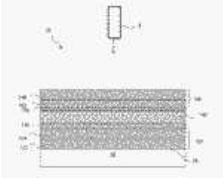
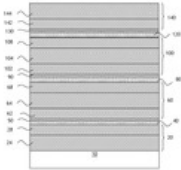
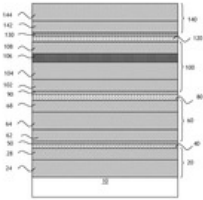
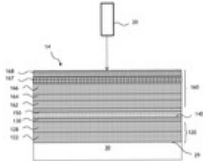
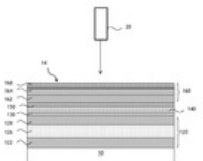
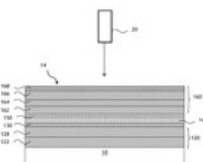
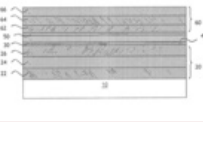
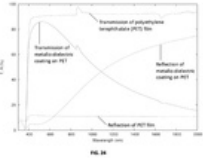


15 results for (Substrate provided with a stack having thermal properties)/ICLM/TI/AB/IW/TX - Collection: FAMPAT

#	 Title	Publication number	Publ. date	Applicant/Assignee	
1.	Substrate provided with a stack having thermal properties and comprising four functional metal films and use of such a substrate	FR2985724	2013-07-19	SAINT GOBAIN GLASS*	
The invention relates to a substrate (10), in particular a transparent glass substrate, provided with a stack of thin films comprising four alternating functional metal films (40, 80, 120, 160), in particular functional films consisting of silver or of a metal alloy containing silver, and five antireflective coatings (20, 60, 100, 140, 180), each antireflective coating comprising at least one antireflective film, such that each functional metal film (40, 80, 120, 160) is arranged between two antireflective coatings (20, 60, 100, 40, 180), characterized in that, starting from the substrate, the thicknesses of the second, third and fourth functional metal films (80, 120, 160) are substantially identical, the ratio of the thickness of one film to the thickness of the preceding film being between 0.9 and 1.1, inclusive, and the thickness of the first functional metal film (40) being approximately half the thickness of the second functional metal film (80), the ratio of the thickness of the second metal film to the thickness of the first functional metal film (40) being between 1.9 and 2.2, inclusive.					
2.	Substrate provided with a stack having thermal properties, in particular for manufacturing heated glass	CA2822399	2012-07-12	SAINT GOBAIN GLASS*	
The invention relates to a substrate (10), in particular a transparent glass substrate, provided with a stack of thin layers comprising an alternation of "n" metal functional layers (40, 80, 120), in particular functional layers made of silver or a metal alloy containing silver, and "(n + 1)" non-reflecting coatings (20, 60, 100, 140), where n is an integer = 3, each non-reflecting coating comprising at least one non-reflecting layer, such that each functional layer (40, 80, 120) is arranged between two non-reflecting coatings (20, 60, 100, 140), characterised in that said stack comprises at least two high-index non-reflecting layers (25, 145), each having a refractive index = 2.15 such that the non-reflecting coating (20) located under the first functional layer (40) starting from the substrate, and the non-reflecting coating located above the last functional layer starting from the substrate each comprise at least one high-index non-reflecting layer (25, 145), and such that each non-reflecting coating (60, 100) which is arranged between two functional layers does not comprise a high-index non-reflecting layer.					
3.	Substrate provided with a multilayer having thermal properties and a substoichiometric intermediate layer	FR3026404	2016-04-01	SAINT GOBAIN GLASS*	
The invention relates to a substrate (10) coated on one face (11) with a thin-film multilayer (14) having reflection properties in the infra red and/or in solar radiation comprising a single metallic functional layer (140), in particular based on silver or on a metal alloy containing silver, and two antireflection coatings (120, 160), said coatings each comprising at least one dielectric layer (122, 164), said functional layer (140) being positioned between the two antireflection coatings (120, 160), characterized in that at least one of said antireflection coatings (120, 160) comprises an intermediate layer comprising a zinc tin oxide $\text{Sn}_x\text{Zn}_y\text{O}_z$ with a ratio of $0.1 \leq x/y \leq 2.4$, with $0.75(2x + y) \leq z \leq 0.95(2x + y)$ and having a physical thickness of between 2 nm and 25 nm, or even between 2 nm and 12 nm.					
4.	Substrate provided with a stack having thermal properties	FR3005048	2014-10-31	SAINT GOBAIN GLASS*	
The invention relates to a transparent substrate comprising a stack of thin layers successively comprising, starting from the substrate, an alternation of three metallic functional layers, in particular of functional layers based on silver or on silver-comprising metal alloy, and of four antireflective coatings, each antireflective coating comprising at least one dielectric layer, so that each metallic functional layer is positioned between two antireflective coatings, characterized in that: - the thicknesses of the metallic functional layers, starting from the substrate, increase as a function of the distance from the substrate, - the second metallic functional layer is directly in contact with a blocking layer, referred to as second blocking layer, chosen from a blocking underlayer and a blocking overlayer, respectively referred to as second blocking underlayer and second blocking overlayer, - the second blocking underlayer and/or the second blocking overlayer exhibits a thickness of greater than 1 nm.					
5.	Textured substrate including a stack with thermal properties	FR2928147	2009-09-04	SAINT GOBAIN GLASS*	
The invention relates to a glass substrate (10) that comprises a main surface having a three-dimensional texture with a depth of at least 1 mm, characterised in that said main surface (11) includes a stack of thin layers (100) having reflection properties in the infrared and/or solar radiation spectrum.					
6.	Substrate provided with a stack having thermal properties and an absorbent layer	CA2883716	2014-03-27	SAINT GOBAIN GLASS*	
The invention relates to a substrate (10) coated on one surface (11) with a stack of thin layers (14) having reflective properties for infrared and/or solar radiation, comprising a single metal functional layer (140), in particular made of silver or a metal alloy containing silver and two dielectric coatings (120, 160), said coatings each comprising at least one dielectric layer (122, 164), said functional layer (140) being arranged between the two dielectric coatings (120, 160), said stack also comprising a single absorbent layer (19), characterised in that said absorbent layer (19) is a metal layer having a physical thickness of 0.5 nm to 1.5 nm, or of 0.6 nm to 1.2 nm, and is located directly on said surface (11) and directly under a dielectric layer made of nitride and not comprising any oxygen.					
7.	Susbtrate provided with a stack having thermal properties, comprising at least one nickel oxide layer	CA3006338	2017-06-08	SAINT GOBAIN GLASS*	
The invention relates to a transparent substrate (30), the main face of which is provided with a stack of thin layers including at least one, or a single, functional metal layer (140) having reflection properties in the infrared and/or solar radiation ranges, in particular based on silver or metal alloy containing silver, and two anti-reflection coatings (120, 160), each comprising at least one dielectric layer (122, 126; 162, 168). The above-mentioned functional layer (40) is disposed between the two anti-reflection coatings (20, 60). The substrate is characterised in that at least one nickel oxide layer NiO is located below the functional layer (140) in the direction of the substrate (30) and/or above the functional layer (140), with at least one layer or a single layer of a different material being inserted between the nickel oxide layer NiO, or each nickel oxide layer, and the functional layer (140).					

8.	Substrate provided with a stack having thermal properties, comprising at least one nickel oxide layer	CA3006870	2017-06-08	SAINT GOBAIN GLASS*	
The invention relates to a transparent substrate (30), the main face of which is provided with a stack of thin layers including at least one, or a single, functional metal layer (140) having reflection properties in the infrared and/or solar radiation ranges, in particular based on silver or metal alloy containing silver, and two anti-reflection coatings (120, 160), each comprising at least one dielectric layer (122, 126; 162, 168). The above-mentioned functional layer (140) is disposed between the two anti-reflection coatings (120, 160). The substrate is characterised in that at least one nickel oxide layer Ni_xO is located on or in contact with the functional layer (140) starting at the substrate (30), the physical thickness of said nickel oxide layer Ni_xO being at least 0.3 nm, or between 0.6 and 8.0 nm, or even between 1.0 and 5.0 nm.					
9.	Substrate provided with a stack having thermal properties	WO2017006030	2017-01-12	SAINT GOBAIN GLASS*	
The invention relates to a material comprising a transparent substrate coated with a stack of thin layers which, starting at the substrate, successively comprises three functional, silver-based metallic layers and four dielectric coatings referred to as M1, M2, M3 and M4 moving outwards from the substrate, said layers and coatings being disposed alternately, characterized in that - the thickness of the first functional layer is less than the thickness of the second functional layer and less than the thickness of the third functional layer and, - the dielectric coatings M1 and M2 each have an optical depth Eo1 and Eo2 that satisfies the relation Eo2 < 1.1 Eo1.					
10.	Substrate provided with a stack having thermal properties	WO2017006027	2017-01-12	SAINT GOBAIN GLASS*	
The invention relates to a material comprising a transparent substrate coated with a stack of thin layers comprising, starting at the substrate, three functional metallic silver-based layers and four dielectric coatings which are disposed alternately in such a way that every functional metallic layer is positioned between two dielectric coatings. The thicknesses of the three functional layers and the thicknesses of the dielectric coatings are selected such that they confer upon the materials a solar gain value lower than 20% for a light transmittance in the order of 40%.					
11.	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 γ2 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 γ1 and said pre-terminal layer (167) being in the at least partially oxidised state, characterised in that said redox potential γ1 is higher than said redox potential γ2.					
12.	Substrate provided with a stack having thermal properties and an intermediate layer of stoichiometric compounds	FR3026403	2016-04-01	SAINT GOBAIN GLASS*	
The invention relates to a substrate (10) coated on one surface (11) with a stack of thin layers (14) having infrared- and/or sunlight-reflection properties comprising one functional metal layer (140), particularly made with silver or a metal alloy containing silver, and two anti-reflective coatings (120, 160), said coatings each comprising at least one dielectric layer (122, 164), said functional layer (140) being arranged between the two anti-reflective coatings (120, 160), characterized in that at least one of said anti-reflective coatings (120, 160) comprises an intermediate layer containing zinc oxide Zn1O1+x where 0.05 < x < 0.3 and having a physical thickness of 0.5 nm to 20 nm, or even 2.5 nm to 10 nm.					
13.	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.					
14.	Substrate comprising a stack with thermal properties	FR2928913	2009-09-25	SAINT GOBAIN GLASS*	
The invention relates to a glass substrate (10) having, on a main side, a stack of thin layers comprising a functional metallic layer (40) with reflective properties in infrared and/or solar radiation, particularly silver-based or based on a metallic alloy containing silver, and two anti-reflective coatings (20, 60), said coatings each comprising at least one dielectric layer (22, 64) silicon-dioxide based, possibly doped with at least one other element, such as aluminum, said functional layer (40) being placed between the two antireflective coatings (20, 60), characterized in that the optical thickness e60 in nm of the underlying antireflective coating (60) is: e60 = 5 x e40 + a, where e40 is the geometric thickness in nm of the functional layer (40) such as 13 4040 < 18, and where a is a number = 25 ± 15.					
15.	Energy control coatings, structures, devices, and methods of fabrication thereof	WO2018191817	2018-10-25	3E NANO* UNIVERSITY OF TORONTO*	
Multilayer metallo-dielectric energy control coatings are disclosed in which one or more layers are formed from a hydrogenated metal nitride dielectric, which may be hydrogenated during or after dielectric deposition. Properties of the multilayer coating may be configured by appropriately tuning the hydrogen concentration (and/or the spatial profile thereof) in one or more hydrogenated metal nitride dielectric layers. One or more metal layers of the multilayer coating may be formed on a hydrogenated nitride dielectric layer, thereby facilitating adhesion of the metal with a low percolation threshold and enabling the formation of thin metal layers that exhibit substantial transparency in the visible spectrum. Optical properties of the coating may be tuned through modulation of metal-dielectric interface roughness and dispersion of metal nanoparticles in the dielectric layer. Electrical busbars and micro-nano electrical grids may be integrated with one or more metal layers to provide functionality such as de-icing and defogging.					