

Title (en)

RECORDING A LATENT HOLOGRAPHIC GRATING AND AMPLIFICATION OF ITS DYNAMIC RANGE

Title (de)

AUFZEICHNUNG EINES LATENTEN HOLOGRAPHISCHEN GITTERS UND VERSTÄRKUNG SEINES DYNAMISCHEN BEREICHS

Title (fr)

ENREGISTREMENT D'UN RÉSEAU HOLOGRAPHIQUE LATENT ET AMPLIFICATION DE SA PLAGE DYNAMIQUE

Publication

EP 4308982 A1 20240124 (EN)

Application

EP 22715291 A 20220321

Priority

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- US 2022021120 W 20220321

Abstract (en)

[origin: WO2022198121A1] Recording a volume Bragg grating is effectuated by a recording medium formed from a matrix polymer precursor including a controlled radical reactive group, a photoactive base monomer, and a photoinitiator system more reactive with the photoactive base monomer than the controlled radical reactive group in the presence of an excitation source, and a photoredox catalyst. The medium is cured thereby forming a support matrix from the matrix polymer precursor. Exposure to the excitation source through a pattern causes the photoinitiator to polymerize the base monomer, forming a latent grating of the Bragg grating. The latent grating has bright and dark fringes determined by the pattern. The concentration of polymerized base polymer is higher in the bright fringes than in the dark fringes. The exposing causes a portion of the matrix to diffuse into the dark fringes. The support matrix has a lower refractive index than the polymerized photoactive base monomer.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2022198121A1

Designated contracting state (EPC)

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