

Title (en)

OPTICAL STRUCTURE, ESPECIALLY FOR A SECURITY DOCUMENT AND/OR A DOCUMENT OF VALUE

Title (de)

OPTISCHE STRUKTUR, SPEZIELL FÜR EIN SICHERHEITSDOKUMENT UND/ODER EIN DOKUMENT VON WERT

Title (fr)

STRUCTURE OPTIQUE, NOTAMMENT POUR UN DOCUMENT DE SECURITE ET/OU DE VALEUR

Publication

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Application

EP 06831348 A 20061116

Priority

- FR 2006051186 W 20061116
- FR 0553480 A 20051116

Abstract (en)

[origin: WO2007057613A1] The present invention relates to an optical structure, especially for a security document and/or a document of value, comprising: first and second opposed outer faces, at least a first interface which includes a first array of microreliefs and is placed so that, upon passing through this first interface in the direction from the first outer face to the second outer face, light passes from a first medium having a first refractive index to a second medium having a second refractive index, greater than the first, at least a second interface comprising a second array of microreliefs and placed so that, upon passing through this second interface in the direction from the first outer face to the second outer face, light passing from a third medium having a third refractive index to a fourth medium having a fourth refractive index, less than the third, each interface having at least one portion offset relative to the other interface when the structure is observed along a direction approximately perpendicular to at least one of the outer faces.

IPC 8 full level

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Citation (opposition)

Opponent :

- EP 1888349 A2 20080220 - RUE DE INT LTD [GB]
- WO 2006108607 A2 20061019 - OVD KINEGRAM AG [CH], et al
- WO 2007051529 A1 20070510 - GIESECKE & DEVRIENT GMBH [DE], et al
- JP 2001315472 A 20011113 - DAINIPPON PRINTING CO LTD
- CH 689680 A5 19990813 - ELECTROWATT TECH INNOVAT CORP [CH]
- US 5492370 A 19960220 - CHATWIN CHARLES E [GB], et al
- WO 03053713 A1 20030703 - GIESECKE & DEVRIENT GMBH [DE], et al
- WO 03082598 A2 20031009 - RUE DE INT LTD [GB], et al
- EP 0328086 A2 19890816 - AMERICAN BANK NOTE HOLOGRAPHIC [US]
- US 4856857 A 19890815 - TAKEUCHI SATOSHI [JP], et al
- WO 03055692 A1 20030710 - DURAND TECHNOLOGY LTD [GB], et al
- WO 03068525 A1 20030821 - GIESECKE & DEVRIENT GMBH [DE], et al
- WO 9813211 A1 19980402 - AUSTRALIA RESERVE BANK [AU], et al
- US 5573639 A 19961112 - SCHMITZ CHRISTIAN [DE], et al
- US 6199911 B1 20010313 - ISHERWOOD ROLAND [GB], et al
- EP 1141480 A1 20011010 - RUE DE INT LTD [GB]
- R. LENK ET AL.: "ABC Physik, Band 1/A - Ma", 1989, BROCKHAUS VERLAG, LEIPZIG, pages: 88 - 89

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