

Title (en)  
ORGANIC ELECTROLUMINESCENT ELEMENT

Title (de)  
ORGANISCHES ELEKTROLUMINESZENZELEMENT

Title (fr)  
ELEMENT ELECTROLUMINESCENT ORGANIQUE

Publication  
**EP 1649731 A1 20060426 (DE)**

Application  
**EP 04741151 A 20040720**

Priority  
• EP 2004008071 W 20040720  
• DE 10333232 A 20030721  
• DE 10357318 A 20031205

Abstract (en)  
[origin: WO2005011334A1] The invention relates to the improvement of phosphorescent organic electroluminescent devices, whereby materials of formula (1) are used for the hole blocking layer.

IPC 1-7  
**H05B 33/14**; **C09K 11/06**

IPC 8 full level  
**C09K 11/06** (2006.01); **H01L 51/50** (2006.01); **H05B 33/14** (2006.01); **H01L 27/32** (2006.01)

CPC (source: EP KR US)  
**C07C 13/567** (2013.01 - EP US); **C07C 25/22** (2013.01 - EP US); **C09K 11/06** (2013.01 - KR); **H05B 33/14** (2013.01 - KR);  
**H10K 85/626** (2023.02 - EP US); **H10K 50/11** (2023.02 - EP US); **H10K 50/125** (2023.02 - EP US); **H10K 50/18** (2023.02 - EP KR US);  
**H10K 2101/10** (2023.02 - EP US); **Y02E 10/549** (2013.01 - EP US); **Y10S 428/917** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB NL

DOCDB simple family (publication)  
**WO 2005011334 A1 20050203**; EP 1649731 A1 20060426; JP 2006528836 A 20061221; JP 4865551 B2 20120201;  
KR 101175808 B1 20120824; KR 20060061798 A 20060608; US 2006159951 A1 20060720; US 7862904 B2 20110104

DOCDB simple family (application)  
**EP 2004008071 W 20040720**; EP 04741151 A 20040720; JP 2006520764 A 20040720; KR 20067001460 A 20040720; US 56358104 A 20040720