

Search history

- Search 1: ic=(c03c17/36) and ft=((silver or Ag) and ((zinc or Zn) w2 (Sn or tin)) and coat* and nm) (Results 508)
- Search 2: (1) and ft=(dielectric*) (Results 424)
- Search 3: (2) and ft=((infrared or IR or infra-red) and (reflec* or antireflec*)) (Results 386)
- Search 4: (3) and ft=(silicon w1 nitr*) (Results 291)
- Search 5: (4) and ft=((silver or Ag) w3 (coat* or film*)) (Results 154)
- Search 6: (4) and ft=((silver or Ag) w3 (sheet* or plate*)) (Results 14)
- Search 7: (1) and ft=(SnZn or SnxZny) (Results 34)
- Search 8: [SP]: 1. a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection coatings, said coatings each comprising at least one dielectric layer, said functional layer being positioned between the two antireflection coatings, said stack additionally comprising a terminal layer which is the layer of the stack which is furthest from said face, wherein said terminal layer is a metallic layer consisting of zinc and tin, made of snxzny 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 these values. 2. the substrate as claimed in claim 1, wherein said metallic terminal layer is made of snxzny with a ratio of 0.55?x/y?0.83. 3. the substrate as claimed in claim 1, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 4. the substrate as claimed in claim 3, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 5. the substrate as claimed in claim 3, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 6. the substrate as claimed in claim 5, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 7. a multiple glazing comprising: at least two substrates which are held together by a frame structure, said glazing providing a separation between an external space and an internal space, wherein at least one intermediate gas-filled space is positioned between the two substrates, one of the two substrates being the substrate as claimed in claim 1. 8. a process for obtaining a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection coatings, comprising the following steps, in order: depositing on one face of said substrate the thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising the at least one metallic functional layer and the at least two antireflection coatings to form the substrate as claimed in claim 1, treating said thin-films stack using a source that produces radiation, said x/y ratio of the terminal layer being identical before and after said treating. 9. the substrate as claimed in claim 1, wherein the metallic functional layer is based on silver or on a metal alloy containing silver. 10. the substrate as claimed in claim 1, wherein the physical thickness is between 0.6 nm and 2.7 nm excluding these values. 11. the substrate as claimed in claim 2, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 12. the substrate as claimed in claim 11, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 13. the substrate as claimed in claim 4, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 14. the substrate as claimed in claim 13, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 15. the substrate as claimed in claim 13, wherein the high-index dielectric layer is based on an oxide. 16. the substrate as claimed in claim 5, wherein the high-index dielectric layer is based on an oxide. 17. the process as claimed in claim 8, wherein the at least one metallic functional layer is based on silver or on a metal alloy containing silver. 18. the process as claimed in claim 8, wherein the radiation produced in the treating is infrared radiation. (Results 8)
- Search 9: (7) and ft=(reflective w1 index) (Results 0)
- Search 10: (7) and ft=(refractive w1 index) (Results 17)

• session log created:13 November 2018 03:12:34

• Update information:

PatBase Coverage at Update 2018 Week 45 (Year 2018 Week 45)

PatBase Coverage includes 100+ million documents from over 100 patent-issuing authorities and includes patent applications, granted patents, utility models and designs â€” detailed in the below coverage listings.

Major countries

Publishing body	Document type	Bibliographic publication date		Full-Text publication date	
		Earliest	Latest	Earliest	Latest
CN China	Patent Applications	19850910	20181109	19850910	20181106
	Patents	19930106	20181109	19930106	20181106
	Utility Model Applications	19850409	19921230	19850409	19921230
	Utility Models	19930106	20181109	19930106	20181106
	Designs	19850910	20181109	19850910	20150819
DE Germany	Patent Applications	19211221	20181108	19650317	20181031
	Patents	18770101	20181108	19200113	20181031
	Utility Models	19280626	20181108	19610831	20181031
	EP/WO Patents	19871217	20140410		
EP European Patent Office	Patent Applications	19781220	20181107	19781220	20181107
	Patents	19800109	20181107	19800109	20181031
FR France	Patent Applications	19690307	20181109	19810102	20181012
	Patents	18550227	20181109	19600502	20181102
	Utility Model Applications	19720107	20181102	19800104	20181012
	Utility Models	19730112	20181109	19690802	20181102
GB United Kingdom	Unpublished Patent Applications	19830209	20181024		
	Patent Applications	19790104	20181107	19790104	20181024
	Patents	17820704	20181107	19020911	19811216
JP Japan	Patent Applications	19710116	20181108	19930108	20181025
	Patents	19281026	20181024	19960529	20181024
	Utility Model Applications	19710723	20060209	19990817	20031107
	Utility Models	19640805	19960329		
	Registered Utility Models	19940726	20181025	19940726	20101216
	Designs	20141110	20181105		
KR Republic of Korea	Patent Applications	19781209	20181108	19800531	20181107
	Patents	19700820	20181109	19770628	20181107
	Utility Model Applications	19781127	20181108	19940730	20181107

	Utility Models	19780110	20181108	19970104	20181107
US United States of America	Patent Applications	20010315	20181108	20010315	20181101
	Patents	18360101	20181106	18560617	20181106
	Designs	18650912	20181106	19770719	20181106
	Patent Applications	19781019	20181108	19781019	20181101
WO World Intellectual Property Organization (WIPO)	Designs	20151023	20181109	20151023	20181102

20181110 21:00

- Login to Patbase:13 November 2018 03:12:34
- search history cleared
- **search:** SS1 ic=(c03c17/36) and ft=((silver or Ag) and ((zinc or Zn) w2 (Sn or tin)) and coat* and nm) (Results 508)
- **search:** SS2 (1) and ft=(dielectric*) (Results 424)
- **search:** SS3 (2) and ft=((infrared or IR or infra-red) and (reflec* or antireflec*)) (Results 386)
- **search:** SS4 (3) and ft=(silicon w1 nitr*) (Results 291)
- **search:** SS5 (4) and ft=((silver or Ag) w3 (coat* or film*)) (Results 154)
- **search:** SS6 (4) and ft=((silver or Ag) w3 (sheet* or plate*)) (Results 14)
- **search:** SS7 (1) and ft=(SnZn or SnxZny) (Results 34)
- **search:** SS8 [SP]: 1. a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection coatings, said coatings each comprising at least one dielectric layer, said functional layer being positioned between the two antireflection coatings, said stack additionally comprising a terminal layer which is the layer of the stack which is furthest from said face, wherein said terminal layer is a metallic layer consisting of zinc and tin, made of snxzny 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 these values. 2. the substrate as claimed in claim 1, wherein said metallic terminal layer is made of snxzny with a ratio of 0.55?x/y?0.83. 3. the substrate as claimed in claim 1, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 4. the substrate as claimed in claim 3, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 5. the substrate as claimed in claim 3, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 6. the substrate as claimed in claim 5, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 7. a multiple glazing comprising: at least two substrates which are held together by a frame structure, said glazing providing a separation between an external space and an internal space, wherein at least one intermediate gas-filled space is positioned between the two substrates, one of the two substrates being the substrate as claimed in claim 1. 8. a process for obtaining a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection coatings, comprising the following steps, in order: depositing on one face of said substrate the thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising the at least one metallic functional layer and the at least two antireflection coatings to form the substrate as claimed in claim 1, treating said thin-films stack using a source that produces radiation, said x/y ratio of the terminal layer being identical before and after said treating. 9. the substrate as claimed in claim 1, wherein the metallic functional layer is based on silver or on a metal alloy containing silver. 10. the substrate as claimed in claim 1, wherein the physical thickness is between 0.6 nm and 2.7 nm excluding these values. 11. the substrate as claimed in claim 2, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 12. the substrate as claimed in claim 11, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 13. the substrate as claimed in claim 4, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 14. the substrate as claimed in claim 13, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 15. the substrate as claimed in claim 13, wherein the high-index dielectric layer is based on an oxide. 16. the substrate as claimed in claim 5, wherein the high-index dielectric layer is based on an oxide. 17. the process as claimed in claim 8, wherein the at least one metallic functional layer is based on silver or on a metal alloy containing silver. 18. the process as claimed in claim 8, wherein the radiation produced in the treating is infrared radiation. (Results 8)
- **search:** SS9 (7) and ft=(reflective w1 index) (Results 0)
- List: SS8 1-50 ([SP]: 1. a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection

coatings, said coatings each comprising at least one dielectric layer, said functional layer being positioned between the two antireflection coatings, said stack additionally comprising a terminal layer which is the layer of the stack which is furthest from said face, wherein said terminal layer is a metallic layer consisting of zinc and tin, made of sn_xzn_y with a ratio of $0.1 \leq x/y \leq 2.4$ and having a physical thickness of between 0.5 nm and 5.0 nm excluding these values. 2. the substrate as claimed in claim 1, wherein said metallic terminal layer is made of sn_xzn_y with a ratio of $0.55 \leq x/y \leq 0.83$. 3. the substrate as claimed in claim 1, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 4. the substrate as claimed in claim 3, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 5. the substrate as claimed in claim 3, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 6. the substrate as claimed in claim 5, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 7. a multiple glazing comprising: at least two substrates which are held together by a frame structure, said glazing providing a separation between an external space and an internal space, wherein at least one intermediate gas-filled space is positioned between the two substrates, one of the two substrates being the substrate as claimed in claim 1. 8. a process for obtaining a substrate coated on one face with a thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising at least one metallic functional layer and at least two antireflection coatings, comprising the following steps, in order: depositing on one face of said substrate the thin-films stack having reflection properties in the infrared and/or in solar radiation and comprising the at least one metallic functional layer and the at least two antireflection coatings to form the substrate as claimed in claim 1, treating said thin-films stack using a source that produces radiation, said x/y ratio of the terminal layer being identical before and after said treating. 9. the substrate as claimed in claim 1, wherein the metallic functional layer is based on silver or on a metal alloy containing silver. 10. the substrate as claimed in claim 1, wherein the physical thickness is between 0.6 nm and 2.7 nm excluding these values. 11. the substrate as claimed in claim 2, wherein said terminal layer is located directly on a dielectric layer based on silicon nitride and comprising no oxygen. 12. the substrate as claimed in claim 11, wherein said dielectric layer based on silicon nitride has a physical thickness of between 10 and 50 nm. 13. the substrate as claimed in claim 4, wherein said antireflection coating positioned on top of said metallic functional layer, on the opposite side from said face, comprises a high-index dielectric layer made of a material having a refractive index of between 2.3 and 2.7. 14. the substrate as claimed in claim 13, wherein said high-index layer has a physical thickness of between 5 and 15 nm. 15. the substrate as claimed in claim 13, wherein the high-index dielectric layer is based on an oxide. 16. the substrate as claimed in claim 5, wherein the high-index dielectric layer is based on an oxide. 17. the process as claimed in claim 8, wherein the at least one metallic functional layer is based on silver or on a metal alloy containing silver. 18. the process as claimed in claim 8, wherein the radiation produced in the treating is infrared radiation.) (Results 8)

- **search:** SS10 (7) and $ft=(\text{refractive } w1 \text{ index})$ (Results 17)
- **List:** SS10 1–50 ((7) and $ft=(\text{refractive } w1 \text{ index})$) (Results 17)