

Title (en)
PROCESS FOR FABRICATING ORGANIC SEMICONDUCTOR DEVICES USING INK-JET PRINTING TECHNOLOGY AND DEVICE AND SYSTEM EMPLOYING SAME

Title (de)
TINTENSTRAHL-DRUCKVERFAHREN FÜR DIE HERSTELLUNG VON ORGANISCHEN HALBLEITERANORDNUNGEN

Title (fr)
PROCEDE DE FABRICATION DE DISPOSITIFS A SEMI-CONDUCTEURS ORGANIQUES AU MOYEN D'UNE TECHNIQUE PAR JET D'ENCRE ET DISPOSITIF ET SYSTEME AFFERENTS

Publication
EP 1029369 A1 20000823 (EN)

Application
EP 98953483 A 19981014

Priority

- US 9821665 W 19981014
- US 6229497 P 19971017
- US 7270998 P 19980127

Abstract (en)
[origin: WO9921233A1] An emission system for presenting visual image is disclosed. The emissive system typically contains first electrodes (90) deposited over and in contact with a substrate. One or more conjugated organic buffer layers (40) are then deposited over and in contact with the first electrodes, and second electrodes (22) are subsequently deposited over the conjugated organic buffer layers. The conjugated organic buffer layers (40) regulate current flow between the first electrodes (90) and the second electrodes (22). Either before or after the deposition of each conjugated organic buffer layer (40), but before the deposition of the second electrodes (22), conjugated organic deposits (34, 36, 38) are ink-jet printed such that they are in contact with at least one conjugated organic buffer layer. The conjugated organic deposits (34, 36, 38) help to generate an indicator when a voltage stimulus is applied across the first electrodes (90) and the second electrodes (22). Depending on the material of the conjugated organic deposits (34, 36, 38), the indicator may be luminescence, fluorescence, conductivity, or the like. A voltage source is used for selectively applying the voltage stimulus across the first electrodes (90) and the second electrodes (22).

IPC 1-7
H01L 35/24

IPC 8 full level
H01L 21/48 (2006.01); **H01L 27/32** (2006.01); **H01L 51/00** (2006.01); **H01L 51/05** (2006.01); **H01L 51/40** (2006.01); **H01L 51/50** (2006.01); **H05B 33/10** (2006.01); **H05B 33/12** (2006.01); **H01L 51/30** (2006.01)

CPC (source: EP KR US)
H01L 21/4867 (2013.01 - EP); **H10K 10/00** (2023.02 - EP US); **H10K 50/11** (2023.02 - EP); **H10K 59/17** (2023.02 - EP); **H10K 59/221** (2023.02 - EP); **H10K 71/135** (2023.02 - EP); **H10K 99/00** (2023.02 - KR); **H10K 50/125** (2023.02 - EP); **H10K 59/12** (2023.02 - EP); **H10K 59/122** (2023.02 - EP US); **H10K 59/173** (2023.02 - EP US); **H10K 59/35** (2023.02 - EP); **H10K 85/324** (2023.02 - EP); **H10K 85/60** (2023.02 - EP); **H10K 85/615** (2023.02 - EP); **H10K 85/631** (2023.02 - EP); **H10K 85/649** (2023.02 - EP); **H10K 85/6565** (2023.02 - EP)

Cited by
US7297621B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9921233 A1 19990429; AU 1084699 A 19990510; AU 725148 B2 20001005; CA 2306948 A1 19990429; CA 2306948 C 20040907; CN 1280708 A 20010117; EP 1029369 A1 20000823; EP 1029369 A4 20020403; JP 2001521269 A 20011106; KR 20010031169 A 20010416

DOCDB simple family (application)
US 9821665 W 19981014; AU 1084699 A 19981014; CA 2306948 A 19981014; CN 98811747 A 19981014; EP 98953483 A 19981014; JP 2000517452 A 19981014; KR 20007004091 A 20000417