

Title (en)  
SAFETY AND/OR VALUABLE DOCUMENT HAVING A PHOTONIC CRYSTAL

Title (de)  
SICHERHEITS- UND/ODER WERTDOKUMENT MIT PHOTONISCHEM KRISTALL

Title (fr)  
DOCUMENT DE SÉCURITÉ ET/OU DE VALEUR À CRISTAL PHOTONIQUE

Publication  
**EP 2118855 A2 20091118 (DE)**

Application  
**EP 08715461 A 20080206**

Priority  
• DE 2008000228 W 20080206  
• DE 102007007029 A 20070208

Abstract (en)  
[origin: CA2677418A1] The invention relates to a safety and/or valuable document having a safety element, wherein the safety element has a photonic crystal arranged on a substrate in relation to an orientation defined on a surface of the substrate, and a luminescent substance. It is characterized in that an emission wavelength  $\lambda$  of the luminescent substance, and a grid constant of the photonic crystal are aligned with each other and specified according to the formula  $\lambda = m \cdot 2 \cdot d$ , wherein  $d$  is a distance between two lattice planes of the photonic crystal, and  $m$  is a positive integer.

IPC 8 full level  
**G07D 7/12** (2006.01); **B42D 15/00** (2006.01); **B42D 15/10** (2006.01)

CPC (source: EP US)  
**B42D 25/00** (2014.10 - EP); **B42D 25/29** (2014.10 - EP US); **G07D 7/003** (2017.04 - EP); **B42D 25/387** (2014.10 - EP)

Citation (search report)  
See references of WO 2008095481A2

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

DOCDB simple family (publication)  
**DE 102007007029 A1 20080814**; AU 2008213463 A1 20080814; AU 2014203815 A1 20140731; AU 2016225899 A1 20160929; AU 2016225899 B2 20180201; CA 2677418 A1 20080814; CA 2677418 C 20160920; CN 101652800 A 20100217; CN 101652800 B 20130206; EP 2118855 A2 20091118; EP 2118855 B1 20200923; WO 2008095481 A2 20080814; WO 2008095481 A3 20081211

DOCDB simple family (application)  
**DE 102007007029 A 20070208**; AU 2008213463 A 20080206; AU 2014203815 A 20140711; AU 2016225899 A 20160909; CA 2677418 A 20080206; CN 200880004390 A 20080206; DE 2008000228 W 20080206; EP 08715461 A 20080206