 full level

B42D 25/29 (2014.01); **B42D 25/378** (2014.01)

CPC (source: EP KR RU US)

B42D 25/29 (2014.10 - EP KR RU); **B42D 25/373** (2014.10 - US); **B42D 25/378** (2014.10 - EP KR RU US); **G07D 7/1205** (2017.04 - US); **B42D 25/21** (2014.10 - US); **B42D 25/23** (2014.10 - US); **B42D 25/24** (2014.10 - US); **B42D 25/29** (2014.10 - US); **B42D 25/355** (2014.10 - US); **G07D 2207/00** (2013.01 - US)

Citation (opposition)

Opponent : SICPA HOLDING SA

- US 2013015789 A1 20130117 - MIYAZAKI HIROSHI [JP], et al
- US 2014001351 A1 20140102 - CARR PAUL A [US], et al
- WO 2006024530 A1 20060309 - GIESECKE & DEVRIENT GMBH [DE], et al
- WO 9739428 A1 19971023 - RUE DE INT LTD [GB], et al
- EP 1616929 A2 20060118 - FAB NAC MONEDA Y TIMBRE ES [ES]
- EP 1158459 A1 20011128 - SICPA HOLDING SA [CH]
- WO 2011082794 A1 20110714 - GIESECKE & DEVRIENT GMBH [DE], et al
- WO 2005036479 A2 20050421 - GIESECKE & DEVRIENT GMBH [DE], et al
- WO 2005035271 A2 20050421 - GIESECKE & DEVRIENT GMBH [DE], et al
- DE 102006047851 A1 20080417 - GIESECKE & DEVRIENT GMBH [DE]
- SIRMANE LIANA: "Vacuum ultraviolet excitation spectroscopy of nanostructured complex oxide phosphors", PHD THESIS, 2017, XP055848180
- "Quintaurus-Tau. Fluorescence lifetime spectrometer. C 11367 series", HAMAMATSU PHOTONICS K. K., 2016, pages 1 - 8, XP055848184
- "Fluorescence Lifetime MEASUREMENT SOFTWARE U11487-01 Instruction Manual", HAMAMATSU PHOTONICS K. K., May 2018 (2018-05-01), XP055848188

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

DOCDB simple family (publication)

DE 102016011180 A1 20180315; CN 109863037 A 20190607; CN 109863037 B 20201222; EP 3512713 A1 20190724; EP 3512713 B1 20201216; ES 2843602 T3 20210719; HU E053301 T2 20210628; KR 102265444 B1 20210615; KR 20190039291 A 20190410; PL 3512713 T3 20210504; PT 3512713 T 20210105; RU 2712380 C1 20200128; US 10766294 B2 20200908; US 2019358990 A1 20191128; WO 2018050283 A1 20180322

DOCDB simple family (application)

DE 102016011180 A 20160914; CN 201780064057 A 20170914; EP 17767996 A 20170914; EP 2017001087 W 20170914; ES 17767996 T 20170914; HU E17767996 A 20170914; KR 20197007769 A 20170914; PL 17767996 T 20170914; PT 17767996 T 20170914; RU 2019110248 A 20170914; US 201716332869 A 20170914