

Title (en)

Security document comprising means for authentication and method for authentication of security document

Title (de)

Sicherheitsdokument mit Mitteln zur Authentifizierung und Methode zur Authentifizierung von Sicherheitsdokumenten

Title (fr)

Document de sécurité avec des moyens d'authentification et méthode pour l'authentification de documents de sécurité

Publication

EP 1548657 A1 20050629 (EN)

Application

EP 03029829 A 20031224

Priority

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Abstract (en)

A security document according to the invention comprises substrate means 2 and security means 5 for authentication provided on a predetermined area 4 of said substrate means. The security means comprises means selectively reflecting visible light depending on the temperature and means changing the temperature depending on the application of a magnetic field. The means selectively reflecting light and the means changing the temperature are arranged as to form said security means exhibiting different colors depending on a magnetic field applied to the substrate means. In a preferred embodiment of the invention, the means selectively reflecting visible light comprises liquid crystals and the means changing the temperature comprises gadolinium. <IMAGE>

IPC 1-7

G07D 7/00; **B42D 15/00**

IPC 8 full level

B42D 15/00 (2006.01); **G07D 7/00** (2006.01); **G07D 7/04** (2006.01); **G07D 7/12** (2006.01)

CPC (source: EP US)

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Citation (search report)

- [XY] DE 2909731 A1 19790920 - OESTERR NATIONALBANK
- [X] WO 0225600 A2 20020328 - BUNDESDRUCKEREI GMBH [DE], et al
- [A] WO 03057499 A1 20030717 - BUNDESDRUCKEREI GMBH [DE], et al
- [A] DE 19932240 A1 20010118 - BUNDESDRUCKEREI GMBH [DE]
- [Y] ZHU H ET AL: "MAGNETOCALORIC EFFECT IN LAYERED PEROVSKITE MANGANESE OXIDE LA1.4CA1.6MN2O7", APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 81, no. 18, 28 October 2002 (2002-10-28), pages 3416 - 3418, XP001142419, ISSN: 0003-6951

Cited by

CN109251590A; EP3150763A4; CN105243648A; US10940712B2

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DOCDB simple family (application)

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