

Title (en)

ORGANIC FIELD-EFFECT TRANSISTOR AND METHOD OF FABRICATING THIS TRANSISTOR

Title (de)

ORGANISCHER FELDEFFEKTTRANSISTOR UND VERFAHREN ZUR HERSTELLUNG DIESES TRANSISTORS

Title (fr)

TRANSISTOR ORGANIQUE À EFFET DE CHAMP ET PROCÉDÉ DE FABRICATION DE CE TRANSISTOR

Publication

EP 2168182 A2 20100331 (FR)

Application

EP 08826858 A 20080715

Priority

- FR 2008051330 W 20080715
- FR 0705096 A 20070713

Abstract (en)

[origin: WO2009016301A2] This organic field-effect transistor comprises a semiconductor layer (10) made of an organic semiconductor material. The mobility μ_{sup} of the charge carriers in a first volume of the semiconductor layer is ten times greater than the mobility μ_{mf} of the charge carriers in a second volume of the semiconductor layer, the first volume corresponding to the 10% of the volume of the semiconductor layer that are closest to the gate electrode and the second volume corresponding to the 10% of the volume of the semiconductor layer that are closest to the drain and source electrodes.

IPC 8 full level

H01L 51/10 (2006.01); **H01L 51/40** (2006.01)

CPC (source: EP US)

H10K 10/464 (2023.02 - EP US); **H10K 10/486** (2023.02 - EP US); **H10K 85/113** (2023.02 - EP US); **H10K 85/623** (2023.02 - EP US)

Citation (search report)

See references of WO 2009016301A2

Citation (examination)

- US 2006177961 A1 20060810 - KIM CHANG J [KR], et al
- US 2006270066 A1 20061130 - IMAHAYASHI RYOTA [JP], et al
- US 2007152211 A1 20070705 - HAN CHANG W [KR]
- MATSUSHIMA H ET AL: "Organic electrophosphorescent devices with mixed hole transport material as emission layer", CURRENT APPLIED PHYSICS, NORTH-HOLLAND, AMSTERDAM, NL, vol. 5, no. 4, 1 May 2005 (2005-05-01), pages 305 - 308, XP027680642, ISSN: 1567-1739, [retrieved on 20050501]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

FR 2918797 A1 20090116; FR 2918797 B1 20091106; BR PI0812454 A2 20141202; CN 101779307 A 20100714; CN 101779307 B 20121212; EP 2168182 A2 20100331; JP 2010533372 A 20101021; KR 101474335 B1 20141218; KR 20100055409 A 20100526; US 2010096625 A1 20100422; US 8258504 B2 20120904; WO 2009016301 A2 20090205; WO 2009016301 A3 20090416

DOCDB simple family (application)

FR 0705096 A 20070713; BR PI0812454 A 20080715; CN 200880024601 A 20080715; EP 08826858 A 20080715; FR 2008051330 W 20080715; JP 2010515583 A 20080715; KR 20107002844 A 20080715; US 62841509 A 20091201