

Title (en)

LOW-EMISSIVITY MATERIAL COMPRISING A SILICON NITRIDE- OR OXYNITRIDE-BASED LAYER AND A ZINC TIN OXIDE-BASED LAYER

Title (de)

EMISSIONSARMS MATERIAL MIT EINER SCHICHT AUF SILICIUMNITRID- ODER OXYNITRIDBASES UND EINER SCHICHT AUF ZINKZINNOXIDBASES

Title (fr)

MATÉRIAUX À BAS ÉMISSIF COMPRENANT UNE COUCHE À BASE DE NITRURE OU D'OXYNITRURE DE SILICIUM ET UNE COUCHE À BASE D'OXYDE DE ZINC ET D'ÉTAIN

Publication

EP 4149898 A1 20230322 (FR)

Application

EP 21732440 A 20210507

Priority

- FR 2004682 A 20200512
- FR 2021050787 W 20210507

Abstract (en)

[origin: WO2021229166A1] The invention relates to a material comprising a transparent substrate coated with a stack comprising at least one silver-based functional metal layer and at least two dielectric coatings, each dielectric coating comprising at least one dielectric layer, such that each functional metal layer is arranged between two dielectric coatings, characterised in that the dielectric coating located in contact with the substrate comprises: - a layer comprising silicon selected from silicon oxynitride or nitride-based layers located directly in contact with the substrate; - a layer based on zinc oxide and tin comprising at least 20% by mass of tin relative to the total mass of zinc and tin located directly in contact with the layer comprising silicon, the sum of the thicknesses of all oxide-based layers present in the dielectric coating located between the substrate and the first functional metal layer and/or in each dielectric coating located above the first silver-based functional layer is greater than 50% of the total thickness of the dielectric coating.

IPC 8 full level

C03C 17/36 (2006.01); **C23C 14/00** (2006.01)

CPC (source: EP US)

C03C 17/3435 (2013.01 - US); **C03C 17/3482** (2013.01 - US); **C03C 17/36** (2013.01 - EP); **C03C 17/3607** (2013.01 - US);
C03C 17/3618 (2013.01 - EP); **C03C 17/3626** (2013.01 - EP); **C03C 17/3636** (2013.01 - EP); **C03C 17/3644** (2013.01 - EP);
C03C 17/3652 (2013.01 - EP); **C03C 17/366** (2013.01 - EP); **C03C 17/3681** (2013.01 - EP US); **C23C 14/024** (2013.01 - EP);
C23C 14/08 (2013.01 - EP); **C23C 14/10** (2013.01 - EP); **C23C 14/34** (2013.01 - EP); **C03C 2217/216** (2013.01 - US);
C03C 2217/25 (2013.01 - US); **C03C 2217/944** (2013.01 - EP)

Citation (search report)

See references of WO 2021229166A1

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

FR 3110159 A1 20211119; BR 112022021999 A2 20221213; CN 114981226 A 20220830; CO 2022016082 A2 20221129;
EP 4149898 A1 20230322; MX 2022014177 A 20221202; US 2023174418 A1 20230608; WO 2021229166 A1 20211118

DOCDB simple family (application)

FR 2004682 A 20200512; BR 112022021999 A 20210507; CN 202180009805 A 20210507; CO 2022016082 A 20221110;
EP 21732440 A 20210507; FR 2021050787 W 20210507; MX 2022014177 A 20210507; US 202117924089 A 20210507