

Title (en)

UV-ABSORBING NANOCRYSTAL CONTAINING COMPOSITE

Title (de)

UV-ABSORBIERENDER NANOKRISTALLHALTIGER VERBUNDSTOFF

Title (fr)

COMPOSITE CONTENANT UN NANOCRISTAL D'ABSORPTION DU RAYONNEMENT UV

Publication

EP 3277633 A1 20180207 (EN)

Application

EP 16716361 A 20160329

Priority

- US 201562139979 P 20150330
- US 2016024688 W 20160329

Abstract (en)

[origin: WO2016160790A1] A composite material comprising an amorphous, porous material with nanocrystalline material in its pores has been found to be a UV absorber. The porous material is a matrix of pores that act as a scaffold for the nanocrystalline material. The particles of the nanocrystalline material are isolated, which mean that they do not connect to each other. In some embodiments, the nanocrystalline material is completely inside the pores of the porous material. In some embodiments, the nanocrystalline material may stick out of some or all of the pores of the porous material. In some embodiments, the nanocrystalline material is a cerium oxide material. In some embodiments, the nanocrystallite ranges in size from 2 to about 100 nm on its longest axis, with an aspect ratio from about 1 to about 1.5.

IPC 8 full level

C01G 23/00 (2006.01); **C01F 17/00** (2006.01); **C01G 9/02** (2006.01); **C01G 23/053** (2006.01); **C01G 39/02** (2006.01); **C01G 51/00** (2006.01);
C09C 1/00 (2006.01); **C09C 1/30** (2006.01)

CPC (source: CN EP KR US)

C01B 33/12 (2013.01 - KR); **C01F 17/32** (2020.01 - CN EP); **C01F 17/34** (2020.01 - CN EP); **C01G 9/02** (2013.01 - CN EP);
C01G 23/006 (2013.01 - CN EP US); **C01G 23/0532** (2013.01 - CN EP); **C01G 39/02** (2013.01 - CN EP); **C01G 51/00** (2013.01 - CN EP);
C09C 1/0081 (2013.01 - CN EP KR); **C09C 1/3045** (2013.01 - CN EP KR); **C01P 2002/02** (2013.01 - KR); **C01P 2002/60** (2013.01 - CN EP KR);
C01P 2004/50 (2013.01 - KR); **C01P 2004/54** (2013.01 - KR); **C01P 2004/60** (2013.01 - CN EP); **C01P 2004/61** (2013.01 - CN EP);
C01P 2004/62 (2013.01 - CN EP); **C01P 2004/64** (2013.01 - KR); **C01P 2004/80** (2013.01 - KR); **C01P 2004/82** (2013.01 - CN EP);
C01P 2004/84 (2013.01 - CN EP); **C01P 2006/60** (2013.01 - CN EP KR); **C01P 2006/62** (2013.01 - CN EP); **C01P 2006/63** (2013.01 - CN EP);
C01P 2006/64 (2013.01 - CN EP)

Citation (search report)

See references of WO 2016160790A1

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)

WO 2016160790 A1 20161006; CA 2981073 A1 20161006; CN 107683257 A 20180209; EP 3277633 A1 20180207; JP 2018517792 A 20180705;
KR 20180015618 A 20180213

DOCDB simple family (application)

US 2016024688 W 20160329; CA 2981073 A 20160329; CN 201680028055 A 20160329; EP 16716361 A 20160329;
JP 2017551329 A 20160329; KR 20177031517 A 20160329