

Title (en)

LAYER ARRANGEMENT FOR A LIGHT-EMITTING COMPONENT

Title (de)

SCHICHTANORDNUNG FÜR EIN LICHEMITTIERENDES BAUELEMENT

Title (fr)

ENSEMBLE DE COUCHES POUR UN COMPOSANT ÉMETTEUR DE LUMIÈRE

Publication

EP 1789994 A1 20070530 (DE)

Application

EP 05766723 A 20050616

Priority

- DE 2005001076 W 20050616
- DE 102004039594 A 20040813
- EP 04019276 A 20040813
- EP 05766723 A 20050616

Abstract (en)

[origin: WO2006015567A1] The invention relates to a layer arrangement for a light-emitting component, especially a phosphorescent organic light-emitting diode, which comprises a hole-injecting contact and an electron-injecting contact, each linked with a light-emitting area. Said light-emitting area comprises a light-emitting layer from a material (M1) and another light-emitting layer from another material (M2), the material (M1) being ambipolar and preferably adapted to transport holes and the other material (M2) being ambipolar and adapted to transport electrons. A heterojunction is configured in the light-emitting area comprising the material (M1) and the other material (M2). A boundary surface between the material (M1) and the other material (M2) is of the staggered type II. The material (M1) and the other material (M2) contains admixed thereto one or more triplet emitter doping agents. An energy barrier for hole migration from the material (M1) to the other material (M2) and an energy barrier for electron migration from the other material (M2) to the material (M1) are each smaller than approximately 0.4 eV.

IPC 8 full level

H01L 21/00 (2006.01)

CPC (source: EP KR US)

H10K 50/11 (2023.02 - EP KR US); **H10K 50/155** (2023.02 - KR); **H10K 50/16** (2023.02 - KR); **H10K 85/324** (2023.02 - KR); **H10K 85/342** (2023.02 - KR); **H10K 85/611** (2023.02 - KR); **H10K 85/615** (2023.02 - KR); **H10K 85/631** (2023.02 - KR); **H10K 85/649** (2023.02 - EP KR US); **H10K 85/6572** (2023.02 - KR); **H10K 50/155** (2023.02 - EP US); **H10K 50/165** (2023.02 - EP US); **H10K 85/324** (2023.02 - EP US); **H10K 85/342** (2023.02 - EP US); **H10K 85/611** (2023.02 - EP US); **H10K 85/615** (2023.02 - EP US); **H10K 85/631** (2023.02 - EP US); **H10K 85/6572** (2023.02 - EP US); **H10K 2101/10** (2023.02 - EP US); **H10K 2102/103** (2023.02 - EP US)

Citation (search report)

See references of WO 2006015567A1

Designated contracting state (EPC)

GB NL

DOCDB simple family (publication)

WO 2006015567 A1 20060216; DE 112005002603 A5 20070809; EP 1789994 A1 20070530; JP 2008509565 A 20080327; KR 101027896 B1 20110407; KR 20070056061 A 20070531; US 2008203406 A1 20080828; US 8653537 B2 20140218

DOCDB simple family (application)

DE 2005001076 W 20050616; DE 112005002603 T 20050616; EP 05766723 A 20050616; JP 2007525155 A 20050616; KR 20077003457 A 20050616; US 57361705 A 20050616