ENVIRONMENTALLY FRIENDLY HOLOGRAPHIC RECORDING MATERIAL

TECNOLOGÍA PATENTADA

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RESUMEN

Our research group has developed a new photopolymer which may be used as a holographic recording material. It is easy to prepare in layers of the desired thickness and has a lower potential toxicity than conventional materials. It is characterized by being environmentally friendly, since it does not contain any petroleum-derived solvents or other components classified as toxic, biotoxic, explosive, radioactive, oxidising, corrosive, inflammable or environmentally hazardous, and no such substances are used to prepare it.

The only solvent used is water, thus minimizing any risk of contamination and, at the end of its useful life, it is easy to recycle in aqueous phase. It is possible to automatize all the stages of its preparation, and it enables holograms to be obtained in a single stage without the need for subsequent processing.

We are looking for companies interested in acquiring this technology for its commercial exploitation.

VENTAJAS Y ASPECTOS INNOVADORES

ADVANTAGES:

- It allows holograms to be obtained by exposure to light in a single stage and without the need for subsequent processing.

- The material may be covered in totally or partially transparent plastic, before or after obtaining the hologram.

- It does not contain solvents derived from petroleum or other components classified as toxic, biotoxic, explosive, radioactive, oxidising, corrosive, inflammable or hazardous for the environment (under Commission Directive 2001/59/EC) and no such products are used in its preparation.

- The material itself and all its components are soluble in water.

- After its useful life, it may be eliminated by aqueous phase processes.

- It is compatible with the environment, thereby minimizing any potential risk of contamination.

- Its fabrication process is completely safe for workers, since water is the only solvent used.

- The processes of preparing the solution, depositing it in moulds and subsequently extracting it may all be automatized.

INNOVATIVE ASPECTS:

- Due to its characteristics and the fact that during the preparation process, its useful life and subsequent elimination, water is the only solvent used, the negative impact of this material on the environment is minimized.

- It does not contain any components classified as toxic, biotoxic, explosive, radioactive, oxidising, corrosive, inflammable or hazardous for the environment.

- Although the fabrication process is totally safe for workers, it is possible to automatize all the stages, thereby reducing the production costs.

- Layers of different thicknesses may be easily obtained and they may be used at different wavelengths.

APLICACIONES DE LA OFERTA

This is a light sensitive material used in various optical technologies, in particular as holographic recording material (support for holographic optical elements and holographic memories). Its main applications include:

- Holographic interferometry.

- Production of three dimensional images for coded labels and security systems.

- Manufacturing of holographic optical elements such as lenses, filters, systems for processing images and optical fibre network intercommunication devices.

- Holographic data storage.

- Other applications of photopolymerizable systems: dental treatments, protection of vehicle lights, flexoprinting, etc.

COLABORACIÓN BUSCADA

We are looking for companies interested in acquiring this technology for its exploitation. Any of the various forms of technology transfer (patent license agreement, transfer of user, manufacturing or commercializing rights to third parties, etc.) may be used.