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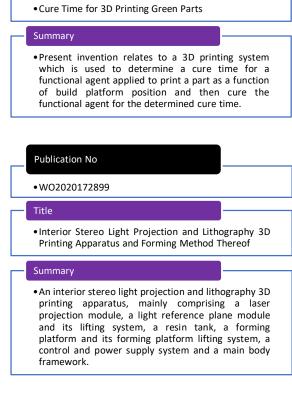
# **RECENT PATENT PUBLICATIONS ON 3D PRINTING**

Dates: 27<sup>th</sup> August 2020 to 03<sup>rd</sup> September 2020

3D printing has witnessed an upward trend in terms of device and materials. Here, we present snapshots from some recent publications relating to 3D printing.

# Publication No •WO2020176085 Title •Cure Time for 3D Printing Green Parts Summary •Present invention relates to a 3D printing system

# Publication No •W02020176855 Title •High Resolution Three-dimensional Printing System Summary •This invetion includes a 3D printing system for fabricating a three-dimensional article motorized build platform, a dispensing module, a pulsed light source, an imaging module, a movement mechanism, and a controller.



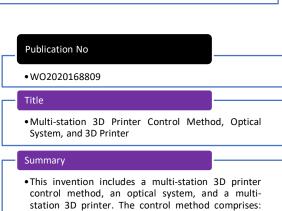
# • WO2020176078 Title • Determining Fusing Energy Profiles in 3D Printing Summary • A method of 3D printing includes receiving a 3D object model that defines the shape of an object to be printed in a layer-by-layer build process, and

**Publication No** 

**Publication No** 

Title

•US20200269463



pre-processing 3D model information, and forming

pieces of executable data. The optical system

comprises a control system, a light source, a moving

mechanism, and a storage module. A single optical system is used to perform exposure at multiple stations, thereby achieving mass production of 3D

printing.

<ul> <li>A method of 3D printing includes receiving a object model that defines the shape of an obje be printed in a layer-by-layer build process, determining a desired thermal profile based or shape of the object. For each object layer, a full energy radiation pattern is determined based the desired thermal profile.</li> </ul>	ct to and the using

Reinforcement of 3D-Printed Concrete Bodies

Summary

 A method for producing a component from hardenable material, wherein, at least one layer of the material is printed in a 3D printing process, and multiple similar reinforcing elements are introduced into the layer(s) and the two method steps are cyclically repeated until the component one is completed and characterized.

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## **Publication No**

• WO2020169369

# Title

• 3D Printing Method for Producing Concretecontaining Segments of a 3D Object

# Summary

•The present invention relates to a 3D printing method for the (layer-by-layer) production of at least one segment of a 3D concrete-based object, the at least one segment having at least three layers and containing concrete. The present invention also relates to 3D object as such, containing at least one segment which has at least three layers and contains concrete and can be produced by the method according to the invention.

# **Publication No**

• WO2020171702; US20200269601

#### Title

 System and Method for High Accuracy Printing on a 3D Surface

# Summary

 This invention provides a method and system for printing an image on a 3D surface, wherein a printing robot is controlled to first carry out an encoder pattern capture run.

# Publication No

•WO2020170058

# Title

• Parallel Axis With Plate Printer (P.A.P Printer)

# Summary

 The present device has been designed as a 3D printer for semi-industrial applications by using fused deposition modeling (FDM). The fixed-bed configuration allows for reducing vibration errors on workpiece caused by moving beds.

## **Publication No**

•US20200269501

## Title

• Three-dimensional Printing

# Summary

 A composition for 3D printing includes a polymer build material and a non-conductive fusing agent dispensable onto the polymer build material to form a polymer-fusing agent composite portion.

# **Publication No**

•WO2020170693

#### Title

• Printer Control System, Printing System and Printing Data Creation Method

# Summary

• This printer control system for controlling an inkjet printer that prints an image of a prescribed thickness on a printing medium, is provided with an image data creating/editing unit. Defining as a thick portion 3D that portion in the image printed on the printing medium where thickness is to be imparted to the image, the image data sent from the image data creating/editing unit to the printer control unit includes thickness information relating to the thickness of the thick portion 3D and/or shape information relating to the shape of the edge of the thick portion 3D.

# **Publication No**

• US20200269503

# Title

• 3D Printing Device

# Summary

• This 3D printing device includes a printing substrate, a movable printing head and a flexible printing space cover which, proceeding from the printing head, spans the printing substrate such that a closed printing space is formed between the printing head and the printing substrate.

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# **Publication No**

•WO2020168590

#### Title

•3D Printing Device, and Method for Preparing 3D Printed Structure

## Summary

 Present invention discloses a 3D printing device, and a method for preparing a 3D printed structure.
 The device comprises a curing system, and a curing pattern player, a flat curing surface with dewettability, and a receiving base.

# **Publication No**

• WO2020168883

#### Title

• Method for Preparing Metal Powder Material

## Summary

 The method features a simple process, to prepare a plurality of metal powder materials having different morphologies, including nano-, submicron-, and micron-scale metal power materials, and has a good application prospect in fields such as catalysis, powder metallurgy, and 3D printing.

# **Publication No**

• WO2020168808

# Title

• 3D Printing Tray, 3D Printing Device and Exposure Stripping Process

# Summary

•The present disclosure relates to the technical field of 3D printing, and particularly relates to a 3D printing tray, a 3D printing device and an exposure stripping process. The 3D printing tray comprises a base, a release film, a piece of light-transmitting glass and a clamp plate.

# **Publication No**

•US20200269507

# Title

Automatic Filament Changer

# Summary

• A method and apparatus for automatic filament change out without interruption to a 3D print task. As a filament roll runs out of filament, the tail end is detected and an automatic filament changer selects and feeds a new strand of filament to a 3D printer's extruder.

## **Publication No**

• WO2020171810

#### Title

 Controlling an Energy Source of an Additive Manufacturing System

# Summary

 Present Invention relates to adjusting an energy source of a 3D printing system. A build bed of a 3D printing system is arranged to receive a layer of build material and the energy source of the 3D printing system is controllable to provide energy to a zone of the build bed.

# **Publication No**

• US20200269505

# Title

 Apparatus, System, and Method for Use in Threedimensional Printing

## Summary

• The present invention concerns a reservoir assembly for use in three-dimensional (3D) printing for building a 3D object, which includes a top frame and a tensioned film. The tensioned film may be air permeable and elastic, wherein surfaces of the tensioned film are micro textured so that the tensioned film becomes optically clear when it contacts with the liquid material. The tensioned film minimizes the creation of bubbles between the top and bottom surfaces. This also helps blurring the boundaries thereby enhancing the surface finish of the fabricated parts.

# Publication No

•WO2020169261

# Title

• 3D-Printing Injector Having Cooling Means

# Summary

• The invention relates to a 3D-printing injector having an electrically controllable actuator and means for cooling, and thus for removing heat from the actuator.

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