

Patente und Patentanmeldungen / Dr. Ralph Domnick / Geschäftsführer Ara-Authentic GmbH

Lfd.-Nr	Titel	Abstract	Details
001	Smart card module, method for producing a smart card module, smart card and method for testing a smart card module	In various exemplary embodiments, a smart card module is provided. The smart card module includes a carrier and a layer stack at least partly covering the carrier. The layer stack includes a reflection layer, a light-transmissive layer arranged above the reflection layer, and a partly light-transmissive silver layer arranged above the light-transmissive layer. The partly light-transmissive silver layer is configured for reflecting part of light impinging on the partly light-transmissive silver layer.	Publication/Patent Number: US10585034B2 Publication Date: 2020-03-10 Application Number: US16/043,824 Filing Date: 2018-07-24 Inventor : Spoettl, Thomas Belzner, Mathias Domnick, Ralph Pohl, Jens Pueschner, Frank Stampka, Peter Weiss, Daniel Assignee: Infineon Technologies AG IPC: G01N21/25
002	Smart Card Module, Method for Producing a Smart Card Module, Smart Card and Method for Testing a Smart Card Module	In various exemplary embodiments, a smart card module is provided. The smart card module includes a carrier and a layer stack at least partly covering the carrier. The layer stack includes a reflection layer, a light-transmissive layer arranged above the reflection layer, and a partly light-transmissive silver layer arranged above the light-transmissive layer. The partly light-transmissive silver layer is configured for reflecting part of light impinging on the partly light-transmissive silver layer.	Publication/Patent Number: US2019033206A1 Publication Date: 2019-01-31 Application Number: US20/181,604 Filing Date: 2018-07-24 Inventor : Pohl, Jens Pueschner, Frank Stampka, Peter Spoettl, Thomas Belzner, Mathias Weiss, Daniel Domnick, Ralph Assignee: Infineon Technologies AG IPC: G06K19/07
003	Smart Card Module, Method for Producing a Smart Card Module, Smart Card and Method for Testing a Smart Card Module	In various exemplary embodiments, a smart card module is provided. The smart card module includes a carrier and a layer stack at least partly covering the carrier. The layer stack includes a reflection layer, a light-transmissive layer arranged above the reflection layer, and a partly light-transmissive silver layer arranged above the light-transmissive layer. The partly light-transmissive silver layer is configured for reflecting part of light impinging on the partly light-transmissive silver layer.	Publication/Patent Number: US20190033206A1 Publication Date: 2019-01-31 Application Number: US16/043,824 Filing Date: 2018-07-24 Inventor : Spoettl, Thomas Belzner, Mathias Domnick, Ralph Pohl, Jens Pueschner, Frank Stampka, Peter Weiss, Daniel Assignee: Infineon Technologies AG IPC: G01N21/25

004	<p>CHIPKARTENMODUL, VERFAHREN ZUM HERSTELLEN EINES CHIPKARTENMODULS, CHIPKARTE UND VERFAHREN ZUM PRÜFEN EINES CHIPKARTENMODULS</p> <p>Title (English): Smart card module, manufacturing method of smart card module, inspection method of smart card and smart card module</p>	<p>In verschiedenen Ausführungsbeispielen wird ein Chipkartenmodul bereitgestellt. Das Chipkartenmodul kann einen Träger und einen den Träger zumindest teilweise bedeckenden Schichtenstapel aufweisen. Der Schichtenstapel kann eine Reflexionsschicht, eine über der Reflexionsschicht angeordnete lichtdurchlässige Schicht und eine über der lichtdurchlässigen Schicht angeordnete, für Licht teildurchlässige Silberschicht, welche eingerichtet ist zum Reflektieren eines Teils von auf sie auftreffendem Licht, aufweisen.</p>	<p>Publication/Patent Number: DE102017116736B3 Publication Date: 2018-12-13 Application Number: DE102017116736 Filing Date: 2017-07-25 Inventor : Pohl, Jens Domnick, Ralph Stampka, Peter Belzner, Mathias Weiss, Daniel Püschner, Frank Spöttl, Thomas Assignee: Infineon Technologies AG IPC: B42D25/45</p>
005	<p>Method and apparatus for identifying a product</p> <p>Publication/Patent Number: US09589227B2</p>	<p>The present invention relates to a method and a corresponding apparatus for identifying a product (1) or information relating to the product (1). In the method, a concealed code on the product (1) is identified, wherein the code is given by a set of ellipsometric parameters, and the method comprises the following steps of: measuring ellipsometric variables for at least one defined point (8) on a surface (9) of the product (1), comparing the measured ellipsometric variables with at least one reference code, and determining a match between the measured ellipsometric variables and the reference code or one of the reference codes or determining a mismatch with each reference code.</p>	<p>Publication Date: 2017-03-07 Application Number: US12/735,092 Filing Date: 2008-12-18 Inventor : Beck, Uwe Hertwig, Andreas Hönig, Dirk Domnick, Ralph Assignee: BAM Bundesanstalt Für Materialforschung Und-Prüfung IPC: G06F17/00</p>

006

**METHOD FOR PRODUCING
TAMPER-PROOF
IDENTIFICATION ELEMENTS**

Publication/Patent Number: HUE027104T2

Publication Date: 2016-08-29

Application Number: HUE03784094

Filing Date: 2003-07-28

Inventor : Kastner, Friedrich Bergsmann, Martin

Walter, Harald Bauer, Georg Domnick, Ralph

Assignee: HUECK FOLIEN GES.M.B.H

IPC: B41M3/14

007

**Procedimiento de
producción de características
de identificación a prueba de
falsificación**

**Title (English): The process of
making false Identification
Features**

Procedimiento de producción de características de identificación a prueba de falsificación consistente en cada caso por lo menos una capa reflectante a ondas electromagnéticas (2), una capa separadora ópticamente transparente (3) y una capa formada por clústeres metálicos (4), donde sobre un sustrato portador (1) se aplica parcial o totalmente una capa reflectante a ondas electromagnéticas (2), sobre esta capa reflectante a ondas electromagnéticas se aplica la capa separadora inerte ópticamente transparente (3) parcial o totalmente y sobre esta capa separadora ópticamente transparente se aplica una capa formada por clústeres metálicos (4), caracterizado porque la capa formada de clústeres metálicos (4) se aplica por medio de un procedimiento técnico de vacío mediante pulverización catódica o evaporación o a partir de sistemas basados en disolventes por medio de un procedimiento químico en húmedo o de impresión, y la capa separadora ópticamente transparente (3) se forma a partir de por lo menos una capa polimérica de, que se aplica mediante pintura, lacado, fundición, pulverización, impresión, por ejemplo, por un procedimiento de serigrafía, huecograbado, flexografía, o impresión digital, o un procedimiento de recubrimiento por rodillo, donde se obtiene un grosor de capa homogéneo con una tolerancia del $\pm 5\%$.

Publication/Patent Number: ES2564043T3

Publication Date: 2016-03-17

Application Number: ES03784094

Filing Date: 2003-07-28

Inventor : Walter, Harald Bauer, Georg Kastner,
Friedrich Bergsmann, Martin Domnick, Ralph

Assignee: HUECK FOLIEN GES.M.B.H

IPC: B41M3/14

008	METHOD FOR PRODUCING TAMPER-PROOF IDENTIFICATION ELEMENTS	Publication/Patent Number: EP1558449B1 Publication Date: 2016-01-06 Application Number: EP03784094.9 Filing Date: 2003-07-28 Inventor : Kastner, Friedrich Bergsmann, Martin Walter, Harald Bauer, Georg Domnick, Ralph Assignee: Hueck Folien Ges.m.b.H IPC: B42D15/00	
009	METHOD AND APPARATUS FOR IDENTIFYING A PRODUCT	Publication/Patent Number: EP2225708B1 Publication Date: 2014-09-24 Application Number: EP08863379.7 Filing Date: 2008-12-18 Inventor : Beck, Uwe Hertwig, Andreas HÖnig, Dirk Domnick, Ralph Assignee: BAM Bundesanstalt für Materialforschung und -prüfung IPC: G06K19/14	
010	Verfahren und Vorrichtung zum Erkennen eines Erzeugnisses Title (English): Device and device for detecting a product	Verfahren zum Erkennen eines Erzeugnisses (1) oder von das Erzeugnis (1) betreffenden Informationen, bei dem eine von dem Erzeugnis (1) getragene versteckten Kodierung identifiziert wird, wobei die Kodierung durch einen Satz ellipsometrischer Parameter gegeben ist und das Verfahren folgende Schritte umfasst: – Messen ellipsometrischer Größen für mindestens eine definierte Stelle (8) auf einer Oberfläche (9) des Erzeugnisses (1), – Vergleichen der gemessenen ellipsometrischen Größen mit mindestens einer zuvor archivierten Kodierung, – Feststellen einer Übereinstimmung der gemessenen ellipsometrischen Größen mit der archivierten Kodierung oder einer der archivierten Kodierungen oder Feststellen einer Nicht- Übereinstimmung mit jeder archivierten Kodierung.	Publication/Patent Number: DE102007063415B4 Publication Date: 2014-12-04 Application Number: DE102007063415 Filing Date: 2007-12-18 Inventor : Domnick, Ralph Dr HÖnig, Dirk Dr Beck, Uwe Dr Hertwig, Andreas Dr Assignee: BAM Bundesanstalt für Materialforschung und -prüfung IPC: G06K7/10

011	METHOD FOR PRODUCING TAMPER-PROOF IDENTIFICATION ELEMENTS	<p>A method for producing forgery proof identification features, and forgery-proof identification features produced according to said method, each consisting of at least one electromagnetic wave-reflecting layer (2). one spacer layer (3) and one layer formed of metallic clusters (4), are described, wherein a partially or fully covering electromagnetic wave-reflecting layer followed by one or more partially and/or fully covering polymer layers (3) of defined thickness are applied to a base substrate (1), whereupon a layer formed of metallic clusters produced using a vacuum method or from solvent-based systems is applied to said spacer layer(s).</p>	<p>Publication/Patent Number: CA2494961C Publication Date: 2012-06-26 Application Number: CA2494961 Filing Date: 2003-07-28 Inventor : Kastner, Friedrich Bergsmann, Martin Bauer, Georg Walter, Harald Domnick, Ralph Assignee: HUECK FOLIEN GES.M.B.H. NOVEMBER AG IPC: B41M3/14</p>
012	METHOD AND APPARATUS FOR IDENTIFYING A	<p>The present invention relates to a method and a corresponding apparatus for identifying a product (1) or information relating to the product (1). In the method, a concealed code on the product (1) is identified, wherein the code is given by a set of ellipsometric parameters, and the method comprises the following steps of: measuring ellipsometric variables for at least one defined point (8) on a surface (9) of the product (1), comparing the measured ellipsometric variables with at least one reference code, and determining a match between the measured ellipsometric variables and the reference code or one of the reference codes or determining a mismatch with each reference code.</p>	<p>PRODUCT Publication/Patent Number: US20110095080A1 Publication Date: 2011-04-28 Application Number: US12/735,092 Filing Date: 2008-12-18 Inventor : Beck, Uwe Hertwig, Andreas Hönig, Dirk Domnick, Ralph Assignee: Beck, Uwe Hertwig, Andreas Hönig, Dirk Domnick, Ralph IPC: G06K19/14</p>

013	Method for producing tamper-proof identification elements	<p>The invention relates to a method for producing tamper-proof identification elements, and to tamper-proof identification elements produced according to said method and consisting respectively of at least one layer (2) reflecting electromagnetic waves (3), a spacer layer, and a layer consisting of metallic clusters (4). According to said method, a partial or all-over layer reflecting electromagnetic waves is applied to a carrier substrate (1), followed by at least one partial and/or all-over polymer layer having a defined thickness (3), and a layer consisting of metallic clusters which is produced by means of a method using vacuum technology or from systems based on solvents is then applied to said spacer layer(s).</p>	<p>Publication/Patent Number: US08067056B2 Publication Date: 2011-11-29 Application Number: US10/523,825 Filing Date: 2003-07-28 Inventor : Kastner, Friedrich Bergsmann, Martin Walter, Harald Bauer, Georg Domnick, Ralph Assignee: Hueck Folien Ges .M.B.I.I. November AG IPC: B05D1/36</p>
014	METHOD AND APPARATUS FOR IDENTIFYING A PRODUCT		<p>Publication/Patent Number: EP2225708A1 Publication Date: 2010-09-08 Application Number: EP08863379.7 Filing Date: 2008-12-18 Inventor : Beck, Uwe Hertwig, Andreas HÖnig, Dirk Domnick, Ralph Assignee: BAM Bundesanstalt für Materialforschung und -prüfung IPC: G06K19/14</p>

015	Device and method for checking the authenticity of an anti-forgery marking	<p>The invention relates to a device for checking the authenticity of an anti-forgery marking with colors which change depending on the angle of observation, comprising a) several first light sources, emitting in a given spectral range, whereby the light sources are different from each other with regard to the wavelength of the emission maximum thereof and the first light sources (1) are housed in a housing (5) such as to irradiate the surface (O), with the housing (5) placed thereon, at a given first angle (α_1), b) a first means (2) for measuring the intensity of the light reflected from the surface (O) arranged at a second angle (α_2) and c) a means (7) for the automatic comparison of measured intensities with the reference intensities stored for at least one given color for each light source (1).</p>	<p>Publication/Patent Number: US07755747B2 Publication Date: 2010-07-13 Application Number: US10/528,446 Filing Date: 2003-10-02 Inventor : Graßl, Björn Maksimovic, Radoslav Bauer, Georg Domnick, Ralph Walter, Harald Assignee: Secutech International Pte. Ltd. IPC: G06K9/74</p>
016	METHOD AND APPARATUS FOR IDENTIFYING A PRODUCT	<p>The present invention relates to a method and a corresponding apparatus for identifying a product (1) or information relating to the product (1). In the method, a concealed code on the product (1) is identified, wherein the code is given by a set of ellipsometric parameters, and the method comprises the following steps of: measuring ellipsometric variables for at least one defined point (8) on a surface (9) of the product (1), comparing the measured ellipsometric variables with at least one reference code, and determining a match between the measured ellipsometric variables and the reference code or one of the reference codes or determining a mismatch with each reference code.</p>	<p>Publication/Patent Number: WO2009077208A1 Publication Date: 2009-06-25 Application Number: EP2008/011101 Filing Date: 2008-12-18 Inventor : Domnick, Ralph Beck, Uwe Hertwig, Andreas Hoenig, Dirk Assignee: DOMNICK, RALPH BECK, UWE HERTWIG, ANDREAS HOENIG, DIRK BAM BUNDESANSTALT FUER MATERIALFORSCHUNG UND-PRUEFUNG IPC: G06K19/14</p>

017	<p>Verfahren und Vorrichtung zum Erkennen eines Erzeugnisses Title (English): Method and device for detecting a finished product</p>	<p>Verfahren zum Erkennen eines Erzeugnisses (1) oder von das Erzeugnis (1) betreffenden Informationen, bei dem eine von dem Erzeugnis (1) getragene versteckte Kodierung identifiziert wird, wobei die Kodierung durch einen Satz ellipsometrischer Parameter gegeben ist und das Verfahren folgende Schritte umfasst: – Messen ellipsometrischer Größen für mindestens eine definierte Stelle (8) auf einer Oberfläche (9) des Erzeugnisses (1), – Vergleichen der gemessenen ellipsometrischen Größen mit mindestens einer zuvor archivierten Kodierung, – Feststellen einer Übereinstimmung der gemessenen ellipsometrischen Größen mit der archivierten Kodierung oder einer der archivierten Kodierungen oder Feststellen einer Nicht-Übereinstimmung mit jeder archivierten Kodierung.</p>	<p>Publication/Patent Number: DE102007063415A1 Publication Date: 2009-06-25 Application Number: DE102007063415 Filing Date: 2007-12-18 Inventor : Domnick, Ralph Dr Hönig, Dirk Dr Beck, Uwe Dr Hertwig, Andreas Dr Assignee: BAM Bundesanstalt für Materialforschung und -prüfung IPC: G06K7/10</p>
018	<p>Forgery-proof marking for objects and method for identifying such a marking</p>	<p>The invention relates to forgery-proof marking for objects, such as check cards, banknotes, labels, and the like, comprising a plastic transparent film (1) having a first and second surface, whereby a series of layers is applied to the second surface. When viewed from the first surface, the color of this series of layers changes according to the viewing angle, and the series of layers is formed from an absorber layer provided on the second surface, from a spacer layer (3) overlying the absorber layer, and from a mirror layer (2) overlying the spacer layer (3). In order to improve the machine identification of the authenticity of the marking, the invention provides that the absorber layer is comprised of metallic clusters (4).</p>	<p>Publication/Patent Number: US07322530B2 Publication Date: 2008-01-29 Application Number: US10/486,955 Filing Date: 2002-08-14 Inventor : Walter, Harald Bauer, Georg Domnick, Ralph Assignee: november Aktiengesellschaft Gesellschaft für Molekulare Medizin IPC: G06K19/06</p>

019	<p>Substrat mit Schichtabfolge zur Erzeugung eines in Abhängigkeit des Blickwinkels sich ändernden Farbeindrucks</p> <p>Title (English): A subthread with a hierarchical sequence to produce a color impression that varies with the view</p>	<p>Die Erfindung betrifft ein Substrat (1, 8, 9) mit einer darauf vorgesehenen Schichtabfolge (2, 7) zur Erzeugung eines in Abhängigkeit des Blickwinkels sich ändernden Farbeindrucks, wobei die Schichtabfolge (2, 7) eine elektromagnetische Wellen reflektierende Reflexionsschicht (3), eine auf der Reflexionsschicht (3) lagernde für elektromagnetische Wellen durchlässige Abstandsschicht (4) und eine auf der Abstandsschicht (4) lagernde aus metallischen Clustern gebildete Absorberschicht (5) aufweist, wobei die Reflexionsschicht (3) für elektromagnetische Wellen teilweise durchlässig ist.</p>	<p>Publication/Patent Number: DE102006027263A1 Publication Date: 2007-12-13 Application Number: DE102006027263 Filing Date: 2006-06-09 Inventor : Kosak, Hans Domnick, Ralph Assignee: IDENTIF GMBH IPC: G02B5/26</p>
020	<p>DEVICE AND METHOD FOR CHECKING THE AUTHENTICITY OF AN ANTI-FORGERY MARKING</p>		<p>Publication/Patent Number: EP1547026B1 Publication Date: 2007-06-27 Application Number: EP03757908.3 Filing Date: 2003-10-02 Inventor : Grassl, Björn Maksimovic, Radoslav Bauer, Georg Domnick, Ralph Walter, Harald Assignee: November Aktiengesellschaft IPC: G07D7/12</p>
021	<p>VORRICHTUNG UND VERFAHREN ZUR PRÜFUNG DER AUTHENTIZITÄT EINER FÄLSCHUNGSSICHEREN MARKIERUNG</p> <p>Title (English): A device and method for verifying the authenticity of an anti-counterfeiting mark</p>		<p>Publication/Patent Number: AT365955T Publication Date: 2007-07-15 Application Number: AT03757908 Filing Date: 2003-10-02 Inventor : Bauer, Georg Walter, Harald Grassl, Bjoern Maksimovic, Radoslav Domnick, Ralph Assignee: NOVEMBER AKTIENGESELLSCHAFT IPC: G07D7/12</p>

022	<p>VORRICHTUNG UND VERFAHREN ZUR PRÜFUNG DER AUTHENTIZITÄT EINER FÄLSCHUNGSSICHEREN MARKIERUNG</p> <p>Title (English): Device and method for verifying the authenticity of an anti-fake mark</p>	<p>Publication/Patent Number: DE50307579D1 Publication Date: 2007-08-09 Application Number: DE50307579 Filing Date: 2003-10-02 Inventor : Bauer, Georg Walter, Harald Grassl, Bjoern Maksimovic, Radoslav Domnick, Ralph Assignee: NOVEMBER AG IPC: G07D7/12</p>
023	<p>Method for producing tamper-proof identification elements</p>	<p>The invention relates to a method for producing tamper-proof identification elements, and to tamper-proof identification elements produced according to said method and consisting respectively of at least one layer (2) reflecting electromagnetic waves (3), a spacer layer, and a layer consisting of metallic clusters (4). According to said method, a partial or all-over layer reflecting electromagnetic waves is applied to a carrier substrate (1), followed by at least one partial and/or all-over polymer layer having a defined thickness (3), and a layer consisting of metallic clusters which is produced by means of a method using vacuum technology or from systems based on solvents is then applied to said spacer layer(s).</p> <p>Publication/Patent Number: US20060147640A1 Publication Date: 2006-07-06 Application Number: US10/523,825 Filing Date: 2003-07-28 Inventor : Kastner, Friedrich Bergsmann, Martin Walter, Harald Bauer, Georg Domnick, Ralph Assignee: Kastner, Friedrich Bergsmann, Martin Walter, Harald Bauer, Georg Domnick, Ralph IPC: B05D1/12</p>

024 **VERFAHREN ZUR
HERSTELLUNG VON
FÄLSCHUNGSSICHEREN
IDENTIFIKATIONSMERKMALE
N**

**Title (English): The method
of Manufacturing Anti-
counterfeiting Identification
characteristics**

Publication/Patent Number: AT413360B

Publication Date: 2006-02-15

Application Number: AT11912002

Filing Date: 2002-08-06

Inventor : Kastner, Friedrich Dr Bergsmann, Martin
Dr Walter, Harald Dr Bauer, Georg Dr Domnick,
Ralph Dr

Assignee: HUECK FOLIEN GES.M.B.H. NOVEMBER
AKTIENGESELLSCHAFT GESELLSCHAFT FUER
MOLEKULARE MEDIZIN
IPC: B41M3/14

025 **Forgery-proof marking for
objects and method for
identifying such a marking**

The invention relates to forgery-proof marking for objects, such as check cards, banknotes, labels, and the like, comprising a plastic transparent film (1) having a first and second surface, whereby a series of layers is applied to the second surface. When viewed from the first surface, the color of this series of layers changes according to the viewing angle, and the series of layers is formed from an absorber layer provided on the second surface, from a spacer layer (3) overlying the absorber layer, and from a mirror layer (2) overlying the spacer layer (3). In order to improve the machine identification of the authenticity of the marking, the invention provides that the absorber layer is comprised of metallic clusters (4).

Publication/Patent Number: US20050001038A1

Publication Date: 2005-01-06

Application Number: US10/486,955

Filing Date: 2002-08-14

Inventor : Walter, Harald Bauer, Georg Domnick,
Ralph

Assignee: Walter, Harald Bauer, Georg Domnick,
Ralph
IPC: G06K019/00

026	METHOD FOR PRODUCING TAMPER-PROOF IDENTIFICATION ELEMENTS		Publication/Patent Number: EP1558449A1 Publication Date: 2005-08-03 Application Number: EP03784094.9 Filing Date: 2003-07-28 Inventor : Kastner, Friedrich Bergsmann, Martin Walter, Harald Bauer, Georg Domnick, Ralph Assignee: Hueck Folien Ges.m.b.H November AG IPC: B42D15/00
027	Device and method for checking the authenticity of an anti-forgery marking	<p>The invention relates to a device for checking the authenticity of an anti-forgery marking with colours which change depending on the angle of observation, comprising a) several first light sources, emitting in a given spectral range, whereby the light sources are different from each other with regard to the wavelength of the emission maximum thereof and the first light sources (1) are housed in a housing (5) such as to irradiate the surface (O), with the housing (5) placed thereon, at a given first angle (α_1), b) a first means (2) for measuring the intensity of the light reflected from the surface (O) arranged at a second angle (α_2) and c) a means (7) for the automatic comparison of measured intensities with the reference intensities stored for at least one given colour for each light source (1).</p>	Publication/Patent Number: US20050257270A1 Publication Date: 2005-11-17 Application Number: US10/528,446 Filing Date: 2003-10-02 Inventor : Grassl, Bjorn Maksimovic, Radoslav Bauer, Georg Domnick, Ralph Walter, Harald Assignee: NOVEMBER AKTIENGESELLSCHAFT GESELLSCHAFT FUR MOLEKULARE MEDIZIN IPC: H04L009/00
028	DEVICE AND METHOD FOR CHECKING THE AUTHENTICITY OF AN ANTI-FORGERY MARKING		Publication/Patent Number: EP1547026A1 Publication Date: 2005-06-29 Application Number: EP03757908.3 Filing Date: 2003-10-02 Inventor : Grassl, Björn Maksimovic, Radoslav Bauer, Georg Domnick, Ralph Walter, Harald Assignee: November Aktiengesellschaft IPC: G07D7/12

029 **Publication/Patent Number:**
EP1547026A1
Publication Date: 2005-06-29
Application Number:
EP03757908.3
Filing Date: 2003-10-02
Inventor : Grassl, Björn
Maksimovic, Radoslav
Bauer, Georg Domnick,
Ralph Walter, Harald
Assignee: November
Aktiengesellschaft
IPC: G07D7/12

030 **METHOD FOR PRODUCING**
TAMPER-PROOF
IDENTIFICATION ELEMENTS

A method for producing forgery proof identification features, and forgery-proof identification features produced according to said method, each consisting of at least one electromagnetic wave-reflecting layer (2). one spacer layer (3) and one layer formed of metallic clusters (4), are described, wherein a partially or fully covering electromagnetic wave-reflecting layer followed by one or more partially and/or fully covering polymer layers (3) of defined thickness are applied to a base substrate (1), whereupon a layer formed of metallic clusters produced using a vacuum method or from solvent-based systems is applied to said spacer layer(s).

Publication/Patent Number: ATA11912002A
Publication Date: 2005-07-15
Application Number: AT11912002
Filing Date: 2002-08-06
Inventor : Kastner, Friedrich Dr Bergsmann, Martin
Dr Walter, Harald Dr Bauer, Georg Dr Domnick,
Ralph Dr
Assignee: HUECK FOLIEN GES.M.B.H. NOVEMBER
AKTIENGESELLSCHAFT GESELLSCHAFT FUER
MOLEKULARE MEDIZIN
IPC: B41M3/14

Publication/Patent Number: CA2494961A1
Publication Date: 2004-02-19
Application Number: CA2494961
Filing Date: 2003-07-28
Inventor : Kastner, Friedrich Bergsmann, Martin
Bauer, Georg Walter, Harald Domnick, Ralph
Assignee: HUECK FOLIEN GES.M.B.H. NOVEMBER AG
IPC: B41M3/14

031 **Color determination device for determining the colors on a surface, said colors varying dependent on the angle of observation, e.g. for banknote checking, whereby an arrangement of angled light emitters and detectors is used**

Device for determining the color or colors on a surface (O), in which the colors observed vary with the observation angle. The device has a number of light sources (1) emitting light within a given spectral range, but with different wavelengths. The sources are contained in a housing (5) so that their light is incident at a first angle (α_1) on the surface. Detection means (2) detect reflected light at a second angle (α_2), while means are provided for automatic comparison of the measured intensities with reference intensities or for calculation of coordinates in color space. The device can be expanded by provision of further light sources (3) emitting at a third angle (approximately B_1), while a second detector detects light at a fourth angle (approximately B_2). An Independent claim is made for a method for detecting the colors or colors on a surface, whereby said colors vary dependent on the angle of observation.

Publication/Patent Number: DE10246563A1
Publication Date: 2004-04-15
Application Number: DE10246563
Filing Date: 2002-10-05
Inventor : Bauer, Georg Walter, Harald Maksimovic, Radoslav Domnick, Ralph Grasl, Bjoern
Assignee: NOVEMBER AKTIENGESELLSCHAFT GESELLSCHAFT FUER MOLEKULARE MEDIZIN
IPC: G07D7/12

032 **DEVICE AND METHOD FOR CHECKING THE AUTHENTICITY OF AN ANTI-FORGERY MARKING**

Publication/Patent Number: AU2003273943A1
Publication Date: 2004-05-04
Application Number: AU2003273943
Filing Date: 2003-10-02
Inventor : Walter, Harald Bauer, Georg Grassl, Bjorn Domnick, Ralph Maksimovic, Radoslav
Assignee: NOVEMBER AKTIENGESELLSCHAFT GESELLSCHAFT FUR MOLEKULARE MEDIZIN
IPC: G07D7/12

033	DEVICE AND METHOD FOR CHECKING THE AUTHENTICITY OF AN ANTI-FORGERY MARKING	<p>The invention relates to a device for checking the authenticity of an anti-forgery marking with colours which change depending on the angle of observation, comprising a) several first light sources, emitting in a given spectral range, whereby the light sources are different from each other with regard to the wavelength of the emission maximum thereof and the first light sources (1) are housed in a housing (5) such as to irradiate the surface (O), with the housing (5) placed thereon, at a given first angle ($\alpha 1$), b) a first means (2) for measuring the intensity of the light reflected from the surface (O) arranged at a second angle ($\alpha 2$) and c) a means (7) for the automatic comparison of measured intensities with the reference intensities stored for at least one given colour for each light source (1).</p>	<p>Publication/Patent Number: WO2004034338A1 Publication Date: 2004-04-22 Application Number: EP2003010964 Filing Date: 2003-10-02 Inventor : Bauer, Georg Walter, Harald Grassl, Bjoern Maksimovic, Radoslav Domnick, Ralph Assignee: BAUER, GEORG NOVEMBER AKTIENGESELLSCHAFT GESELLSCHAFT FUER MOLEKULARE MEDIZIN WALTER, HARALD GRASSL, BJOERN MAKSIMOVIC, RADOSLAV DOMNICK, RALPH IPC: G07D7/12</p>
034	Method for producing tamper-proof identification elements		<p>Publication/Patent Number: AU2003253348A1 Publication Date: 2004-02-25 Application Number: AU2003253348 Filing Date: 2003-07-28 Inventor : Walter, Harald Bauer, Georg Kastner, Friedrich Bergsmann, Martin Domnick, Ralph Assignee: HUECK FOLIEN GES.M.B.H. IPC: B41M3/14</p>
035	Method for producing tamper-proof identification elements		<p>Publication/Patent Number: AU2003253348A8 Publication Date: 2004-02-25 Application Number: AU2003253348 Filing Date: 2003-07-28 Inventor : Walter, Harald Bauer, Georg Kastner, Friedrich Bergsmann, Martin Domnick, Ralph Assignee: HUECK FOLIEN GES.M.B.H. IPC: B41M3/14</p>

036

**METHOD FOR PRODUCING
TAMPER-PROOF
IDENTIFICATION ELEMENTS**

The invention relates to a method for producing tamper-proof identification elements, and to tamper-proof identification elements produced according to said method and consisting respectively of at least one layer (2) reflecting electromagnetic waves (3), a spacer layer, and a layer consisting of metallic clusters (4). According to said method, a partial or all-over layer reflecting electromagnetic waves is applied to a carrier substrate (1), followed by at least one partial and/or all-over polymer layer having a defined thickness (3), and a layer consisting of metallic clusters which is produced by means of a method using vacuum technology or from systems based on solvents is then applied to said spacer layer(s).

Publication/Patent Number: WO2004014663A1
Publication Date: 2004-02-19
Application Number: EP2003008327
Filing Date: 2003-07-28
Inventor : Kastner, Friedrich Bergsmann, Martin Bauer, Georg Walter, Harald Domnick, Ralph
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IPC: B41M3/14

037

**Forgery-proof marking
system for e.g. check cards
comprises plastic film and
layers whose color varies
with angle of observation,
made up of absorbing layer
of metal clusters, spacer and
reflecting layers**

Forgery-proof marking system for check cards, bank notes, tickets, etc. comprises a plastic film (1) and an arrangement of layers whose color varies with the angle of observation. This is made up of an absorbing layer of metal clusters (4), a spacer layer (3) and a reflecting layer (2). An Independent claim is included for a mechanical method for verifying the marking comprising: (a) observing the spectrum of light reflected from the markings for a given angle of observation; (b) identifying absorption peaks in the spectrum; and (c) comparing these with preset values.

Publication/Patent Number: DE10208036A1
Publication Date: 2003-08-21
Application Number: DE10208036
Filing Date: 2002-02-26
Inventor : Bauer, Georg Walter, Harald Domnick, Ralph
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IPC: B42D15/10

038

**FORGERY-PROOF MARKING
FOR OBJECTS AND METHOD
FOR IDENTIFYING SUCH A
MARKING**

The invention relates to a forgery-proof marking for objects, such as check cards, banknotes, labels and the like, comprising a plastic transparent film (1) having a first and second surface, whereby a series of layers is applied to the second surface. When viewed from the first surface, the color of this series of layers changes according to the viewing angle, and the series of layers is formed from an absorber layer provided on the second surface, from a spacer layer (3) overlying the absorber layer, and from a mirror layer (2) overlying the spacer layer (3). In order to improve the machine identification of the authenticity of the marking, the invention provides that the absorber layer is comprised of metallic clusters (4).

Publication/Patent Number: WO03016073A1

Publication Date: 2003-02-27

Application Number: EP0209124

Filing Date: 2002-08-14

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