

Title (en)

ELECTROLUMINESCENT COMPOUNDS COMPRISING FLUORENE GROUP AND ORGANIC ELECTROLUMINESCENT DEVICE USING THE SAME

Title (de)

ELEKTROLUMINESZENZVERBINDUNGEN MIT FLUORENGRUPPE UND DAVON GEBRAUCH MACHENDE ORGANISCHE ELEKTROLUMINESZENZVORRICHTUNG

Title (fr)

COMPOSÉS ÉLECTROLUMINESCENTS COMPRENANT UN GROUPE FLUORÈNE ET DISPOSITIF ÉLECTROLUMINESCENT ORGANIQUE LES UTILISANT

Publication

EP 1981951 A4 20110427 (EN)

Application

EP 07708617 A 20070126

Priority

- KR 2007000456 W 20070126
- KR 20060008840 A 20060127
- KR 20070006082 A 20070119

Abstract (en)

[origin: WO2007086701A1] The present invention relates to organic electroluminescent compounds represented by Chemical Formula 1 and an electroluminescent device comprising the compound in an electroluminescent layer. The electroluminescent compound according to the invention has good luminous efficiency and excellent lifetime of the material, so that an OLED device having very good operation lifetime can be prepared.

IPC 8 full level

C09K 11/06 (2006.01)

CPC (source: EP KR)

C09K 11/06 (2013.01 - EP KR); **H05B 33/14** (2013.01 - EP KR); **H10K 50/11** (2023.02 - KR); **H10K 85/321** (2023.02 - KR); **H10K 85/324** (2023.02 - KR); **H10K 85/626** (2023.02 - KR); **H10K 85/631** (2023.02 - EP KR); **H10K 85/633** (2023.02 - EP KR); **C09K 2211/1011** (2013.01 - EP KR); **C09K 2211/1014** (2013.01 - EP KR); **H10K 50/11** (2023.02 - EP); **H10K 85/321** (2023.02 - EP); **H10K 85/324** (2023.02 - EP); **H10K 85/626** (2023.02 - EP); **H10K 2102/103** (2023.02 - EP)

Citation (search report)

- [A] WO 9116322 A2 19911031 - MASSACHUSETTS INST TECHNOLOGY [US]
- [A] US 2005236977 A1 20051027 - YAMADA NAOKI [JP], et al
- [A] WO 2004020371 A1 20040311 - CANON KK [JP], et al
- [A] WO 2005068413 A1 20050728 - TOSOH CORP [JP], et al & EP 1752440 A1 20070214 - TOSOH CORP [JP]
- [A] EP 1317005 A2 20030604 - LG ELECTRONICS INC [KR]
- [A] BELFIELD KEVIN D ET AL: "New highly efficient two-photon fluorescent dyes", PROCEEDINGS OF SPIE, SPIE, USA, vol. 5351, 1 January 2004 (2004-01-01), pages 173 - 180, XP002473083, ISSN: 0277-786X, DOI: 10.1117/12.529633
- [A] PAN MICHAEL ET AL: "A new approach to design light emitting devices using electroactive dyes", MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS; [MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS], MATERIALS RESEARCH SOCIETY, USA, vol. 734, 1 January 2002 (2002-01-01), pages B9.24.1 - B9.24.6, XP002473078, ISBN: 978-1-55899-828-5
- [A] PATRA A ET AL: "ELECTRLUMINESCENCE PROPERTIES OF SYSTEMATICALLY DERIVATIZED ORGANIC CHROMOPHORES CONTAINING ELECTRON DONOR AND ACCEPTOR GROUPS", CHEMISTRY OF MATERIALS, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 14, no. 10, 1 October 2002 (2002-10-01), pages 4044 - 4048, XP001502066, ISSN: 0897-4756, DOI: 10.1021/CM020075X
- [A] MIKROYANNIDIS JOHN A ET AL: "Synthesis and Photophysical Characteristics of 2,7-Fluorenevinylene- Based Trimers and Their Electroluminescence", JOURNAL OF PHYSICAL CHEMISTRY. B (ONLINE), AMERICAN CHEMICAL SOCIETY, COLUMBUS, OH, US, vol. 110, no. 41, 1 January 2006 (2006-01-01), pages 20317 - 20326, XP002473077, ISSN: 1520-5207
- [A] SUO ZHIYONG ET AL: "New fluorophores based on trifluorenylamine with very large intrinsic three-photon absorption cross sections", ORGANIC LETTERS, AMERICAN CHEMICAL SOCIETY, US, vol. 7, no. 22, 1 January 2005 (2005-01-01), pages 4807 - 4810, XP002473082, ISSN: 1523-7060, DOI: 10.1021/OL0513645
- [A] LEE KWANG-SUP ET AL: "Optical power limiting properties of two-photon absorbing fluorene and dithienothiophene-based chromophores", PROCEEDINGS OF SPIE, SPIE, USA, vol. 4991, 1 January 2003 (2003-01-01), pages 175 - 182, XP002473087, ISSN: 0277-786X, DOI: 10.1117/12.485829
- See references of WO 2007086701A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 2007086701 A1 20070802; CN 101405365 A 20090408; CN 101405365 B 20130116; EP 1981951 A1 20081022; EP 1981951 A4 20110427; JP 2009524701 A 20090702; JP 5259426 B2 20130807; KR 100812178 B1 20080312; KR 20070078698 A 20070801; TW 200732453 A 20070901; TW I340760 B 20110421

DOCDB simple family (application)

KR 2007000456 W 20070126; CN 200780008132 A 20070126; EP 07708617 A 20070126; JP 2008556231 A 20070126; KR 20070006082 A 20070119; TW 96102978 A 20070126