

Title (en)  
SECURITY ELEMENT AND VERIFICATION METHOD HAVING AN EXCITATION-DEPENDENT OPTICAL EFFECT IN THE NON-VISIBLE WAVELENGTH REGION

Title (de)  
SICHERHEITSELEMENT UND VERIFIKATIONSVERFAHREN MIT EINEM ANREGUNGSABHÄNGIGEN OPTISCHEN EFFEKT IM NICHT SICHTBAREN WELLENLÄNGENBEREICH

Title (fr)  
ÉLÉMENT DE SÉCURITÉ ET PROCÉDÉ DE VÉRIFICATION À EFFET OPTIQUE FONCTION DE L'EXCITATION DANS LA GAMME DES LONGUEURS D'ONDE NON VISIBLES

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Application  
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Abstract (en)  
[origin: WO2015086709A2] The invention relates to a security element (110), comprising a substrate layer and a security structure (115) formed on the substrate layer, which is constructed having a structural color (210) comprising microcapsules (10) containing colloidal particles (13), which by means of a structural excitation comprising the creation of an electrical and/or magnetic field can be arranged and/or re-arranged in a crystal-like structure to each other. The crystal-like structure (15) has reflection and/or transmission properties for light that can be influenced and/or adjusted by way of the structural excitation. In a non-excited state, the microcapsules (10) have an increased transmission capability and reduced reflection ability for at least one wavelength in the non-visible wavelength region. In the structural excited state, in which an electrical and/or magnetic field generated by way of structural excitation exists in the region of the microcapsules (10), the microcapsules (10) have a reduced transmission capability and an increased reflection ability compared to the non-structural excited state. The invention further relates to a verification method.

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