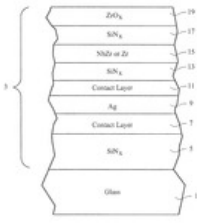
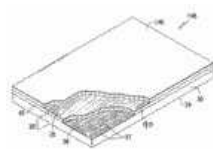
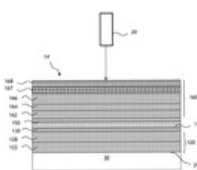
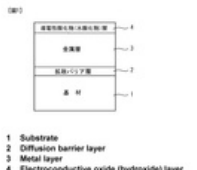
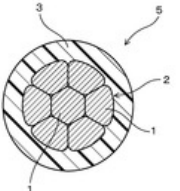
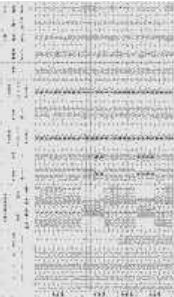
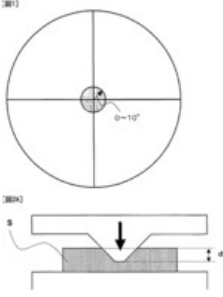
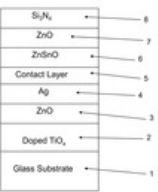
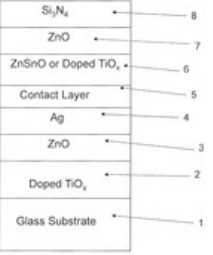
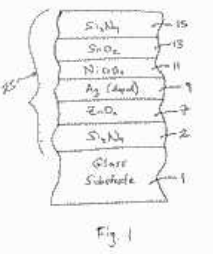


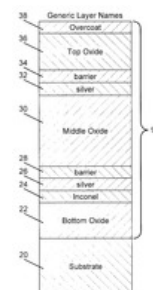
#	Title	Publication number	Publ. date	Applicant/Assignee
1.	Copper foil for printed wiring boards, and laminate using same	WO2012128009	2012-09-27	JX NIPPON MINING & METALS*
Provided are: a copper foil for printed wiring boards, which enables circuits that are suitable for fine pitches and have a cross-sectional shape with small footings to be efficiently manufactured; and a laminate that uses the copper foil. The copper foil for printed wiring boards is provided with a copper foil substrate, and a covering layer that covers at least part of the surface of the copper foil substrate. The covering layer is composed of: a first layer comprising at least one of Pt, Pd and Au, which are laminated in order from the surface of the copper foil substrate; and a second layer comprising one or more types of metal among Ni, Co, Sn, Zn, Cu, and Cr. Au, Pt, Pd, Ni, Co, Sn, Zn, Cu, and Cr are present in the coating layer at coating amounts of 200 to 2000 µg/dm², 200 to 2000 µg/dm², 120 to 1200 µg/dm², 5 to 1500 µg/dm², 5 to 1500 µg/dm², 5 to 1200 µg/dm², 5 to 1200 µg/dm², 5 to 1500 µg/dm², and 5 to 80 µg/dm², respectively. The thickness of the coating layer is 3 to 25 nm. If the atomic concentration (%) of the at least one of Pt, Pd, and Au in the depth direction (x; unit: nm) obtained by XPS depth profiling from the surface is regarded as f(x), the atomic concentration of the at least one metal among Ni, Co, Sn, Zn, Cu, and Cr is regarded as g(x), and first maximum values for f(x) and g(x) in the interval [0, 15] are regarded as f(G) and g(G), respectively, G = F, f(F) = 1%, and g(G) = 1% are satisfied.				
2.	Substrate provided with a stack having thermal properties and having a metal terminal layer	FR3026405	2016-04-01	SAINT GOBAIN GLASS*
The invention relates to a substrate (10) coated on one face (11) with a stack of thin layers (14) having reflective properties for infrared and/or solar radiation comprising at least one metal functional layer (140), in particular made from silver or from a metal alloy containing silver, and at least two anti-reflective coatings (120, 160), said coatings each comprising at least one dielectric layer (122, 164), said functional layer (140) being disposed between the two anti-reflective coatings (120, 160), said stack further comprising a terminal layer (168) that is the layer of the stack that is the furthest from said face (11), characterised in that said terminal layer (168) is a metal layer consisting of zinc and tin, made from Sn_xZn_y with a ratio of 0.1 ≤ x/y ≤ 2.4 and having a physical thickness of between 0.5 nm and 5.0 nm, excluding said values, or indeed of between 0.6 nm and 2.7 nm, excluding said values.				
3.	Copper foil for flexible printed board, copper-clad laminate using the same, flexible printed board, and electronic device	CN107046763	2017-08-15	JX NIPPON MINING & METALS*
PROBLEM TO BE SOLVED: To provide copper foil for a flexible printed board, which is superior in bendability and etchability. SOLUTION: Copper foil for a flexible printed board comprises: 0.001-0.05 mass% of Ag; and a total of 0.003-0.825 mass% of one or more additive elements selected from a group consisting of P, Ti, Sn, Ni, Be, Zn, In and Mg to tough pitch copper standardized according to JIS-H3100(C1100) or oxygen-free copper according to JIS-H3100(C1011). The copper foil has an average crystal grain diameter of 0.5-4.0 µm, and a tensile strength of 235-290 MPa. SELECTED DRAWING: Figure 1				
4.	Heat treatable coated article with dual layer overcoat	WO200204375	2002-01-17	CENTRE LUXEMBOURGEOIS DE RECHERCHE POUR LE VERRE & LA CERAM CENTRE LUXEMBOURGEOIS DE RECHERCHES POUR LE VERRE & LA CERAMIQUE GUARDIAN EUROPE S À R L GUARDIAN EUROPE S À** R L GUARDIAN GLASS* GUARDIAN INDUSTRIES ILNS
A coated article is provided so as to include an overcoat having, an outermost layer including silicon nitride which overlies an underlayer including a metal oxide (MOx) or a metal oxynitride (MOxNy), where the metal (M) is selected from the group of Cr, Nb, Hf, Ta, and/or combinations thereof. Such an overcoat provides for good mechanical and chemical protection in the context of heat treatable coated articles. Coated articles herein may be used in the context of insulating glass (IG) window units, architectural or residential monolithic window units, vehicle windows, and/or the like.				
5.	Coated article with ir reflecting layer(s) and overcoat for improving solar gain and visible transmission	US20180252027	2018-09-06	GUARDIAN GLASS* INTERMOLECULAR*
A coated article includes a low-emissivity (low-E) coating. The low-E coating includes at least one infrared (IR) reflecting layer of a material such as silver, gold, or the like, and a dielectric overcoat designed to increase solar heat gain coefficient (SHGC) of the coated article. A dielectric undercoat may also be designed to increase SHGC of the coated article in certain example embodiments. In certain example embodiments, the overcoat and/or undercoat are designed to increase SHGC while also providing for desirably high visible transmission (TY or Tvis) and desirably low normal emittance (En).				
6.	Coated article with low-e coating having protective doped silver layer for protecting silver based ir reflecting layer(s) , and method of making same	US20180251886	2018-09-06	GUARDIAN GLASS*
A coated article includes a low emissivity (low-E) coating supported by a glass substrate. The low-E coating includes at least one silver (Ag) based infrared (IR) reflecting layer(s) that is provided adjacent to and contacting at least one protective metallic or substantially metallic doped silver layer in order to improve chemical durability characteristics of the low-E coating. The silver based IR reflecting layer and adjacent protective doped silver layer are part of a low emissivity (low-E) coating, and may be sandwiched between at least transparent dielectric layers. A barrier layer including Ni and/or Cr may be provided over and directly contacting the protective doped silver layer in order to further improve durability of the low-E coating.				

7.	Coated article with low-e coating having multilayer overcoat and method of making same	US20130216861	2013-08-22	GUARDIAN GLASS* GUARDIAN INDUSTRIES	
A coated article is provided so as to include a low-E (low emissivity) coating having an infrared (IR) reflecting layer sandwiched between at least a pair of dielectric layers. The IR reflecting layer may be of or include a material such as silver (Ag), and is provided between a pair of contact layers. The low-E coating includes an overcoat having a substantially metallic layer (e.g., NbZr or Zr) which has been found to improve the durability of the coating without significantly sacrificing desired optical characteristics. Such coated articles may be used in the context of windows.					
					
8.	Coated non-metallic sheet having a brushed metal appearance	US20080145661	2008-06-19	PPG INDUSTRIES VITRO VITRO FLAT GLASS*	
An article includes a substrate, e.g. a glass sheet having a first major surface and an opposite second major surface having a textured surface to provide a predetermined pattern on the second surface of the substrate, and an overlay, e.g. a coating over the pattern. The percent of visible light transmittance, and percent visible light reflectance, of the substrate and the overlay is selected such that the pattern is visible when the article is viewed through one of the surfaces of the substrate or overlay. In one non-limiting embodiment, the substrate is glass and the article has a metallic appearance. In another non-limiting embodiment, the overlay is a transparent coating deposited on the second surface of the glass sheet into grooves of the pattern. Other non-limiting embodiments include the substrate having a Delta % haze of greater than 15%, and a protective overcoat over the coating.					
9.	Coating film section for producing coated glass and application of coating film section	CN107235642	2017-10-10	CHINA TRIUMPH INTERNATIONAL ENGINEERING*	
The invention provides a coating film section for producing coated glass and application of the coating film section. The coating film section at least comprises a plurality of isolation chambers, conveying units, gas isolation units, cathode target materials, vacuuming units and a cooling unit, wherein the isolation chambers are connected in sequence; openable cover plates are arranged at the tops of the isolation chambers; the sizes and the shapes of the cover plates are identical; a gas isolation unit or a cathode target material is arranged inside each isolation chamber; the conveying units are arranged at the lower parts inside the isolation chambers and pass through all isolation chambers; the vacuuming devices are arranged on the cover plates of the isolation chambers with the gas isolation units; the cooling units are arranged inside the isolation chambers equipped with the cathode target materials. Due to the process arrangement of the coating film section, the production of multiple single/double-silver products can be met; the positions of target materials need to be changed when different products are produced, and the positions can be very easily changed in time; a certain process upgrading space needs to be preserved for product updating in the future.					
10.	Substrate provided with a stack having thermal properties with a metal terminal layer and an oxidised pre-terminal layer	FR3036701	2016-12-02	SAINT GOBAIN GLASS*	
The invention relates to a substrate (30) covered on one surface (29) with a stack of thin layers (14) including at least one metal functional layer (140), said stack including a terminal layer (168), which is the layer of the stack that is furthest from said surface (29), which includes at least one metal M2, said metal being a reducing agent in an oxide/metal pair having a redox potential γ_2 and said terminal layer (168) being in the metal state, as well as a pre-terminal layer (167) which is the layer of the stack located directly under and in contact with said terminal layer (168) in the direction of said surface (29), which includes at least one metal M1, said metal being an oxidiser in an oxide-metal pair having a redox potential γ_1 and said pre-terminal layer (167) being in the at least partially oxidised state, characterised in that said redox potential γ_1 is higher than said redox potential γ_2.					
11.	Electrical contact material for connector, method for producing same, and electrical contact for connector	WO2012147506	2012-11-01	AUTONETWORKS TECHNOLOGIES* SUMITOMO ELECTRIC INDUSTRIES* SUMITOMO WIRING SYSTEMS*	
Provided is a technique for producing an electrical contact material for a connector whereby stable contact resistance is maintained over a long period and the insertion force during terminal insertion is sufficiently small, and which has excellent electrical reliability and durability and yet is also inexpensive. A method for producing an electrical contact material for a connector comprises: a metal layer formation step for forming atop a substrate a metal layer comprising Ni, Sn, Al, Zn, Cu, In, or an alloy thereof; an oxide layer removal step for removing an oxide layer formed after the metal layer formation step; and an electroconductive oxide layer (or electroconductive hydroxide layer) formation step for performing an oxidation treatment (or hydroxylation treatment) on the surface of the metal layer from which the oxide layer has been removed, to form an electroconductive oxide layer (or electroconductive hydroxide layer). An electrical contact material for a connector, in which a metal layer comprising Ni, Sn, Al, Zn, Cu, In, or an alloy thereof is formed atop a substrate and an electroconductive oxide layer or an electroconductive hydroxide layer is formed atop the metal layer.					
12.	A coating film section for producing coated glass	CN207031269	2018-02-23	CHINA TRIUMPH INTERNATIONAL ENGINEERING*	
The utility model provides a coating film section for producing coated glass, the coating film section includes at least: vacuum unit and cooling unit, are taken out at the cathode target material to a plurality of isolation cavities, transmission unit, the gaseous unit of keeping apart, every isolation cavity connects gradually, and every top that keeps apart the cavity sets up the apron that can open, and every apron size and shape are unanimously, every the inside that keeps apart the cavity sets up gaseous unit or the cathode target material of keeping apart, the below of transmission unit setting in keeping apart the cavity is just link up all and is kept apart cavities, every is equipped with set up evacuating device on the apron on the isolation cavity of gaseous isolation unit, install the inside cooling unit that still sets up of isolation cavity of cathode target material. The utility model provides a processing set-up can satisfy the production of multiple single, double-silver product, the different product of production, when the target position need change, change that can be simple and convenient, timely, following product update needs to reserve certain technology upgrading space.					
13.	Copper alloy strand, copper alloy twisted wire, and automotive electric wire	WO2015159671	2015-10-22	AUTO NETWORKS TECHNOLOGIES AUTOMATIC NETWORK TECHNOLOGY INSTITUTE AUTONETWORKS TECHNOLOGIES* AUTONOMOUS WORKSHOPS SUMITOMO VERING THYSS SUMITOMO ELECTRIC INDUSTRIES REES SUMITOMO ELECTRIC INDUSTRIES* SUMITOMO WIRING SYSTEMS*	
The conventional automotive electric wires having small diameters have such disadvantages that the strength of a conductive body therein is often poor and the fixing strength to a terminal is often decreased. The present invention addresses the problem of providing: a copper alloy strand which enables the provision of an automotive electric wire in which a conductive body has high strength and which has excellent fixing strength to a terminal; a copper alloy twisted wire; and an automotive electric wire manufactured using the copper alloy strand or the copper alloy twisted wire. A means for solving the problem is a copper alloy strand which has such a chemical component composition that at least one additive element selected from the group consisting of Fe, Ti, Sn, Ag, Mg, Zn, Cr and P is contained in the total amount of 0.45% to 2.0% by mass inclusive, H is contained in an amount of 10 ppm by mass or less, and Cu and unavoidable impurities make up the remainder.					

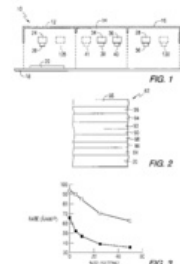
14.	Cu-ni-si-mg-based alloy having improved electrical conductivity and bendability	WO2010126046	2010-11-04	JX NIPPON MINING & METALS*	
Disclosed is a Cu-Ni-Si-Mg-based alloy comprising 1.0 to 4.5% by mass of Ni, 0.16 to 1.13% by mass of Si, and 0.05 to 0.30% by mass of Mg, with the remainder being Cu and unavoidable impurities. The Cu-Ni-Si-Mg-based alloy contains Ni-Si-Mg precipitates (X) and Ni-Si precipitates (Y), wherein the average particle diameter of the precipitates (X) is 0.05 to 3.0 μm, there is contained no precipitate (X) having a particle diameter of larger than 10 μm, and the average particle diameter of the precipitates (Y) is 0.01 to 0.10 μm. The copper alloy may contain Cr, P, Mn, Ag , Co, Mo, As, Sb, Al, Hf, Zr, Ti, C, Fe, In, Ta, Sn or Zn in the total amount of 0.01 to 2.0% by mass. Preferably, the precipitates (X) are contained at a density of 103 to 105 particles/mm2 and the precipitates (Y) are contained at a density of 1.0×10^8 to 1.0×10^{11} particles/mm2. The Cu-Ni-Si-Mg-based alloy has high strength, high electrical conductivity, and good bending workability, and also has excellent stress relaxation resistance under high temperatures.					
15.	Glazing comprising a substrate coated with a stack comprising a functional layer made from silver and a thick blocking underlayer made from ti ox	WO2015071610	2015-05-21	SAINT GOBAIN GLASS*	
The invention concerns a glazing comprising a transparent substrate coated with a stack of thin layers comprising at least one functional metal layer made from silver , at least two antireflective coatings , each antireflective coating comprising at least one dielectric layer , such that each functional metal layer is disposed between two antireflective coatings . The stack comprises at least one antireflective coating comprising a dielectric layer likely to generate hole defects and at least one blocking layer made from titanium oxide having a thickness greater than 1 nm, the blocking layer is located between the antireflective coating comprising a dielectric layer likely to generate hole defects and a functional metal layer made from silver , in direct contact with the functional metal layer made from silver .					
16.	Cu-ni-si alloy wire having excellent bendability	WO2012124732	2012-09-20	JX NIPPON MINING & METALS*	
The purpose of the present invention is to provide a Cu-Ni-Si alloy showing improved bendability, even when notched. The invention is an alloy wire composed of 1.0 to 4.5% Ni, 0.2 to 1.0% Si, and copper and inevitable impurities as the balance, wherein at the surface layer and the center, the maximum value of the X-ray random intensity ratio on the {200} pole figure is 3.0 to 15.0 within a range where the turning angle α of the axis perpendicular to the turning axis of the goniometer for diffraction specified by the Shultz method is within a range of 0 to 10°; preferably the number of inclusions having a grain size of 1 to 2 μm is 50 to 200 inclusions/mm2; and the alloy optionally contains a total of 0.005 to 2.5% of one or more selected from Sn , Zn , Mg, Fe, Ti, Zr, Cr, Al, P, Mn, Co, Cr and Ag . The alloy is produced by hot rolling, cooling to 600 to 300°C at a speed of 10 to 100°C/minute, then cold rolling at a strain rate of 1×10^{-6} to 1×10^{-4} /s, solution treatment, aging, and final cold rolling, and can then be annealed.					
17.	Coated article having low-e coating with ir reflecting layer(s) and doped titanium oxide dielectric layer(s) and method of making same	US20180251887	2018-09-06	GUARDIAN GLASS* INTERMOLECULAR*	
A coated article includes a low emissivity (low-E) coating having at least one infrared (IR) reflecting layer of a material such as silver , gold, or the like, and at least one high refractive index layer of or including titanium oxide and at least one additional metal. A doped titanium oxide layer(s) is designed and deposited in a manner so as to be amorphous or substantially amorphous (as opposed to crystalline) in the low-E coating , so as to better withstand optional heat treatment (HT) such as thermal tempering and reduce haze. The high index layer may be a transparent dielectric high index layer in preferred embodiments, which may be provided for antireflection purposes and/or color adjustment purposes, in addition to having thermal stability.					
18.	Coated article having low-e coating with ir reflecting layer(s) and niobium-doped titanium oxide dielectric layer(s) and method of making same	US20180250917	2018-09-06	GUARDIAN GLASS*	
A coated article includes a low emissivity (low-E) coating having at least one infrared (IR) reflecting layer of a material such as silver , gold, or the like, and at least one high refractive index layer of or including titanium oxide and at least one additional metal. A doped titanium oxide layer(s) is designed and deposited in a manner so as to be amorphous or substantially amorphous (as opposed to crystalline) in the low-E coating , so as to better withstand optional heat treatment (HT) such as thermal tempering and reduce haze. The high index layer may be a transparent dielectric high index layer in preferred embodiments, which may be provided for antireflection purposes and/or color adjustment purposes, in addition to having thermal stability.					
19.	Coated article with low-e coating having doped silver ir reflecting layer(s)	US20180244569	2018-08-30	GUARDIAN GLASS*	
Example embodiments of this invention relate to a coated article having a low-E coating including at least one infrared (IR) reflecting layer of silver that is doped with a material such as SiAl, SiZn, or SiZnCu. The IR reflecting layer(s) is part of a low-E coating , and may be sandwiched between at least transparent dielectric layers . A silver based IR reflecting layer doped in such a manner for example provides for improved corrosion resistance and chemical durability of the layer and the overall coating , and improved stability such as reduced haze upon optional heat treatment (HT), while maintaining good optical properties, compared to an Ag IR reflecting layer that is not doped.					

2010-05-14 APOGEE ENTERPRISES
APOGEE ENTPR*
APOGEE WASSAU
APOGEE WAUSAU
PEAK ENTERPRISE
TRU VUE
TUBELITE

A **substrate** having a **coating** is disclosed. The **coating** is formed of a plurality of **layers**. At least one of the **layers** includes a Nickel -Chromium-Molybdenum alloy and at least two additional **layers** including **silver**. A **coating** for a **substrate** is also disclosed. A method of applying a **coating** to a **substrate** is further disclosed.

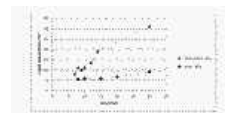
2000-06-29 PPG INDUSTRIES
VITRO FLAT GLASS*

Methods are presented for depositing an infrared reflective, e.g., **silver**, containing multi-**layer coating** onto a **substrate** to form a **coated** article. One or more ceramic cathodes are used to deposit a protective **layer** over the **silver layer**. The use of the ceramic cathodes eliminates the need for the metal primer **layers** common in the prior art. Both the infrared reflective **layer** and a ceramic **layer** can be deposited in the same **coating zone**, this **coating zone** containing sufficient oxygen to provide a substantially oxidized ceramic **coating layer** without adversely impacting upon the properties of the infrared reflective **layer**.



22.	Method for rapid annealing of a stack of thin layers containing an indium overlay	CA2999205	2017-04-20	SAINT GOBAIN SAINT GOBAIN GLASS* SAINT GOBAIN GLASS FRANCE SAINT-GOBAIN GLASS SAINT-GOBAIN GLASS FRANCE
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The invention relates to a heat treatment method involving irradiating a **substrate**, comprising a sheet of **glass coated** on one of the surfaces thereof with a stack of thin **layers**, in an atmosphere containing oxygen (O₂), with electromagnetic radiation having a wavelength between 500 and 2000 nm, said electromagnetic radiation coming from an emission device placed opposite the stack of thin **layers**, a relative movement being created between said emission device and said **substrate** so as to heat the stack of thin **layers** to a temperature of at least 300°C for a brief period of less than one second, preferably less than 0.1 second. Said method is characterized in that the last **layer** in the stack, in contact with the atmosphere, referred to as the overlay, is a metal **layer** of indium or an indium alloy. The invention also relates to a **substrate** for implementing this method and a **substrate** obtainable by this method.



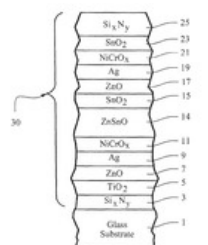
23.	Glazing comprising a substrate coated with a stack comprising at least one functional layer made from zinc-doped silver	WO2015071612	2015-05-21	SAINT GOBAIN GLASS*
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The invention concerns a glazing comprising a transparent **substrate coated** with a stack of thin **layers** comprising at least one functional metal **layer** and at least two antireflective **coatings**, each antireflective **coating** comprising at least one **dielectric layer**, such that each functional metal **layer** is disposed between two antireflective **coatings**. The stack comprises at least one functional metal **layer** made from **silver** comprising: - at least 95.0 %, preferably at least 96.5 %, and more preferably at least 98.0 % by weight **silver** relative to the weight of the functional **layer** and - 0.5 to 3.5 %, and preferably 1.0 to 2.0 % by weight **zinc** relative to the weight of **zinc** and **silver** in the functional **layer**.



24.	Ig window unit including double silver coating having increased shgc to u-value ratio, and corresponding coated article for use in ig window unit or other window	US8940400	2015-01-27	GUARDIAN GLASS® GUARDIAN INDUSTRIES
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An insulating **glass** (IG) window unit includes first and second substrates, and a low-emissivity (low-E) **coating** supported by one of the substrates. The low-E **coating** has two **silver** based infrared (IR) reflecting **layers** and allows the IG window unit to realize an increased SHGC to U-value ratio, and an increased thickness ratio of an upper **silver** based **layer** of the **coating** to a bottom **silver** based **layer** of the **coating**. The low-E **coating** is designed to have a low film-side reflectance, so that for example, when the low-E **coating** is used on surface number three of an IG window unit the IG window unit can realize reduced visible reflectance as viewed from the outside of the building on which the IG window unit is mounted or is to be mounted.



25.	Thin film deposition method and resulting product	WO2010142926	2010-12-16	SAINT GOBAIN GLASS*
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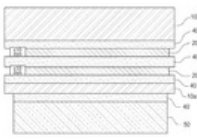
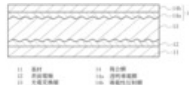
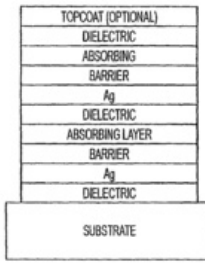
The invention relates to a method for obtaining a **substrate coated** on at least one face thereof with a low-emittance stack of thin films, said method comprising the following steps consisting in: depositing on at least one face of the **substrate** a stack of thin films including at least one **silver** film between two thin **dielectric** films; and heat treating the at least one **coated** face with at least one laser radiation emitted at at least one wavelength of between 500 and 2000 nm, such that the emissivity and/or square resistance of the stack is reduced by at least 5 %. According to the invention, prior to treatment, the stack includes at least one thin film that at least partially absorbs laser radiation and, consequently, the absorption of the stack at at least one laser radiation wavelength is such that the absorption of a 4 mm-thick clear **glass substrate coated** with this stack at the at least one laser radiation wavelength is greater than or equal to 10 %.

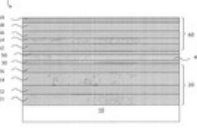
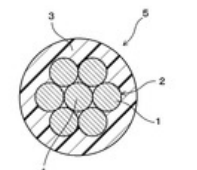
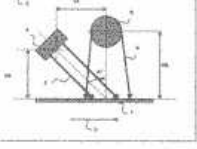
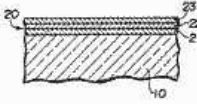
$$\Delta E^* = \sqrt{(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2}$$

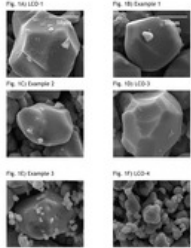
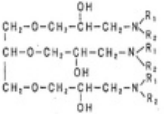
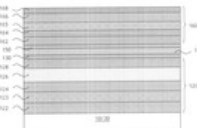
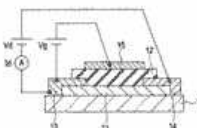
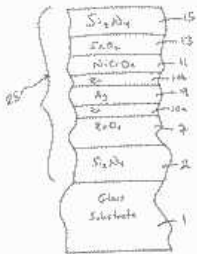
1999-11-18 PPG INDUSTRIES
VITRO
VITRO FLAT GLASS*

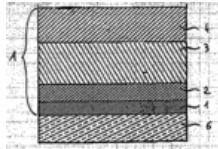
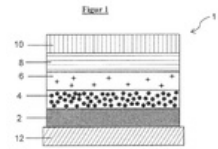
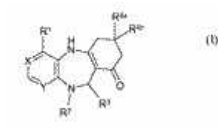
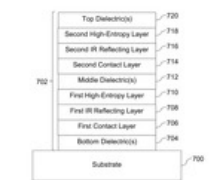
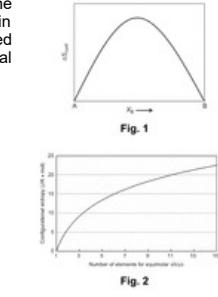
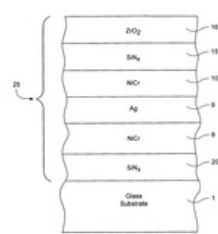
Tin is added to a **zinc** cathode target to enhance the sputter efficiency of the target. Films deposited using the cathode, e.g., greater than zero but less than 10 weight percent **tin** and greater than 90 but less than 100 weight percent **zinc** improve the chemical durability of a high transmittance, low emissivity **coating** stack over **coating** stacks having **zinc** oxides without **tin** oxide. High transmittance, low emissivity **coating** stacks are heated with the heated **coating** having reduced haze by selecting the thickness of metal primer **layer** between an infrared reflective film, e.g. a **silver** film and a **dielectric** film, e.g., a 52-48 **zinc** stannate, **zinc** oxide, **tin** oxide film or a **zinc** oxide film. Also disclosed are enhancing films that lower the resistivity of **silver** films deposited thereon and improve chemical durability of the **coating** stack.

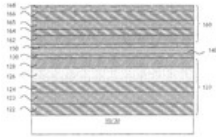
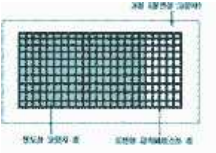
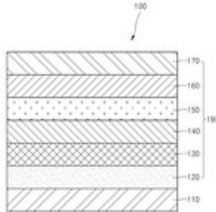
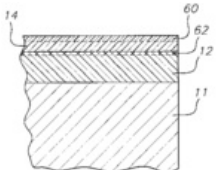
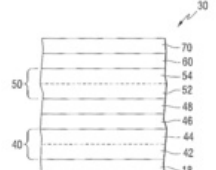
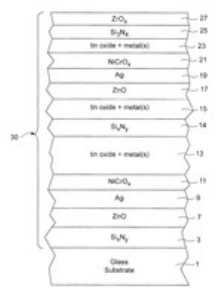
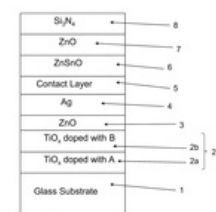
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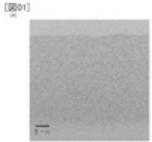
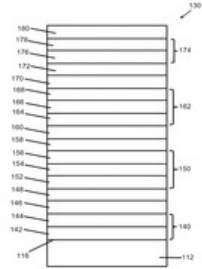
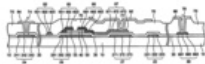
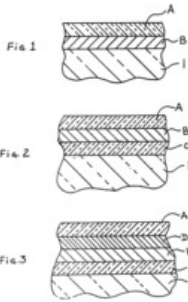
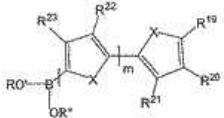
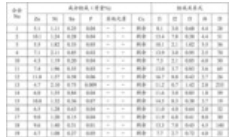
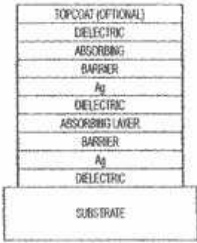
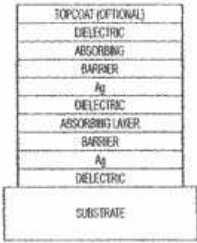
27.	Tempered and non-tempered glass coatings having similar optical characteristics	WO2014164695	2014-10-09	PPG INDUSTRIES* VITRO	
Temperable and non-temperable coatings are provided which have similar optical characteristics. The non-temperable coating is placed on glass that is not to be tempered and provides certain optical characteristics. The temperable coating is placed on a glass substrate and the coated substrate is then tempered. After tempering, the coated tempered glass sheet and the coated non-tempered glass sheet have similar optical characteristics. Both coatings have a plurality of metal layers , with at least one of the metallic layers being a discontinuous layer with a primer layer over the discontinuous metal layer . For the non-temperable coating , the discontinuous metal layer has an effective thickness in the range of 1.5 nm to 1.7 nm. For the temperable coating , the discontinuous metal layer has an effective thickness in the range of 1.7 nm to 1.8 nm. The primer layer of the temperable coating is thinner than the primer layer of the non-temperable coating .					
28.	Touch panel, preparing method thereof, and ag-pd-nd alloy for touch panel	WO2014168712	2014-10-16	3M*	
Provided is a touch panel comprising: a transparent substrate , a transparent conductive material disposed on the substrate , and a Ag-Pd-Nd alloy layer disposed on the transparent conductive material. Provided are also a preparation method of the touch panel and a display comprising the touch panel. Provided are also a Ag-Pd-Nd alloy for touch panel, comprising: 97.9 to 99.2 weight % of Ag , 0.7 to 1.8 weight % of Pd, and 0.1 to 0.3 weight % of Nd, based on 100 weight % of the alloy.					
29.	Composition for transparent conductive film formation, method for forming composite film for solar cell, and composite film formed by the method	CN102201274	2011-09-28	MITSUBISHI MATERIALS*	
PROBLEM TO BE SOLVED: To provide a composite film and a method for forming the composite film for a solar cell capable of improving conversion efficiency of the solar cell by decreasing the contact resistance between a photoelectric conversion layer and a transparent conductive film, and between the transparent conductive film and a conductive reflection film, decreasing the serial resistance of the solar cell in power generation, and provide a composition for transparent conductive film formation.SOLUTION: Conductive oxide fine particles are made of Sn - or Zn -doped indium oxide containing In, and Sn or Zn as constituent elements; or In-, Sn -, Al-, Ga-, or Ge-doped zinc oxide containing Zn , and In, Sn , Al, Ga, or Ge as constituent elements; or In-, Ga-, Al-, or Sb-doped tin oxide containing Sn , and In, Ga, Al or Sb as constituent elements. The conductive oxide fine particles further contain a different kind of additive element from the constituent elements, and the content rate of the additive element is 0.01 to 20 mol% for the total 100 mol% of the constituent elements and additive element in the conductive oxide fine particles.					
30.	Low emissivity coating with low solar heat gain coefficient, enhanced chemical and mechanical properties and method of making the same	WO2009067263	2009-05-28	AGC FLAT GLASS AGC GLASS* EHJ DZHI SI FLET GLASS NORT EMMERIKE INK	
The invention provides low-emissivity stacks being characterized by a low solar heat gain coefficient (SHGC), enhanced aesthetics, mechanical and chemical durability, and a tolerance for tempering or heat strengthening. The invention moreover provides low-emissivity coatings comprising, in order outward from the substrate a first dielectric layer ; a first nucleation layer ; a first Ag layer ; a first barrier layer ; a second dielectric layer ; a second nucleation layer ; a second Ag layer ; a second barrier layer ; a third dielectric layer ; and optionally, a topcoat layer , and methods for depositing such coatings on substrates.					
31.	Metal substrate with plating	TW201625414	2016-07-16	JX NIPPON MINING & METALS*	

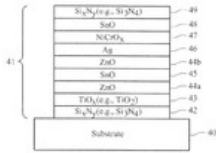
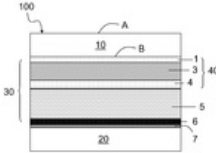
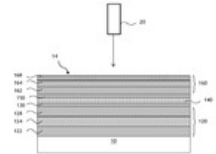
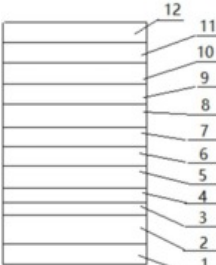
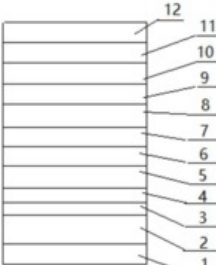
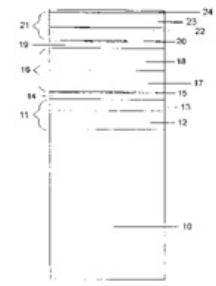
35.	Coated glazing material	GB8900165	1989-03-01	AGC GLASS EUROPE* GURABERUBERU	A substrate of glazing material carries a multi-layer coating which comprises a reflective layer of silver sandwiched between a transparent undercoat and a transparent overcoat. The undercoat for the silver layer comprises at least one layer of a metal oxide. The overcoat for the silver layer comprises a layer of an oxide of a sacrificial metal selected from the group consisting of titanium, aluminum, stainless steel, bismuth, tin and mixtures of two or more thereof, which is formed by initial deposition of the sacrificial metal and its conversion to oxide over which is deposited a layer of zinc oxide having a thickness not greater than 15 nm, and an uppermost overcoating layer of metal oxide selected from the group consisting of tin oxide, bismuth oxide, aluminum oxide, titanium dioxide and mixtures of two or more thereof. For forming a low emissivity coating with good light transmission, the silver layer is 8 to 12 nm thick. A specific multi-layer low emissivity coating is formed by depositing the following layers, starting from the substrate surface: Undercoat 3 nm titanium dioxide 22.5 nm tin oxide (SnO.sub.2) 10 nm zinc oxide Reflective layer 10 nm silver Overcoat 2.5 nm titanium for conversion to titanium dioxide 12.5 nm zinc oxide 10 nm tin oxide 12 nm titanium dioxide.	
36.	Coated article including low-emissivity coating, insulating glass unit including coated article, and methods of making the same	CA2826562	2012-08-30	CENTRE LUXEMBOURGEOIS DE RECHERCHE POUR LE VERRE & LA CERAM CENTRE LUXEMBOURGEOIS DE RECHERCHES POUR LE VERRE & LA CERAMIQUE GLASS & CERAMICS RESEARCH GUARDIAN EUROPE* GUARDIAN EUROPE S À R L GUARDIAN EUROPE S À** R L GUARDIAN GLASS* GUARDIAN INDUSTRIES	Certain example embodiments relate to a coated article including at least one infrared (IR) reflecting layer of a material such as silver or the like in a low-E coating, and methods of making the same. In certain cases, at least one layer of the coating is of or includes nickel and/or titanium (e.g., Ni/TiO₂). The provision of a layer including nickel titanium and/or an oxide thereof may permit a layer to be used that has good adhesion to the IR reflecting layer, and reduced absorption of visible light (resulting in a coated article with a higher visible transmission). When a layer including nickel titanium oxide is provided directly over and/or under the IR reflecting layer (e.g., as a barrier layer), this may result in improved chemical and mechanical durability. Thus, visible transmission may be improved if desired, without compromising durability; or, durability may simply be increased.	
37.	Substrate provided with a stack with thermal properties and comprising high refractive index layers and its use	FR2942794	2010-09-10	SAINT GOBAIN GLASS*	The invention relates to a glass substrate (10) provided, on a main surface, with a thin film stack comprising a metal functional layer (40), in particular made of silver or a metal alloy containing silver and having infrared or solar radiation reflective properties, and two antireflection coatings (20, 60), said coatings each comprising at least two dielectric layers (22, 24, 26, - 62, 64, 66), said functional layer (40) being placed between both antireflection coatings (20, 60), characterized in that each antireflection coating (20, 60) comprises at least one high refractive index dielectric layer (24, 64) contacting or close to the functional layer (40), that is, 10 nm or less from the functional layer (40).	
38.	Copper alloy twisted wire, manufacturing method therefor, and electrical wire for automobile	WO2015129457	2015-09-03	AUTOMATIC NETWORK TECHNOLOGY INSTITUTE AUTONETWORKS TECHNOLOGIES* SUMITOMO ELECTRIC INDUSTRIES* SUMITOMO WIRING SYSTEMS*	A cast material is formed that has a chemical composition which contains a total of 1.0-2.0 mass% inclusive of at least one additional element selected from the group consisting of Fe, Ti, Sn, Ag, Mg, Zn, Cr, and P, with the remainder comprising Cu and unavoidable impurities. A wrought material is formed by plastic working the cast material. An intermediate wire material is formed by wire drawing the wrought material. The intermediate wire material is annealed. A single wire material is formed by wire drawing the annealed intermediate wire material such that the degree of cold working is within a range of 77% or more and less than 99%. A twisted wire material is formed by twisting together a plurality of the single wire materials, and the twisted wire material undergoes heat processing. Thus, a copper alloy twisted wire is obtained.	
39.	Dielectric-layer-coated substrate and installation for production thereof	FR2856677	2004-12-31	SAINT GOBAIN GLASS*	The invention relates to a substrate (1), such as a glass substrate, which is coated with at least one thin dielectric layer. According to the invention, the dielectric layer is deposited by means of cathode sputtering which is, for example, assisted by a magnetic field and which is preferably reactive in the presence of oxygen and/or nitrogen, with exposure to at least one ion beam (3) from an ion source (4). The invention is characterised in that the dielectric layer which is exposed to the ion beam has a refractive index which can be adjusted on the basis of the parameters of the ion source, said ion source being a linear source.	
40.	Heat insulating glass with dielectric multilayer coating	DE4024308	1991-02-07	CENTRAL GLASS*	The invention provides a heat insulating glass plate with a multilayer coating which is fairly low in transmittance for solar radiation and fairly high in transmittance for the visible light and also for radio waves. The multilayer coating is a lamination of transparent and dielectric layers and has three essential layers in which the middle layer is higher or lower in refractivity than the inner and outer layers. The coating may have five layers in which the second and fourth layers are higher or lower in refractivity than the remaining three layers. Each layer of the multilayer coating is a metal compound film deposited by sputtering or CVD. In a first embodiment of the three-layer coating each of the inner and outer layers is formed of SnO.sub.x, ZrO.sub.x, TaO.sub.x or AlN.sub.x having a refractive index of 1.8-2.1 and the middle layer is formed of TiO.sub.x having a refractive index of 2.2-2.5. In a second embodiment, each of the inner and outer layers is formed of SnO.sub.x, TiO.sub.x, ZrO.sub.x, TaO.sub.x, ZnO.sub.x, AlN.sub.x or SiN.sub.x having a refractive index of 1.8-2.5 and the middle layer is formed of SiO.sub.x, AlO.sub.x or SiAlO.sub.x having a refractive index of 1.4-1.7. The heat insulating glass plates are useful as vehicle window glasses, and the second embodiment of the multilayer coating is very suitable for use in laminated glass.	

41.	Lithium metal oxide particles coated with a mixture of the elements of the core material and one or more metal oxides with a spinel phase indexed in the fd3-m space group.	WO2012171780	2012-12-20	UMICORE*
A lithium metal oxide powder for use as a cathode material in a rechargeable battery, consisting of a core material and a surface layer , the core having a layered crystal structure consisting of the elements Li, a metal M and oxygen, wherein the Li content is stoichiometrically controlled, wherein the metal M has the formula Co 1-a M' a , with 0%≤a%≤0.05, wherein M' is either one or more metals of the group consisting of Al, Ga and B; and the surface layer consisting of a mixture of the elements of the core material and inorganic N-based oxides, wherein N is either one or more metals of the group consisting of Mg, Ti, Fe, Cu, Ca, Ba, Y, Sn , Sb, Na, Zn , Zr and Si.				
				
42.	Coated glazing material	GB8900166	1989-03-01	AGC GLASS EUROPE* GURABERUBERU
A substrate of glazing material carries a multi- layer coating which comprises a reflective layer of silver sandwiched between a transparent undercoat and a transparent overcoat . The undercoat for the silver layer comprises at least one layer of a metal oxide selected from tin oxide, titanium dioxide, aluminium oxide, bismuth oxide and a mixture of two or more thereof, over which is deposited a layer of zinc oxide having a thickness not greater than 15 nm. The overcoat for the silver layer comprises a layer of an oxide of a sacrificial metal selected from the group consisting of titanium, aluminium, stainless steel, bismuth, tin and mixtures of two or more thereof, which is formed by initial deposition of the sacrificial metal and its conversion to oxide. For forming a low emissivity coating with good light transmission, the silver layer is 8 to 12 nm thick. A specific multi- layer low emissivity coating is formed by depositing the following layers , starting from the substrate surface: Undercoat 3 nm titanium dioxide 20 nm tin oxide (SnO2) 13 nm zinc oxide Reflective layer 10 nm silver Overcoat 3.5 nm titanium for conversion to titanium dioxide 22 nm tin oxide 12 nm titanium dioxide.				
				
43.	Metal substrate with plating	JP2016138337	2016-08-04	JX NIPPON MINING & METALS*
PROBLEM TO BE SOLVED: To provide a metal substrate excellent in solder adhesiveness and weather resistance while using a metal substrate containing an element high in reactivity with oxygen at room temperature.SOLUTION: There is provided a metal substrate with plating which has a Co-Ni alloy plating layer , a Co-Mo alloy plating layer or a Co-Ni-Mo alloy plating layer formed on a part of or all surface of the metal substrate , wherein all coating weight of Co, Ni and Mo in the plating layer is 500 µg/dm ² or more, excluding a range of 13500 µg/dm ² or more, total coating amount of Ni and Mo to total coating amount of Co, Ni and Mo (hereafter also called "Ni+Mo ratio (%)") is 10% to 50% by mass ratio and total coating amount of Co, Ni and Mo in the plating layer is 3000 µg/dm ² or more, the metal substrate is formed by a copper alloy containing one or more selected from a group consisting of Ti, Si, Mg, P, Sn , Zn , Cr, Zr, V, Na, Ca, Ba, Cs, Mn, K, Ga, B, Nb, Ce, Be, Nd, Sc, Hf, Ho, Lu, Yb, Dy, Er, Pr, Y, Li, Gd, Pu, In, Fe, La, Ta, Th, U, Sm, Tb, Sr, Tm and Al, and is used for applications by connecting the same to an electronic component by soldering at a location having the plating layer .SELECTED DRAWING: None				
				
44.	Substrate provided with a multilayer stack having thermal properties and absorbent layers	FR2940272	2010-06-25	SAINT GOBAIN GLASS*
The invention relates to a multiple-glazing panel comprising at least two substrates, one substrate being coated on an inner face in contact with an intermediate gas cavity with a thin-film multilayer stack having reflection properties in the infrared and/or in solar radiation, which multilayer stack has only a single metallic functional layer (140) and two dielectric films (120, 160), said films each comprising at least one dielectric layer (122, 126; 162, 166), said functional layer (140) being placed between the two dielectric films (120, 160), characterized in that the two dielectric films (120, 160) each comprise at least one absorbent layer (123, 165) which is placed in the dielectric film between two dielectric layers (122, 126; 162, 166), the absorbent material of the absorbent layers (123, 165) being placed symmetrically on each side of the metallic functional layer (140).				
				
45.	Field effect transistor using amorphous oxide film as channel layer	WO2007029844	2007-03-15	CANON*
An amorphous oxide containing hydrogen (or deuterium) is applied to a channel layer of a transistor. Accordingly, a thin film transistor having superior TFT properties can be realized, the superior TFT properties including a small hysteresis, normally OFF operation, a high ON/OFF ratio, a high saturated current, and the like. Furthermore, as a method for manufacturing a channel layer made of an amorphous oxide, film formation is performed in an atmosphere containing a hydrogen gas and an oxygen gas, so that the carrier concentration of the amorphous oxide can be controlled.				
				
46.	Heating coil reflection glass and its process	KR19960004255	1996-02-23	HANKOOK GLASS INDUSTRY*
Heat mirror glass is composed of a primary metal nitride layer (22), a primary diffusion protection layer (23), a heat mirror metal layer (24), a secondary diffusion protection layer (25), and a secondary nitride layer (26) on a glass plate (20) which is a transparent organic or inorganic glass . The primary metal nitride layer (22) and a secondary nitride layer (26) are transparent in a region of visible light. The primary metal nitride layer (22) consists of aluminium nitride or silicon nitride(SixNy : x is 1-3, y is 1-4), the secondary nitride layer (26) consists of aluminium nitride or silicon nitride(SixNy : x is 1-3, y is 1-4). The primary diffusion protection layer (23) consists of a metal selected from Al, Cr, Sn , W, Si,Ti, Ni, Zn , ZnAl, and ZnSn . The secondary diffusion protection layer (25) consists of a metal selected from Al, Cr, Sn , W, Si, Ti, Ni, Zn , ZnAl, and ZnSn .				
				
47.	Coated article with low-e coating having ir reflecting system with silver and zinc based barrier layer(s)	US20180251888	2018-09-06	GUARDIAN GLASS* INTERMOLECULAR*
A coated article includes a silver (Ag) based infrared (IR) reflecting layer (s) on a glass substrate that is provided adjacent to and contacting at least one metallic or substantially metallic zinc (Zn) inclusive barrier layer in order to improve chemical durability characteristics of the low-E coating . In certain example embodiments, the silver based layer may be sandwiched between first and second metallic or substantially metallic barrier layers of or including zinc . The IR reflecting layer (s) and zinc based barrier layer (s) are part of a low emissivity (low-E) coating .				
				

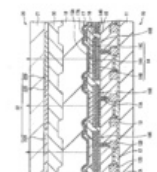
48.	Transparent substrate comprising an anti-solar and/or low-e coating	FR2858816	2005-02-18	SAINT GOBAIN GLASS*	
The invention concerns a transparent substrate (6) comprising on at least one of its surfaces an antireflection coating , in particular with normal incidence consisting of a stack (A) of thin layers , characterized in that the stack comprises successively: a first layer (1) with refractive index n1 ranging between 1.8 and 2.3 and a geometrical thickness e1 ranging between 5 and 50 nm; a second layer (2) with refractive index n2 ranging between 1.35 and 1.65 and geometrical thickness e2 ranging between 5 and 50 nm; a third layer (3) with refractive index n3 ranging between 1.8 and 2.3 and geometrical thickness e3 ranging between 40 and 150 nm; a fourth layer (4) with refractive index n4 ranging between 1.35 and 1.65 and geometrical thickness e4 ranging between 40 and 150 nm.					
49.	Light capable coating system and an object with at least one coatable surface article, provided with the coating system, and use of the coating system for the production of light capable walls, floors or ceilings	EP3171672	2017-05-24	DAW*	
The present invention relates to a luminous coating system capable, comprising, in this order, a) electrically conductive layer a rear, b) a dielectric light-emitting layer , c) a front transparent or translucent layer and electrically conductive upstream d) an electrically insulating barrier layer , wherein at least one of said layers a), b), c) and d), all of these layers in particular, by means of a brush -, - rollers, in particular paint rollers -, - filler. - And/or blade-type application available or trowels are applied. The invention also relates to an item having a surface that can be coated , in particular a wall, floor or ceiling, provided with at least one coating system of the invention relates to. The invention also relates to the use of the inventive coating system for the production of walls, floors or ceiling.					
50.	Glass substrate coated with layers with improved resistivity	WO2008099021	2008-08-21	SAINT GOBAIN GLASS* TIBOTEC PHARMACEUTICALS	
Transparent glass substrate , associated with a stack of thin layers forming an electrode, the stack comprising a sublayer that is a barrier to alkali metals, and an electroconductive layer , said electroconductive layer being coated with an overlayer for protection against oxidation, characterized in that the stack includes a metallic blocking layer capable of being oxidized during heat treatment.					
51.	Coated article supporting high-entropy nitride and/or oxide thin film inclusive coating , and/or method of making the same	US20180022928	2018-01-25	GUARDIAN GLASS*	
Certain example embodiments relate to coated articles supporting high-entropy nitride and/or oxide thin film inclusive coatings , and/or methods of making the same. The example high-entropy alloys systems described herein are heat stable and may be used in optical coatings . A first material system that may be used in connection with certain example embodiments includes SiAlN with one or more (and preferably two or more) of elements such as Hf, Y, Zr, Ti, Ta, and Nb. A second material system that may be used in connection with certain example embodiments includes TiO ₂ with one or more (and preferably two or more) of elements such as Fe, Co, Ni, Sn , Zn , and N. The material systems may in some cases be high-index materials that can serve as a substitute for titanium oxide in layer stacks, in some example applications.					
52.	Coated article supporting high-entropy nitride and/or oxide thin film inclusive coating , and/or method of making the same	US20180022929	2018-01-25	GUARDIAN GLASS*	
Certain example embodiments relate to coated articles supporting high- entropy nitride and/or oxide thin film inclusive coatings , and/or methods of making the same. The example high-entropy alloys systems described herein are heat stable and may be used in optical coatings . A first material system that may be used in connection with certain example embodiments includes SiAlN with one or more (and preferably two or more) of elements such as Hf, Y, Zr, Ti, Ta, and Nb. A second material system that may be used in connection with certain example embodiments includes TiO ₂ with one or more (and preferably two or more) of elements such as Fe, Co, Ni, Sn , Zn , and N. The material systems may in some cases be high-index materials that can serve as a substitute for titanium oxide in layer stacks, in some example applications.					
53.	Coated article with low-e coating including zirconium oxide and/or zirconium silicon oxynitride and methods of making same	WO2009157970	2009-12-30	CENTRE LUXEMBOURGEOIS DE RECHERCHES POUR LE VERRE & LA CERAMIQUE GUARDIAN EUROPE S À R L* GUARDIAN EUROPE S À** R L GUARDIAN GLASS* GUARDIAN INDUSTRIES	
This application relates to a coated article including at least one infrared (IR) reflecting layer of a material such as silver or the like in a low-E coating . In certain embodiments, at least one layer of the coating is of or includes zirconium oxide (e.g., ZrO ₂) or zirconium silicon oxynitride (e.g., ZrSiOxNy). When a layer comprising zirconium oxide or zirconium silicon oxynitride is provided as the uppermost or overcoat layer of the coated article (e.g., over a silicon nitride based layer), this results in improved chemical and heat stability in certain example embodiments. Coated articles herein may be used in the context of insulating glass (IG) window units, vehicle windows, or in other suitable applications such as monolithic window applications, laminated windows, and/or the like.					

54.	Substrate provided with a multilayer stack having thermal properties and an absorbent layer	FR2940271	2010-06-25	SAINT GOBAIN GLASS*
The invention relates to a multiple-glazing panel comprising at least two substrates, one substrate being coated on an inner face in contact with an intermediate gas cavity with a thin-film multilayer stack having reflection properties in the infrared and/or in solar radiation, which multilayer stack has only a single metallic functional layer (140) and two dielectric films (120, 160), said films each comprising at least one dielectric layer (122, 126; 162, 166), said functional layer (140) being placed between the two dielectric films (120, 160), characterized in that at least one dielectric film (120, 160), or even both dielectric films (120, 160), has an absorbent layer (123, 165) which is placed in the dielectric film between two dielectric layers (122, 126; 162, 166), the absorbent material of the absorbent layer(s) (123, 165) being predominantly in the dielectric film (120) lying beneath the metallic functional layer (140) or predominantly in the dielectric film (160) lying above the metallic functional layer (140).				
55.	Conductive film and sheet, and method for preparing the same	KR20050098434	2005-10-12	NANO CHEMICAL TECHNOLOGY*
PURPOSE: A broad-area conductive film and sheet with flexibility and transparency and a preparation method and use thereof are provided to show good shielding efficiency, brightness and luminous efficiency. CONSTITUTION: The broad-area conductive film and sheet comprises: a substrate of a functional polymer; a conductive inorganic metal or metal alloy layer coated at regular intervals on the substrate; and a conductive polymer layer coated on the conductive inorganic metal or metal alloy layer. The broad-area conductive film and sheet comprises: a substrate of the functional polymer; a conductive polymer layer coated on the substrate; and a conductive inorganic metal or metal alloy layer coated at regular intervals. © KIPO 2006				
56.	Low-emissivity transparent laminate and building material containing same	KR20140082153	2014-07-02	ELGY HOUSSIS LG HAUSYS LG HAUSYS*
Provided is a low-emissivity transparent laminate comprising a transparent substrate and a coating layer placed on the transparent substrate, wherein the coating layer has a multilayered structure sequentially comprising a low-emissivity layer, a buffer layer comprising a ZnSe-based composite metal nitride, and a dielectric layer from the transparent substrate.				
57.	Articles coated with abrasion resistant coating	WO200058024	2000-10-05	DAVID A LAPOINT;David;LA POINT DAVID A.
A coating composition includes a cured base coat (12) of polyurethane-containing resin covered by a cured top coat (14) of a silicon-containing resin. The top coat resin is applied in an uncured state to the base coat, the two resins are thereafter heated to at least 140 F, and thereafter the top coat resin is cured to produce the coating composition. A clean metal surface (11) is coated with the coating composition by applying uncured base coat (12) resin to the metal surface (11), curing the base coat resin, and thereafter applying the top coat (14) as described above.				
58.	Solar control coating with high solar heat gain coefficient	WO2010129730	2010-11-11	PPG INDUSTRIES VITRO FLAT GLASS*
A coating provides a high solar heat gain coefficient (SHGC) and a low overall heat transfer coefficient (U-value) to trap and retain solar heat. The coating and coated article are particularly useful for use in architectural transparencies in northern climates. The coating includes a first dielectric layer, a continuous metallic layer formed over at least a portion of the first dielectric layer, the metallic layer having a thickness less than 8 nm; a primer layer formed over at least a portion of the metallic layer; a second dielectric layer formed over at least a portion of the primer layer; and an overcoat formed over at least a portion of the second dielectric layer. When used on a No. 3 surface of a reference IGU, the coating provides a SHGC of greater than or equal to 0.6 and a U-value of less than or equal to 0.35.				
59.	Coated article with low-e coating including tin oxide inclusive layer(s) with additional metal(s)	US20140141259	2014-05-22	GUARDIAN GLASS* GUARDIAN INDUSTRIES
A coated article includes a coating, such as a low emissivity (low-E) coating, supported by a substrate (e.g., glass substrate). The coating includes at least one dielectric layer including tin oxide that is doped with another metal(s). The coating may also include one or more infrared (IR) reflecting layer(s) of or including material such as silver or the like, for reflecting at least some IR radiation. In certain example embodiments, the coated article may be heat treated (e.g., thermally tempered, heat bent and/or heat strengthened). Coated articles according to certain example embodiments of this invention may be used in the context of windows, including monolithic windows for buildings, IG windows for buildings, etc.				
60.	Coated article having low-e coating with ir reflecting layer(s) and doped titanium oxide bi-layer film dielectric and method of making same	US20180257980	2018-09-13	GUARDIAN GLASS* INTERMOLECULAR*
A coated article includes a low emissivity (low-E) coating having at least one infrared (IR) reflecting layer of a material such as silver, gold, or the like, and at least one high refractive index bi-layer film of or including doped titanium oxide (e.g., TiO2 doped with at least one additional element). The titanium oxide based bi-layer film may be of or include a first titanium oxide based layer doped with a first element, and an adjacent second titanium oxide based layer doped with a different second element.				

61.	Oxide semiconductor film, semiconductor device having said oxide semiconductor film, and display device having said semiconductor device	WO2016139556	2016-09-09	SEMICONDUCTOR ENERGY LABORATORY*	
62.	Flash annealing of silver coatings	WO2019028274	2019-02-07	VITRO FLAT GLASS*	
63.	Wire structure, a method for fabricating a wire, a thin film transistor substrate, and a method for fabricating the thin film transistor substrate	CN1917202	2007-02-21	SAMSUNG ELECTRONICS*	
64.	Heat treatable sputter-coated glass.	CA2009863	1990-09-09	GUARDIAN INDUSTRIES*	
65.	Glazing	WO2006048463	2006-05-11	AGC GLASS EUROPE* UNIVERSAL ENTERTAINMENT*	
66.	Layered films for transparent substrates	DE19848751	1999-12-16	SAINT GOBAIN GLASS SAINT GOBAIN VITRAGE*	
67.	Copper alloy sheet and process for producing copper alloy sheet	JP5879464	2016-03-08	MITSUBISHI SHINDOH*	
68.	Low emissivity coating with low solar heat gain coefficient, enhanced chemical and mechanical properties and method of making the same	WO2006124503	2006-11-23	AFG INDUSTRY AGC GLASS* EHJ DZHI SI FLEHT GLASS NORT AMERIKE INK	

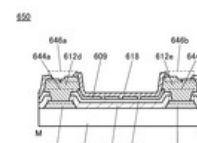
69.	Projected capacitive touch panel with a silver-inclusive transparent conducting layer(s)	US20140145999	2014-05-29	GUARDIAN GLASS* GUARDIAN INDUSTRIES	
70.	Photovoltaic cell including a buffer layer of zinc and tin oxide(s)	EP2521183	2012-11-07	SAINT GOBAIN GLASS*	 FIGURE 1
71.	Neutral, high performance, durable low-E glass coating system, insulating glass units made therefrom, and methods of making same	NO964636	1996-11-01	GU BEN GUARDIAN GLASS* GUARDIAN INDUSTRIES	
72.	Substrate provided with a multilayer having thermal properties and a substoichiometric intermediate layer	FR3026404	2016-04-01	SAINT GOBAIN GLASS*	
73.	Substrate with a thin film stack, having reflexion properties for infrared and/or solar radiation	DE19541937	1996-11-28	SAINT GOBAIN GLASS* SAINT GOBAIN VITRAGE	
74.	Wear-resistant wet-resistant three-silver low-emissivity coated glass	CN106007404	2016-10-12	KIMAK MATERIALS TECHNOLOGY*	
75.	Glazing	WO200127050	2001-04-19	AGC GLASS EUROPE* FLAT GLASS	

- Manufacture of a laminated structure involves laminating several **layers** on a **substrate** forming a mask of the **layers** and etching the **layers** at once by using the mask. Independent claims are also included for: (1) a display device comprising the laminated structure; and (2) a display unit comprising a plurality of display devices.



- A transparent **substrate** has a low emission IR and/or solar radiation reflective **layer** stack with an upper anti-reflection **layer** comprising a lower **tin**, **zinc**, titanium, bismuth or aluminum oxide film and an upper mixed **zinc** and aluminum oxide film. A transparent **substrate** has a low emission IR and/or solar radiation reflective **layer** stack comprising a lower anti-reflection **dielectric layer**, one or more **silver**-based functional **layers**, preferably one or more metallic protection **layers** on and/or under the **silver**-based **layer**(s) and an upper anti-reflection metal oxide **layer**, the novelty being that the upper **layer** comprises a lower SnO₂, ZnO, TiO₂, Bi₂O₃ or Al₂O₃ film and an upper film of a mixed **zinc** and aluminum oxide, especially of ZnAl₂O₄ type spinel structure.

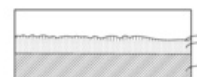
- An oxide semiconductor film contains In, M (M is Al, Ga, Y, or **Sn**), and **Zn** and includes a region with a film density higher than or equal to 6.3 g cm⁻³ and lower than 6.5 g cm⁻³. Alternatively, the oxide semiconductor film contains In, M (M is Al, Ga, Y, or **Sn**), and **Zn** and includes a region with etching at an etching rate higher than or equal to 10 nm min⁻¹ and lower than or equal to 45 nm min⁻¹ when a phosphoric acid aqueous solution obtained by diluting 85 vol percent phosphoric acid with water 100 times is used for etching.



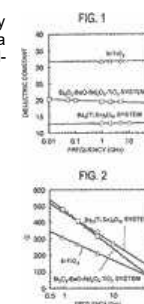
- The present invention relates to **dielectric coatings** and objects having high, but precisely defined surface resistivities.



- An improved Ni-Zn cell with a negative electrode **substrate** plated with **tin** or **tin** and **zinc** during manufacturing has a reduced gassing rate. The copper or brass **substrate** is electrolytic cleaned, activated, electroplated with a matte surface to a defined thickness range, pasted with **zinc** oxide electrochemically active material, and baked. The defined plating thickness range of 40-80 μ m maximizes formation of an intermetallic compound Cu₃Sn that helps to suppress the copper diffusion from under plating **layer** to the surface and eliminates formation of an intermetallic compound Cu₆Sn₅ during baking to provide adequate corrosion resistance during battery operation.



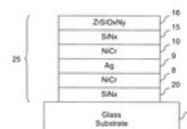
- A composite **dielectric** material comprising a resin resulting from a polyvinylbenzyl ether compound and a **dielectric** ceramic powder dispersed therein is useful in the high-frequency region. A composite magnetic material comprising a polyvinylbenzyl ether compound and a magnetic powder is also provided as well as a flame retardant material comprising a polyvinylbenzyl ether compound and a flame retardant. These materials may be used in the fabrication of substrates, prepreg sheets, **coated** metal foils, molded items, and metal foil-clad substrates.



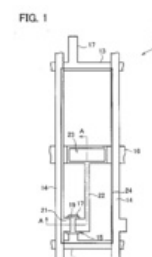
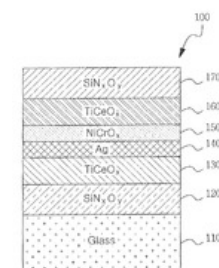
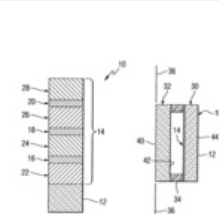
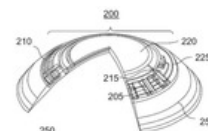
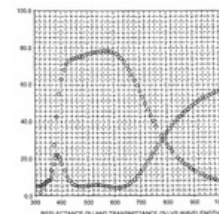
- A thin film of **tin** is plated directly on nickel **coating** a metal **substrate** followed by plating **silver** directly on the thin film of **tin**. The **silver** has good adhesion to the **substrate** even at high temperatures.

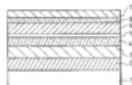
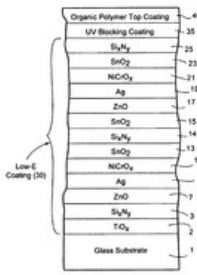
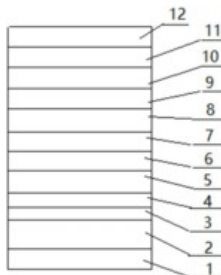
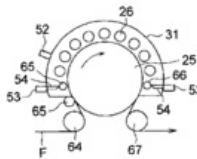
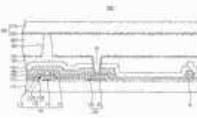
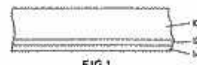


- This application relates to a **coated** article including at least one infrared (IR) reflecting **layer** of a material such as **silver** or the like in a low-E **coating**. In certain embodiments, at least one **layer** of the **coating** is of or includes zirconium oxide (e.g., ZrO₂) or zirconium silicon oxynitride (e.g., ZrSiOxNy). When a **layer** comprising zirconium oxide or zirconium silicon oxynitride is provided as the uppermost or in improved chemical and heat stability. **Coated** articles herein may be used in the context of insulating **glass** (IG) window units, vehicle windows, or in other suitable applications such as monolithic window applications, laminated windows, and/or the like.



84.	Transparent substrate which is covered with a stack of thin layers having reflection properties in infrared and/or solar radiation	FR2858975	2005-02-25	SAINT GOBAIN GLASS*
The invention relates to a transparent substrate which is provided with a stack of thin layers comprising: at least one functional metallic layer which is based, for example, on silver , and which has reflection properties in infrared and/or in solar radiation; at least one metallic blocking layer which is in contact with the functional layer ; and at least one upper dielectric layer . The invention is characterised in that at least one blocking layer is based on zirconium, and in that the upper dielectric layer comprises at least one ZnO-based layer which is in contact with either the functional layer or the blocking layer .				
85.	Coated article with oxynitrides of antimony and/or zinc and corresponding method of manufacture	WO2008008190	2008-01-17	GUARDIAN GLASS* GUARDIAN INDUSTRIES
Certain embodiments of this invention relates to a coated article including a substrate (e.g., glass substrate) which supports a coating thereon, wherein the coating includes at least one layer of or including SbOxNy. This layer is desirable for blocking (reflection and/or absorption) of at least some ultraviolet (UV) radiation. In certain example embodiments of this invention, the layer of SbOxNy may be used as a dielectric layer in a low-E (low-emissivity) coating , and may improve UV-blocking capability of such a low-E coating . Coated articles in certain example embodiments of this invention may be used in the context of insulating glass windows.				
86.	Sputtered films for metal alloy oxides	FI854214	1985-10-28	PPG INDUSTRIES*
A metal alloy oxide film and sputtering method for its production are disclosed, as well as a high transmittance, low emissivity coated product employing said metal alloy oxide film as an antireflective film in combination with a metallic film such as silver . A method for improving the adhesion between metal and metal oxide films and an improved multiple layer coated article comprising primer layers between metal and metal oxide films are also disclosed.				
87.	High infrared reflection coatings	US20070082124	2007-04-12	CARDINAL CG* NIPPON SHEET GLASS
The invention provides low-emissivity coatings that are highly reflective of infrared radiation. The coating includes three infrared-reflection film regions, which may each comprise silver .				
88.	Method and apparatus for ophthalmic devices comprising dielectrics and nano-scaled droplets of liquid crystal	BR102014023059	2014-09-30	BEAM ENGINEERING FOR ADVANCED MEASUREMENTS JOHNSON & JOHNSON VISION CARE* METHODS & APPARATUS FOR OPHTHALMIC DEVICES INCLUDING CYCLOIDALLY ORIENTED LIQUID CRYSTAL LAYERS
This invention discloses methods and apparatus for providing a variable optic insert into an ophthalmic lens. The variable optic insert may have surfaces within that have differing radii of curvature. A liquid crystal layer may be used to provide a variable optic function and in some embodiments, the liquid crystal layer may comprise droplets that are nano-scaled. An energy source is capable of powering the variable optic insert included within the ophthalmic lens. In some embodiments, an ophthalmic lens is cast-molded from a silicone hydrogel. The various ophthalmic lens entities may include electroactive liquid crystal layers to electrically control refractive characteristics.				
89.	Substrate having thermal management coating for an insulating glass unit	WO03093188	2003-11-13	PPG INDUSTRIES VITRO VITRO FLAT GLASS*
A coated article is provided for use in an IG unit. The article includes a substrate and a coating formed over at least a portion of the substrate . The coating includes a plurality of separation layers having one or more dielectric layers and a plurality of infrared reflective layers . The coating can be positioned on the #2 or #3 surface of the IG unit and can provide a reference solar heat gain coefficient of less than or equal to 0.35.				
90.	Low emissivity glass comprising dielectric layer and method for producing the same	WO2011037365	2011-03-31	LG HAUSYS*
Provided is low emissivity glass including a low emissivity layer containing electrically conductive metal; and a composite metal oxide formed on one or both sides of the low emissivity layer and expressed by a following chemical formula 1: TiCeOx (1) wherein Ti is titanium element, Ce is cerium element, and Ox is oxide. Since the dielectric layer which serves as protecting low emissivity layer of low emissivity glass and reducing emissivity contains the composite metal oxide expressed by the above chemical formula 1, visible light transmissivity can be greatly increased with excellent low emissivity.				
91.	Silver alloy material, circuit substrate, electronic device, and method for manufacturing circuit substrate	US20050019203	2005-01-27	SHARP*
A circuit substrate of the present invention uses as component materials for gate lines and gate electrodes, silver alloy material containing silver as a main component, and at least one element selected from the group consisting of tin , zinc , lead, bismuth, indium, and gallium. It is especially preferable that the silver alloy material mainly consisting of silver and containing indium is used for the gate lines and the gate electrodes. With this, it is possible to provide silver alloy material whose resistance value, adhesion, plasma resistance, and reflection characteristics can be appropriately adjusted by the adjustment of the content of indium. Further, it is also possible to apply the alloy in accordance with the characteristic required for each part of the circuit substrate .				



92.	Metal coated substrates	ITTO970572	1997-07-01	AGC GLASS EUROPE*	
A coated substrate including a substrate ; a stack of coating layers provided on the substrate composed of, in the sequence recited, (i) a first layer of dielectric material which is a composite layer including a sub- layer comprising a selectively absorbent material having a refractive index of at least 1.4, a spectral absorption index $k \lambda$ of at least 0.4 in the range $380 < \lambda < 450$ nm and having a ratio of $k380 < \lambda < 450$ nm/ $k650 < \lambda < 760$ nm > 2 , (ii) a first layer of a metal selected the group consisting of silver , gold, copper and alloys of one or more thereof, and (iii) a second layer of dielectric material.					
93.	Transparent substrate coated with a stack of thin layers	CA2286441	2000-04-22	SAINT GOBAIN GLASS* SAINT GOBAIN VITRAGE	 
The dielectric -based coating above the metallic layer comprises a sequence of layers deposited in the order: (a) layer (s) of materials of refractive index n_i above 2.2; (b) layer (s) of materials of refractive index n_i at least 0.3 below that of the last layer (s) n_i ; and (c) last layer (s) material of refractive index n_i more or less equal to n_i . The metallic layer with infrared reflecting properties is based on silver , is preferably in direct contact with the subjacent dielectric material-based coating , has a geometrical thickness of 7-20, especially 9-5 nm, for low emissivity, and 20-25 nm for solar protecting properties. A protective metal layer of thickness not greater than 2 nm and selected from Nb, Ti, Cr or nickel, or an alloy of at least two of these metals, especially Nb/Cr or Ni/Cr, can be located immediately above and in contact with the metallic layer with infrared reflecting properties. The dielectric coating below the IR-reflecting metal layer comprises at least two layers , especially two metal oxide layers or a metal nitride layer , e.g. AlN and Si ₃ N ₄ , and a metal oxide layer , e.g. ZnO, SnO ₂ and TiO ₂ , preferably with direct contact between the dielectric coating and the IR-reflecting metallic layer . The last layer is selected from one of the following: Si ₃ N ₄ , Si ₃ N ₄ :Al, AlN, SnO ₂ , SnZnOx and carbides such as SiC, TiC, CrC and TaC. Independent claims are given for: (A) Low emissivity or solar protection multiple glazing unit; and (B) Low emissivity double glazing unit.					
94.	Coated glass substrate with heat treatable ultraviolet blocking coating	EP2404882	2012-01-11	GUARDIAN GLASS* GUARDIAN INDUSTRIES	
Certain example embodiments of this invention relate to the development of temperable UV blocking coatings having enhanced UV blocking efficiency and aesthetic appearance on stock sheets of glass substrates using large-scale wet coating manufacturing methods. A glass substrate is provided. A base coat is curtain coated on the glass substrate from an oxide precursor material including zinc , cerium, titanium, and silicon precursor materials. The base coat is cured. A top coat is roll coated , directly or indirectly, on the base coat , with the top coat being a sacrificial cross-linked organic polymer-based layer . The substrate is heat treated with the base coat and the top coat thereon. The base coat and the top coat are substantially uniform in thickness, and the heat treating removes substantially all of the top coat while causing substantially no cracking in the base coat .					
95.	Three wear -resisting moisture -proof silver medal low -emissivity coated glass	CN205651732	2016-10-19	KIMAK MATERIALS TECHNOLOGY*	
Three wear -resisting moisture -proof silver medal low -emissivity coated glass , the surface of glass substrate (1) from bottom to top in proper order the successive layer cover the first oxidative zinc -aluminium rete (2), first silver layer (3), first nickel chromium film layer (4), the first oxidative zinc -tin rete (5), second silver layer (6), second nickel chromium film layer (7), second oxidation zinc -tin rete (8), third silver layer (9), third nickel chromium film layer (10), second oxidation zinc -aluminium rete (11) and tin silica rete (12), using the overburden of TSO preparation, reducing the use of siAl material in the silver -colored basic coating film target, energy saving and reduce cost guarantee the stability of glass performance to have lower u value and higher shading coefficient and G value, and energy -conserving effect promotes by a wide margin, improvement life, on year -on -year basis ordinary glass 's energy -conserving level improvement just can effectively improve wear -resisting and moisture -proof hanging down under the unchangeable condition of radiance more than 80%.					
96.	Layer forming method, product comprising the layer, optical film, dielectric-coated electrode and plasma discharge apparatus	WO200248428	2002-06-20	KONICA* KONICA MINOLTA	
A layer forming method is disclosed which comprises the steps of supplying power of not less than 1 W/cm ² at a high frequency voltage exceeding 100 kHz across a gap between a first electrode and a second electrode opposed to each other at atmospheric pressure or at approximately atmospheric pressure to induce a discharge, generating a reactive gas in a plasma state by the charge, and exposing a substrate to the reactive gas in a plasma state to form a layer on the substrate .					
97.	Display substrate, liquid crystal display apparatus having the same and method for manufacturing the same	US20070291217	2007-12-20	SAMSUNG ELECTRONICS*	
A display substrate includes gate lines and source lines, a passivation layer , a light shielding layer , an overcoat layer , and a column spacer. The passivation layer includes a first hole, partially exposing the metal layer . The passivation layer is formed on the substrate having the metal layer formed thereon. The light shielding layer overlaps the metal pattern and includes a positive photosensitive material on the passivation layer . The light shielding layer includes a second hole corresponding to the first hole. The overcoat layer includes a positive photosensitive material on the substrate having the light shielding layer thereon. The overcoat layer includes a third hole corresponding to the second hole. The column spacer is protruded from the overcoat layer corresponding to a portion of the light shielding layer . Accordingly, the number of the exposing mask used for manufacturing the display substrate may be reduced.					
98.	Process for making a tempered and/or curved glass pane with a silver layer, glass pane made by this process and its use	FI881139	1988-03-10	FLACHGLAS PILKINGTON DEUTSCHLAND*	
Verfahren zum Herstellen einer vorgespannten und/oder gebogenen, infrarotreflektierenden Glasscheibe aus Natron-Kalk-Silikatglas, bei dem auf wenigstens eine Seite eines transparenten Glasträgers eine Silberschicht und auf deren dem Glasträger abgewandte Seite mindestens eine Entspiegelungsschicht aus Metalloxid aufgebracht werden und ein thermischer Vorspann- und/oder Biegeprozess bei einer Temperatur von 580 DEG C bis 680 DEG C, vorzugsweise 600 DEG C bis 650 DEG C, durchgeführt wird, dadurch gekennzeichnet, dass auf den im wesentlichen planen Glasträger zumindest eine Silberschicht und eine äussere Schicht aus einem Metall oder einer Metallegierung aufgebracht werden und dass danach der Vorspannund/oder Biegeprozess durchgeführt wird, bei dem sich die äussere Schicht unter Volumenvergrößerung in eine im wesentlichen absorptionsfreie, zumindest einen Teil der Entspiegelungsschicht bildende Metalloxidschicht mit einem Brechungsindex $\geq 1,7$ umwandelt, danach hergestellte Glasscheibe sowie deren Verwendung.					

