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

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Application

EP 04795211 A 20041014

Priority

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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 8 full level

G02B 6/02 (2006.01); **C09K 19/54** (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)

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Citation (search report)

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- See references of WO 2005038497A2

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