

Title (en)
WHITE ORGANIC ILLUMINATING DIODES (OLEDs) BASED ON EXCIPLEX DOUBLE BLUE FLUORESCENT COMPOUNDS

Title (de)
WEISSE ORGANISCHE LEUCHTDIODEN (OLEDs) AUF DER BASIS VON EXCIPLEXEN ZWEIER BLAU FLUORESZIERENDER VERBINDUNGEN

Title (fr)
DIODES ELECTROLUMINESCENTES ORGANIQUES BLANCHES (DELO) A BASE D'EXCIPLEXES DE DEUX COMPOSES FLUORESCENTS BLEUS

Publication
EP 1920478 A2 20080514 (DE)

Application
EP 06778277 A 20060817

Priority
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Abstract (en)
[origin: DE102005040285A1] White light-emitting organic LED contains at least one blue light-emitting fluoranthene derivative (I) as component A and at least one blue light-emitting arylamine derivative as component B, where the HOMO- and LUMO-energies of component A are different from those of component B, and provided that the LUMO-energies of component A are higher than the HOMO-energies of component B. White light-emitting organic LED contains at least one blue light-emitting fluoranthene derivative of formula (I) as component A and at least one blue light-emitting arylamine derivative as component B, where the HOMO- and LUMO-energies of component A are different from those of component B, and provided that the LUMO-energies of component A are higher than the HOMO-energies of component B. R¹-R⁵>H, alkyl, mono or fused aryl, heteroaryl, CH=CH₂, (E)- or (Z)-CH=CH-C₆H₅, acryloyl, methacryloyl, methylstyryl, O-CH=CH₂ or glycidyl; X : alkyl, mono or fused aryl, a group of formula (a) or an oligophenyl; n : 1-10 where X is not an oligophenyl, and n = 1-20 when X = oligophenyl; and provided that at least 2 of R¹-R³ are not H. Independent claims are also included for the following: (1) composition comprising components A and B as above; (2) light-emitting layer comprising a composition as in (1); and (3) a device selected from stationary screens such as computer screens, TVs, screens in printers, kitchen/cooking appliances, advertising boards, illuminations, information boards, mobile screens such as screens in mobile phones, laptops, vehicles and destination displays on buses and railways, all containing white light-emitting organic LED as above. [Image].

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