

Title (en)  
METHOD FOR PRINTING A 3D OBJECT IN A PHOTOREACTIVE COMPOSITION, AND PRINTER SUITABLE FOR IMPLEMENTING THE METHOD

Title (de)  
VERFAHREN ZUM DRUCKEN EINES 3D-OBJEKTS IN EINER LICHTREAKTIVEN ZUSAMMENSETZUNG UND ZUR IMPLEMENTIERUNG DES VERFAHRENS GEEIGNETER DRUCKER

Title (fr)  
PROCÉDÉ D'IMPRESSION D'UN OBJET 3D DANS UNE COMPOSITION PHOTORÉACTIVE, ET IMPRIMANTE ADAPTÉE POUR LA MISE EN ŒUVRE DU PROCÉDÉ

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Application  
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Abstract (en)  
[origin: WO2022171704A1] A method for printing a 3D object in a photoreactive composition space, which object is defined by a 3D image comprising a plurality of illuminated points, the printing method comprising the following steps consisting of: • extracting (ET2) from the image a sequence of partial images otherwise referred to as mosaics, the sequence comprising at least one mosaic, each mosaic comprising a plurality of solid areas and each solid area comprising an illuminated point or a group of adjacent illuminated points, • in an axial direction (Z) and inside the composition space, projecting (ET3) the sequence of mosaics, the projection of each mosaic forming, in the composition space, a plurality of light areas, each light area corresponding to a solid area of the projected mosaic and each being suitable for causing a photoreaction in an associated composition block, • in a solid area of a mosaic, adjusting the number of illuminated points and the distribution of the illuminated points in the solid area such that, when the mosaic is projected into the composition space, the light area associated with the solid area causes the photoreaction in an associated composition block with a desired axial resolution, and • in the same mosaic, distributing the solid areas such that, when the mosaic is projected into the composition space, the composition does not react between the light areas associated with the plurality of solid areas of the mosaic. The invention also relates to a printer suitable for implementing a printing method as described above. The disclosure relates to the 3D printing of objects having microscopic and/or macroscopic dimensions by projecting images with high-axial resolution into non-linear irradiated photoreactive compositions.

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