

Title (en)  
SECURITY ELEMENT COMPRISING A MASKING STRUCTURE CONTAINING A MIXTURE OF NANOMETRIC FILLERS

Title (de)  
SICHERHEITSELEMENT MIT EINER MASKIERUNGSSTRUKTUR MIT EINER MISCHUNG AUS NANOMETRISCHEN FÜLLSTOFFEN

Title (fr)  
ELEMENT DE SECURITE COMPORTANT UNE STRUCTURE DE MASQUAGE CONTENANT UN MELANGE DE CHARGES NANOMETRIQUES

Publication  
**EP 2984227 B1 20180214 (FR)**

Application  
**EP 14721533 A 20140410**

Priority  
• FR 1353252 A 20130411  
• IB 2014060625 W 20140410

Abstract (en)  
[origin: WO2014167527A1] The present invention relates to a security element, preferably a security wire, for a secure document, comprising: a masking structure (13) for reducing the visibility of a surface of the element when the latter is located inside the document or on the surface thereof, the masking structure comprising a mixture of at least two nanometric fillers.

IPC 8 full level  
**D21H 17/67** (2006.01); **B42D 15/00** (2006.01); **D21H 21/44** (2006.01); **D21H 21/48** (2006.01); **D21H 21/52** (2006.01)

CPC (source: EP US)  
**B42D 25/355** (2014.10 - EP US); **B42D 25/378** (2014.10 - EP US); **D21H 17/67** (2013.01 - EP US); **D21H 21/44** (2013.01 - EP US); **D21H 21/48** (2013.01 - EP US); **D21H 21/52** (2013.01 - EP US)

Citation (opposition)  
Opponent : Giesecke+Devrient Currency Technology GmbH  
• US 5871833 A 19990216 - HENBO MOTOSHI [JP], et al  
• WO 03054259 A1 20030703 - HONEYWELL INT INC [US]  
• US 2010015337 A1 20100121 - BECKER FRANZ JOSEF [DE], et al  
• EP 1609619 A2 20051228 - GIESECKE & DEVRIENT GMBH [DE]  
• WO 2012054053 A1 20120426 - HEWLETT PACKARD DEVELOPMENT CO [US], et al  
• WO 2012003947 A1 20120112 - GIESECKE & DEVRIENT GMBH [DE], et al  
• US 6517628 B1 20030211 - PFAFF GERHARD [DE], et al  
• US 2004023008 A1 20040205 - ROSSET HENRI [FR]  
• US 2010194093 A1 20100805 - MACPHERSON CHARLIE [US]  
• US 5354099 A 19941011 - KAULE WITTICH [DE], et al  
• US 4892336 A 19900109 - KAULE WITTICH [DE], et al  
• US 6491324 B1 20021210 - SCHMITZ CHRISTIAN [DE], et al  
• "Römpf Lexikon der Chemie", vol. 3, pages: 2150 - 2153, 3019-3020, XP055631779

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)  
**WO 2014167527 A1 20141016**; CN 105308240 A 20160203; CN 105308240 B 20190405; EP 2984227 A1 20160217; EP 2984227 B1 20180214; FR 3004471 A1 20141017; FR 3004471 B1 20151023; US 10328738 B2 20190625; US 2016059611 A1 20160303

DOCDB simple family (application)  
**IB 2014060625 W 20140410**; CN 201480033261 A 20140410; EP 14721533 A 20140410; FR 1353252 A 20130411; US 201414783868 A 20140410