

Title (en)

METHOD FOR MANUFACTURING A THREE-DIMENSIONAL OBJECT OR FOR MODIFYING THE SURFACE STATE OF A PREFORMED OBJECT BY PHOTO-POLYMERISATION

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES DREIDIMENSIONALEN OBJEKTES ODER ZUR MODIFIZIERUNG DES OBERFLÄCHENZUSTANDES EINES VORGEFORMTEN OBJEKTES DURCH FOTOPOLYMERISATION

Title (fr)

PROCÉDÉ DE FABRICATION D'UN OBJET TRIDIMENSIONNEL, OU DE MODIFICATION DE L'ÉTAT DE SURFACE D'UN OBJET PRÉFORMÉ, PAR PHOTO-POLYMÉRISATION

Publication

EP 4003694 A1 20220601 (FR)

Application

EP 20740645 A 20200722

Priority

- FR 1908646 A 20190730
- EP 2020070623 W 20200722

Abstract (en)

[origin: WO2021018677A1] The invention relates to a method for manufacturing a three-dimensional object or for modifying the surface state of a preformed object by local polymerisation of monomers or oligomers, the polymerisation being initiated by mono-photon or multi-photon absorption in an area to be polymerised, comprising the following steps: - introducing into a vessel with light-transparent walls a reaction medium comprising polymerisable monomers or oligomers, a polymerisation inhibitor, an indicator of the amount of the inhibitor and a photochemical polymerisation initiator; - initiating the polymerisation of the monomers or oligomers; - indicating the amount of inhibitor present in the reaction medium; - controlling the amount of light emitted by the irradiation system relative to the amount of inhibitor indicated by the indicator; and - switching to a following zone to be polymerised by means for moving the object and/or the focused light beam.

IPC 8 full level

B29C 64/106 (2017.01); **B29C 64/135** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01); **B33Y 70/00** (2020.01); **G03F 7/00** (2006.01); **G03F 7/027** (2006.01)

CPC (source: EP US)

B29C 64/106 (2017.07 - EP US); **B29C 64/135** (2017.07 - EP); **B33Y 10/00** (2014.12 - EP); **B33Y 30/00** (2014.12 - EP); **B33Y 70/00** (2014.12 - EP); **G03F 7/0037** (2013.01 - EP); **B29C 64/227** (2017.07 - EP); **B29K 2033/08** (2013.01 - US); **B33Y 10/00** (2014.12 - US); **B33Y 70/00** (2014.12 - US); **B33Y 80/00** (2014.12 - US); **G03F 7/027** (2013.01 - EP)

Citation (search report)

See references of WO 2021018677A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2021018677 A1 20210204; EP 4003694 A1 20220601; FR 3099479 A1 20210205; FR 3099479 B1 20210702; US 2022266505 A1 20220825

DOCDB simple family (application)

EP 2020070623 W 20200722; EP 20740645 A 20200722; FR 1908646 A 20190730; US 202017631570 A 20200722