

Title (en)  
SUBSTRATE PROVIDED WITH A STACK HAVING THERMAL PROPERTIES AND AN INTERMEDIATE LAYER OF STOICHIOMETRIC COMPOUNDS

Title (de)  
SUBSTRAT MIT EINEM STAPEL MIT THERMISCHEN EIGENSCHAFTEN UND EINER ZWISCHENSCHICHT AUS STÖCHIOMETRISCHEN VERBINDUNGEN

Title (fr)  
SUBSTRAT MUNI D'UN EMPILEMENT A PROPRIETES THERMIQUES ET A COUCHE INTERMEDIAIRE SUR STOECHIOMETRIQUE

Publication  
**EP 3201152 A1 20170809 (FR)**

Application  
**EP 15787258 A 20150929**

Priority

- FR 1459255 A 20140930
- FR 2015052587 W 20150929

Abstract (en)  
[origin: WO2016051066A1] 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  $ZnO_{1+x}$  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.

IPC 8 full level  
**C03C 17/36** (2006.01); **E06B 3/66** (2006.01)

CPC (source: EP KR US)  
**C03C 17/36** (2013.01 - EP US); **C03C 17/3626** (2013.01 - EP KR US); **C03C 17/3644** (2013.01 - EP KR US); **C03C 17/3652** (2013.01 - EP KR US); **C03C 17/366** (2013.01 - EP KR US); **C03C 17/3681** (2013.01 - EP KR US); **E06B 3/6715** (2013.01 - US); **C03C 17/3423** (2013.01 - US); **C03C 2217/212** (2013.01 - US); **C03C 2217/216** (2013.01 - US); **C03C 2217/256** (2013.01 - US); **C03C 2217/281** (2013.01 - US); **C03C 2217/73** (2013.01 - US); **C03C 2218/154** (2013.01 - EP KR US); **E06B 3/673** (2013.01 - US); **Y02B 80/22** (2013.01 - US)

Citation (search report)  
See references of WO 2016051066A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**FR 3026403 A1 20160401**; **FR 3026403 B1 20161125**; BR 112017006220 A2 20180313; CN 106715351 A 20170524; CO 2017004368 A2 20170920; EA 201790761 A1 20170929; EP 3201152 A1 20170809; JP 2017537044 A 20171214; KR 20170063706 A 20170608; MX 2017004159 A 20170530; US 10472881 B2 20191112; US 2017218685 A1 20170803; WO 2016051066 A1 20160407

DOCDB simple family (application)  
**FR 1459255 A 20140930**; BR 112017006220 A 20150929; CN 201580053115 A 20150929; CO 2017004368 A 20170428; EA 201790761 A 20150929; EP 15787258 A 20150929; FR 2015052587 W 20150929; JP 2017517090 A 20150929; KR 20177009867 A 20150929; MX 2017004159 A 20150929; US 201515515354 A 20150929