

Title (en)
SILICON PARTICLES USED AS ADDITIVES FOR IMPROVING THE CHARGE CARRIER MOBILITY IN ORGANIC SEMICONDUCTORS

Title (de)
SILIZIUMPARTIKEL ALS ADDITIVE ZUR VERBESSERUNG DER LADUNGSTRÄGERMOBILITÄT IN ORGANISCHEN HALBLEITERN

Title (fr)
PARTICULES DE SILICIUM EN TANT QU'ADDITIFS POUR L'AMELIORATION DE LA MOBILITE DES PORTEURS DE CHARGE DANS DES SEMI-CONDUCTEURS ORGANIQUES

Publication
EP 1500149 A1 20050126 (DE)

Application
EP 03722273 A 20030411

Priority
• DE 0301210 W 20030411
• DE 10219121 A 20020429

Abstract (en)
[origin: WO03094257A1] The invention relates to a semiconductor device comprising a semiconductor section made of an organic semiconductor material. Semiconductor particles or semiconductor clusters are statistically distributed within the organic semiconductor material. The semiconductor particles and/or semiconductor clusters can also be linked by linker molecules. The electrical properties, for example, of a field effect transistor comprising an aforementioned semiconductor section can be improved by adding semiconductor particles to the organic semiconductor material.

IPC 1-7
H01L 51/30; **H01L 51/20**

IPC 8 full level
H01L 51/05 (2006.01); **H01L 21/00** (2006.01); **H01L 21/336** (2006.01); **H01L 29/786** (2006.01); **H01L 51/30** (2006.01); **H01L 51/00** (2006.01)

CPC (source: EP KR US)
H10K 10/466 (2023.02 - KR); **H10K 10/484** (2023.02 - KR); **H10K 10/488** (2023.02 - EP KR US); **H10K 85/113** (2023.02 - EP KR US); **H10K 85/40** (2023.02 - EP KR US); **H10K 85/60** (2023.02 - KR); **H10K 10/466** (2023.02 - EP US); **H10K 85/60** (2023.02 - EP US)

Citation (search report)
See references of WO 03094257A1

Designated contracting state (EPC)
DE FR GB IE IT NL

DOCDB simple family (publication)
WO 03094257 A1 20031113; CN 1650445 A 20050803; DE 10219121 A1 20031127; EP 1500149 A1 20050126; JP 2005531132 A 20051013; KR 100639449 B1 20061026; KR 20040104653 A 20041210; TW 200307377 A 20031201; TW I227064 B 20050121; US 2005104060 A1 20050519; US 7057206 B2 20060606

DOCDB simple family (application)
DE 0301210 W 20030411; CN 03809731 A 20030411; DE 10219121 A 20020429; EP 03722273 A 20030411; JP 2004502377 A 20030411; KR 20047017341 A 20030411; TW 92108590 A 20030414; US 97477404 A 20041028