

Title (en)  
Document of value and/or security document

Title (de)  
Wert- und/oder Sicherheitsdokument

Title (fr)  
Document de valeur et/ou sécurité

Publication  
**EP 1241021 A3 20040310 (DE)**

Application  
**EP 02005017 A 20020306**

Priority  
DE 10113266 A 20010316

Abstract (en)  
[origin: EP1241021A2] Security documents for high-speed verification contain up-conversion elements in the form of small inorganic particles, applied near the surface of the document, which allow high-speed verification by near infrared (NIR) light stimulation and detection of the emission bands in the visible and NIR wavelength range. An Independent claim is also included for security documents for high-speed verification, which contain an up-conversion phosphor comprising a thulium-activated and ytterbium-codoped gadolinium oxysulfide of the composition:

IPC 1-7  
**B42D 15/00**; B41M 3/14; G07D 7/12; C09K 11/475

IPC 8 full level  
**B42D 15/00** (2006.01); **B42D 25/29** (2014.01); B41M 3/14 (2006.01)

CPC (source: EP)  
**B42D 25/29** (2014.10); B41M 3/144 (2013.01)

Citation (search report)

- [X] GB 2258659 A 19930217 - DE LA RUE THOMAS & CO LTD [GB]
- [X] WO 9839392 A1 19980911 - RIEDEL DE HAEN GMBH [DE], et al
- [PX] EP 1116755 A1 20010718 - SICPA HOLDING SA [CH]
- [E] WO 03072682 A1 20030904 - HONEYWELL SPECIALITY CHEMICALS [DE], et al

Cited by  
WO2011098083A1; DE102019122010A1; DE102017103780A1; US2020399834A1; US11788231B2; US8245831B2; WO2004102490A1; EP2534221B1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
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**EP 02005017 A 20020306**; AT 02005017 T 20020306; DE 10113266 A 20010316