

Title (en)
LIQUID CRYSTAL MATERIALS AND ELECTROOPTIC DEVICES WITH A LIQUID CRYSTAL-CONTAINING CLADDING

Title (de)
FLÜSSIGKRISTALLMATERIALIEN UND ELEKTROOPTISCHE EINRICHTUNGEN MIT FLÜSSIGKRISTALLHALTIGER MANTELUNG

Title (fr)
MATIERES DE CRISTAUX LIQUIDES ET DISPOSITIFS ELECTRO-OPTIQUES COMPORTANT UNE GAINE QUI CONTIENT DES CRISTAUX LIQUIDES

Publication
EP 1673646 A2 20060628 (EN)

Application
EP 04795211 A 20041014

Priority
• US 2004034017 W 20041014
• US 51221003 P 20031017

Abstract (en)
[origin: WO2005038497A2] Broadly, then, one aspect of the present invention is a functional optical material composed of a liquid crystal (LC) evidencing a pair of refractive indices (RI's) and a polymer in which the LC is dispersed. The refractive index (RI) of said polymer may be outside of the L C RI's by at least about 0.03. Another aspect of the present invention is a functional optical material composed of a liquid crystal (LC) and a polymer in which the LC is dispersed, wherein said LC is less than about 5% miscible in said polymer. A further aspect of the present invention is a functional optical material composed of a liquid crystal (LC) and a polymer in which the LC is dispersed, wherein the cladding contains not more than about 20wt% LC. In all of these embodiments, the functional optical material can be clad to an optical waveguide and can optionally contain a chromophore. In yet another aspect of the present invention, a functional optical waveguide is composed of a polymer having a refractive index, RIP and an optical waveguide clad having a refractive index, RIWG, wherein RIP is at least about 0.3% lower than RIWG under operating conditions of said clad optical waveguide.

IPC 1-7
G02B 6/02

IPC 8 full level
C09K 19/54 (2006.01); **G02B 6/02** (2006.01); **G02B 6/122** (2006.01); **G02F 1/01** (2006.01); **G02F 1/065** (2006.01); **G02F 1/1333** (2006.01); **G02F 1/1334** (2006.01); **G02F 1/225** (2006.01); **G02B 6/12** (2006.01)

IPC 8 main group level
G02B (2006.01)

CPC (source: EP)
C09K 19/544 (2013.01); **G02B 6/1221** (2013.01); **G02F 1/011** (2013.01); **G02F 1/1326** (2013.01); **G02F 1/1334** (2013.01); **G02F 1/225** (2013.01); **G02B 2006/12142** (2013.01); **G02B 2006/12159** (2013.01); **G02F 1/0118** (2013.01); **G02F 2203/50** (2013.01)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005038497 A2 20050428; **WO 2005038497 A3 20051215**; EP 1673646 A2 20060628; EP 1673646 A4 20071114; JP 2007512391 A 20070517

DOCDB simple family (application)
US 2004034017 W 20041014; EP 04795211 A 20041014; JP 2006535332 A 20041014