

Title (en)

SECURITY ELEMENT HAVING A MAGNIFIED, THREE-DIMENSIONAL MOIRÉ IMAGE

Title (de)

SICHERHEITSELEMENT MIT VERGRÖSSERTEM, DREIDIMENSIONALEN MOIRÉ-BILD

Title (fr)

ÉLÉMENT DE SÉCURITÉ

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Application

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Abstract (en)

[origin: WO2009000530A2] The invention relates to a security element for security papers, value documents and the like, comprising a microoptical magnification system (30) of the moiré type for representing a three-dimensional moiré image (40) containing image components (42, 44) interspaced in one direction at a right angle to the moiré magnification system in at least two moiré image planes; a motif image that contains two or more periodic or at least locally periodic grid cell arrangements having different grid spacings and/or different grid orientations, that are associated with a respective moiré image plane and that contain micro-motif image components for representing the image component (42, 44) of the associated moiré image plane, a focusing element grid, interspaced from the motif image, for the moiré-magnified viewing of the motif image, comprising a periodic or at least locally periodic arrangement of a plurality of grid cells having respective microfocusing elements, the magnified, three-dimensional moiré image (40) moving, when the security element is tilted, in a moiré direction of movement (formula II) for almost any direction of tilting (formula I)).

IPC 8 full level

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Citation (search report)

See references of WO 2009000530A2

Cited by

EP3734352A1; EP4198612A1; WO2013188518A1; WO2013002992A1; WO2013048875A1; US10195891B2; WO2012103441A1;
WO2013163287A1; WO2018147966A1; EP4026702A1; WO2011019912A1; EP3626474A1; EP3626473A1

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CN 101711203 B 20130313; EP 2164711 A1 20100324; EP 2164711 B1 20160601; EP 2164713 A2 20100324; EP 2164713 B1 20160406;
RU 2010101423 A 20110727; RU 2010101424 A 20110727; RU 2466030 C2 20121110; RU 2466875 C2 20121120;
US 2010177094 A1 20100715; US 2010208036 A1 20100819; US 8400495 B2 20130319; US 8878844 B2 20141104;
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