

Title (en)

METHOD FOR MANUFACTURING PERSONALISED OPTICAL DOCUMENT SECURITY ELEMENTS AND THE ELEMENT OBTAINED

Title (de)

VERFAHREN ZUR HERSTELLUNG PERSONALISIERTER SICHERHEITSELEMENTE FÜR OPTISCHE DOKUMENTE UND ERHALTENES ELEMENT

Title (fr)

PROCÉDÉ DE FABRICATION D'ÉLÉMENTS OPTIQUES DE SÉCURITÉ DOCUMENTAIRE PERSONNALISÉS ET ÉLÉMENT AINSI OBTENU

Publication

**EP 3706086 A4 20210721 (EN)**

Application

**EP 17930413 A 20171031**

Priority

ES 2017070726 W 20171031

Abstract (en)

[origin: EP3706086A1] The invention relates to a method for manufacturing personalized optical document security elements and element obtained, the method comprising using confinement surfaces (1, 2), wherein at least one of the confinement surfaces (1, 2) contains a pattern of electrodes (4) and an alignment layer (5) on its inner side, arranging a liquid crystal (3) doped with at least one dichroic dye between the confinement surfaces (1, 2), applying an electric field to the electrodes (4) to orient the liquid crystal (3) according to the voltage applied by each electrode (4), applying light to the liquid crystal (3) through the confinement surfaces (1, 2) until the liquid crystal (3) is polymerized, stopping application of the electric field to the electrodes (4), such that a transparent polymerized liquid crystal film with at least one personalized latent image obtained by applying the electric field to the electrodes (4) is obtained between the confinement surfaces (1, 2).

IPC 8 full level

**G07D 7/12** (2016.01); **B41M 3/14** (2006.01); **B42D 25/364** (2014.01); **B42D 25/40** (2014.01); **B42D 25/41** (2014.01)

CPC (source: EP)

**B41M 3/14** (2013.01); **B42D 25/364** (2014.10); **B42D 25/40** (2014.10); **B42D 25/41** (2014.10); **G07D 7/12** (2013.01)

Citation (search report)

- [IDA] EP 2508358 A1 20121010 - UNIV MADRID POLITECNICA [ES]
- See references of WO 2019086726A1

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)

**EP 3706086 A1 20200909; EP 3706086 A4 20210721;** AU 2017437685 A1 20200430; CN 111602179 A 20200828; CN 111602179 B 20220802; WO 2019086726 A1 20190509

DOCDB simple family (application)

**EP 17930413 A 20171031;** AU 2017437685 A 20171031; CN 201780096475 A 20171031; ES 2017070726 W 20171031