

Title (en)

OPTICAL DEVICES FEATURING TEXTURED SEMICONDUCTOR LAYERS

Title (de)

OPTISCHE BAUELEMENTE MIT TEXTURIERTEN HALBLEITERSCHICHTEN

Title (fr)

DISPOSITIFS OPTIQUES COMPRENANT DES COUCHES A SEMI-CONDUCTEURS TEXTUREES

Publication

EP 1952449 A2 20080806 (EN)

Application

EP 06827176 A 20061031

Priority

- US 2006042483 W 20061031
- US 73203405 P 20051031

Abstract (en)

[origin: WO2007053624A2] A semiconductor sensor, solar cell or emitter, or a precursor therefor, has a substrate and one or more textured semiconductor layers deposited onto the substrate. The textured layers enhance light extraction or absorption. Texturing in the region of multiple quantum wells greatly enhances internal quantum efficiency if the semiconductor is polar and the quantum wells are grown along the polar direction. Electroluminescence of LEDs of the invention is dichromatic, and results in variable color LEDs, including white LEDs, without the use of phosphor.

IPC 8 full level

H01L 21/00 (2006.01); **H01L 33/06** (2010.01); **H01L 33/24** (2010.01); **H01L 33/08** (2010.01); **H01L 33/32** (2010.01)

CPC (source: EP)

H01L 33/06 (2013.01); **H01L 33/24** (2013.01); **H01L 21/0237** (2013.01); **H01L 21/0243** (2013.01); **H01L 21/02433** (2013.01); **H01L 21/02458** (2013.01); **H01L 21/02494** (2013.01); **H01L 21/0254** (2013.01); **H01L 33/08** (2013.01); **H01L 33/32** (2013.01)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2007053624 A2 20070510; **WO 2007053624 A3 20090430**; CA 2627880 A1 20070510; CN 101506937 A 20090812; EP 1952449 A2 20080806; EP 1952449 A4 20110629; JP 2009515340 A 20090409

DOCDB simple family (application)

US 2006042483 W 20061031; CA 2627880 A 20061031; CN 200680049610 A 20061031; EP 06827176 A 20061031; JP 2008538970 A 20061031