

VT

PATENTES

IMPRESIÓN 3D

19



OBJETIVOS
DE DESARROLLO
SOSTENIBLE



Vigilancia
Tecnológica
3º trimestre 2024

NIPO: 220-24-018-3

En este Boletín de Vigilancia Tecnológica se recogen, de manera trimestral, los avances acontecidos en el campo de la tecnología de Impresión 3D que se materializa en forma de solicitudes de patente en todo el mundo.

Aunque en los años 80 comenzaron a desarrollarse los primeros equipos y materiales sobre la tecnología de impresión 3D también denominada fabricación aditiva, no fue hasta 1986 cuando aparece en el mercado la primera impresora 3D comercial, patentada por Charles W. Hull, premiado por la Oficina Europea de Patentes

como inventor del año en 2014 en la categoría de inventores no europeos.

Cuando trataba de buscar un sistema para mejorar el proceso de realización de prototipos de pequeñas piezas de plástico que utilizaba para testar nuevos diseños de productos, desarrolló una máquina de impresión 3D que conseguía realizar en pocos minutos procesos que por aquel entonces llevaban semanas.

Contenido



PROCESOS



MATERIALES



DISPOSITIVOS



PRODUCTOS



PROCESAMIENTO
DE DATOS



Desde entonces, la tecnología no ha parado de evolucionar, especialmente en los últimos años, alcanzándose a partir de 2017 un verdadero auge, cuando se incorpora la automatización utilizando software de inteligencia artificial que permite industrializar la fabricación aditiva y multiplicar la capacidad de los sistemas.

En los últimos años de evolución de la impresión 3D hemos visto pasar del desarrollo conjunto de nuevas tecnologías y materiales innovadores aplicados principalmente a la creación de prototipos y diseños personalizados, a la consecución de productos casi impensables hace tan solo una década. Gracias a esta increíble tecnología hemos visto imprimir, órganos, coches e incluso edificios.

Desde la Oficina Española de Patentes y Marcas, y en cumplimiento de su doble objetivo de proteger y fomentar la innovación tecnológica en nuestro país, así como de divulgar la información técnica que contienen las patentes a través de sus servicios de Información Tecnológica, se realiza este nuevo Boletín de Vigilancia Tecnológica, que se suma a los dieciséis *Boletines VT* que venimos publicando desde el año 2000 con periodicidad

trimestral. Nuestro objetivo es dar a conocer las nuevas solicitudes de patentes que se publican a nivel mundial relacionadas con la tecnología de impresión 3D.

En este Boletín, se incluye una selección de las solicitudes de patentes publicadas a nivel mundial durante el tercer trimestre de 2024, distribuidas en cinco apartados: procesos, materiales, dispositivos, productos y procesamiento de datos.

Para cada patente se incluye su número de publicación, con un enlace que permite la consulta del documento completo, el solicitante, el país de origen y su título.

Esperamos que la información aportada en este Boletín de Vigilancia Tecnológica, sirva para identificar tendencias tecnológicas y sus actores, así como para contribuir a la utilización del conocimiento contenido en los documentos de patente como punto de partida para emprender nuevas actividades de investigación y desarrollo. Para suscribirse a este Boletín basta con cumplimentar este [*formulario de suscripción*](#).

Procesos



Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024184876	GROW OTB LTD [IL]	Additive 3D manufacturing using light-cured resin
WO2024202446	HITACHI LTD [JP]	Method for producing sintered compact, sintered compact, and molding die
WO2024163806	RELATIVITY SPACE INC [US]	Dual plasma wire arc additive manufacturing
WO2024190092	KK KOBE SEIKO SHO KOBE STEEL LTD [JP]	Control information correction method of additive manufacturing device, shaping method, and program
WO2024160545	SIGNIFY HOLDING BV [NL]	Integrating leaky optical fibers in 3D printed items
WO2024142036	TRITONE TECH LTD [IL]	Processing head with cutter and associated cleaning system
WO2024195311	NIPPON LIGHT METAL COMPANY LTD [JP]; NIKKEIKIN ALUMINIUM CORE TECH COMPANY LTD [JP]; TOYO ALUMINIUM KK [JP]	Aluminum alloy molded body and method for producing same
EP4393680	UNIV NANJING AERONAUTICS & ASTRONAUTICS [CN]	Truss additive manufacturing device for aerospace
WO2024192183	DIVERGENT TECH INC [US]	Foam-filled nodes
WO2024192332	UNIV OF DELAWARE [US]	Dual cure additive manufacturing
WO2024197386	THE GOVERNORS OF THE UNIV OF ALBERTA [CA]	Method and system for three-dimensional (3D) printing using interlayer stitching
EP4389323	FRAUNHOFER GES FORSCHUNG [DE]; UNIV FREIBURG ALBERT LUDWIGS [DE]	Method for post-treating additively manufactured structures by means of ultrasound
EP4420860	NORTHROP GRUMMAN SYSTEMS CORP [US]	Apparatus for additively manufacturing an article at high temperatures and related methods
WO2024139268	AIXWAY3D JIANGSU CO LTD [CN]	3D printing powder spreading apparatus and method and 3D printing device
WO2024195856	PROTERIAL LTD [JP]	Manufacturing method for additive-manufactured products
WO2024188290	THE UNIV OF HONG KONG [CN]	3D bioprinting of tumor tissue for mechanistic study and drug screening
WO2024141543	ARKEMA FRANCE [FR]; CENTRE NAT RECH SCIENT [FR]; UNIV HAUTE ALSACE [FR]	Triarylsulfonium based photoinitiators for led cure of cationic, free radical and hybrid cationic/free radical formulations
WO2024188674	EXENTIS KNOWLEDGE GMBH [CH]	Apparatus for producing three-dimensional screen-printed workpieces
WO2024179366	SHENZHEN ANYCUBIC TECHNOLOGY CO LTD [CN]	Measurement apparatus and method, and additive manufacturing device
WO2024188459	RAYO 3D BIOTECH OY [FI]	A method and system for producing a printable object
WO2024151191	NOBULA3D AB [SE]	Apparatus for additive manufacturing
WO2024189180	OCEANSAFE AG [CH]	Fiber and filament for three-dimensional printing

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024198755	SHENYANG RES INSTITUTE OF FOUNDRY CO LTD CAM [CN]	Intelligent temperature control lattice structure based on 4D printing, and use thereof
WO2024142051	3DM DIGITAL MFG LTD [IL]	Additive manufacturing using multiple laser beams
WO2024167398	CEAD B V [NL]	A method and a device for calculating a toolpath for a three-dimensional model for additive manufacturing
EP4410320	FIBROBIOLOGICS INC [US]	Reuse of fibroblasts for skin augmentation
WO2024178932	UNIV NANJING AERONAUTICS & ASTRONAUTICS [CN]	Frozen sand mold hollowed conformal design and low-temperature medium transmission freeze forming method
WO2024199604	KK WIND SOLUTIONS AS [DK]	Electrical conductor assembly
WO2024137624	DARTMOUTH COLLEGE [US]	Modeling and fabrication of functional ceramic-polymer composites
EP4431285	EXENTIS KNOWLEDGE GMBH [CH]	Device for producing three-dimensional screen printing workpieces
WO2024151491	VENUS AEROSPACE CORP [US]	3D-printed catalyst bed for rocket engine
WO2024146672	3D MICROPRINT GMBH [DE]	Method and device for producing micro parts and micro components by means of additive manufacturing using micro laser sintering
WO2024170379	EOS GMBH ELECTRO OPTICAL SYSTEMS [DE]	Exposure strategy within cross sections
WO2024187197	DIVERGENT TECH INC [US]	Directed acoustic energy for melt pool excitation during 3D printing
WO2024200944	AIWAY [FR]	Method for preparing a printable three-dimensional representation of the dentition of a patient for the additive manufacturing of a dental model replicating the dentition of the patient
WO2024160696	BASF SE [DE]; BASF CHINA CO LTD [CN]	Curable composition, 3D-printed object formed therefrom and process of forming the same
WO2024191831	ALIGN TECH INC [US]	Methods and devices for additive manufacturing
WO2024183603	UNIV NANJING AERONAUTICS & ASTRONAUTICS [CN]	Multi-material additive manufacturing system and method for space on-orbit manufacturing
WO2024153871	ELKEM SILICONES FRANCE SAS [FR]; UNIV HAUTE ALSACE [FR]	Additive manufacturing method for producing a silicone elastomer article
WO2024144611	DOKUZ EYLUL UNIV REKTORLUGU [TR]	Carbon and glass fiber reinforced high density polyethylene composite
WO2024158276	UNIV AUTONOMA DEL ESTADO DE MEXICO [MX]	Foot and ankle prosthesis
WO2024178133	ATHENEUM OPTICAL SCIENCES LLC [US]	Multifocal polymeric lenses and methods of manufacture
WO2024146904	SYGNIS S A [PL]	Crucible for a 3D printer, a 3D printer and a method of printing with low-temperature glass
EP4400243	FUND AITIIP [ES]	Method of additive manufacturing for manufacturing molds an additive manufacturing system for manufacturing molds
WO2024206054	3D SYSTEMS INC [US]	Method for manufacturing precision articles with inks having high mobility vehicle fluids
WO2024186067	SAMSUNG E&A CO LTD [KR]	Method for controlling 3D printer for construction
WO2024185695	POLYUSE CO LTD [JP]	Nozzle module, 3D printer, and method for manufacturing molded object

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024205931	3D SYSTEMS INC [US]	Stereolithography with dual and parallel build planes
WO2024156335	NIPPON KORNMEYER CARBON GROUP GMBH [DE]	Method for producing graphitised formed parts by means of 3D printing

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Materiales



Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
EP4431283	SHINETSU CHEMICAL CO [JP]	Hydraulic composition for 3D printing and method of manufacturing 3D object
EP4437032	EVONIK OPERATIONS GMBH [DE]	Powder, especially for layer-by-layer production of three-dimensional objects
WO2024206279	ALLNEX USA INC [US]	Radiation curable composition
WO2024190499	KAWASAKI JUKOGYO KK [JP]	Nickel-based superalloy, nickel-based superalloy powder and method for producing shaped body
WO2024162379	KAWASAKI HEAVY IND LTD [JP]; NAT INST MATERIALS SCIENCE [JP]; UNIV OSAKA [JP]	Nickel-based superalloy, nickel-based superalloy powder, and method for manufacturing molded body
WO2024173229	3D SYSTEMS INC [US]	Compositions comprising an asphaltite additive for additive manufacturing
WO2024167440	OBSHCHESTVO S OGRANICHENNOJ OTVETSTVENNOSTYU INSTITUT LEGKIKH MATERIALOV I TEKH [RU]	Aluminium powder material for additive manufacturing of parts
WO2024203930	MITSUBISHI MAT CORPORATION [JP]	Aluminum powder product
WO2024147991	EOS OF NORTH AMERICA INC [US]	Aluminum alloy for additive manufacturing
WO2024161214	PHOSPRINT P C [GR]	Systems and methods for in vivo cell replacement
WO2024185698	SANYO SPECIAL STEEL CO LTD [JP]	Metal powder for additive manufacturing
WO2024202310	JX ADVANCED METALS CORP [JP]	Additive manufacturing metal powder and method for producing additive manufacturing metal powder
EP4414393	RICOH CO LTD [JP]	Curable composition, cured product, method of producing cured product, and apparatus for producing cured product
WO2024181518	POLYUSE CO LTD [JP]	Powder composition, mortar material for additive manufacturing, molded object, and method for manufacturing molded object
WO2024188725	ARKEMA FRANCE [FR]	Powder mixture
WO2024184521	RHEINISCH WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN ABGEKUEERT RWTH AACHEN KOERPERSCHAFT DES OEFFEN [DE]	Wood-based composition for 3D printing of wooden objects, production method and use
WO2024173784	L LIVERMORE NAT SECURITY LLC [US]	Systems and methods for additive manufacturing to produce carbon-carbon parts with improved properties and reduced manufacturing times
WO2024130318	COMMW SCIENT IND RES ORG [AU]	A method of producing spheroidal metallic particles
WO2024179776	DAIMLER TRUCK AG [DE]	Steel powder mixture for the additive manufacture of a component, preferably for manufacturing components for the construction of machines and for automobile manufacture
WO2024189110	CORAIL ARTEFACT SCIENCE & TECH [FR]	Biodegradable polymer for 3D printing

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024176223	YISSUM RES DEV CO OF HEBREW UNIV JERUSALEM LTD [IL]; SHENKAR COLLEGE OF ENG AND DESIGN [IL]	3D printing by irradiation of recyclable polymers containing reversible covalent bonds
WO2024179728	SIEMENS ENERGY GLOBAL GMBH & CO KG [DE]	Oxidation resistant nickel based alloy and methods
EP4431204	RICOH CO LTD [JP]	Aluminium powder for forming 3D objects and method for producing 3D object
WO2024170615	KSB SE & CO KGAA [DE]	Composite material with embedded carbide
WO2024156439	SIEMENS ENERGY GLOBAL GMBH & CO KG [DE]	Oxidation resistant nickel (ni) base superalloy, powder, components and methods
WO2024159183	KENNAMETAL INC [US]	Bimodal cemented carbide powders for additive manufacturing and structured bodies made therefrom
WO2024170447	VBN COMPONENTS AB [SE]	3D printed metal with controlled carbide size and method of producing the same
EP4417331	BOEING CO [US]	Apparatus and method for passivating a flammable powder
WO2024159178	KENNAMETAL INC [US]	Bimodal cemented carbide powders for additive manufacturing and structured bodies made therefrom
WO2024204368	mitsubishi chemical corp [JP]	Material for three-dimensional modeling, molded body and method for producing same
EP4438752	GF CASTING SOLUTIONS AG [CH]	Aluminium alloy
WO2024183158	UNIV SHAANXI TECHNOLOGY [CN]	Polyimide photosensitive resin applied to ultraviolet curing 3D printing and preparation method therefor
WO2024189531	CONSIGLIO NAZ DELLE RICERCHE [IT]; ENEA AGENZIA NAZ PER LE NUOVE TECNOLOGIE LENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE [IT]	Innovative photomobile polymer, method for preparing said photomobile polymer without rubbing, 3D printing method of said photomobile polymer and 3d printer to implement said 3D printing method
WO2024151769	CENTRAL MICHIGAN UNIV [US]; UNIV BRITISH COLUMBIA [CA]	Additively manufactured stainless steel electrocatalysts
WO2024181623	LOTI CO LTD [KR]	Hydrophobic surface titanium-based powder and method for producing same
WO2024199765	SONY SEMICONDUCTOR SOLUTIONS CORP [JP]; SONY EUROPE B V [GB]	Customized adaptive objects made by additive manufacturing
WO2024155287	TDBT IP INC [US]; CORNEZ SCOTT D [US]; COHEN DANIEL L [US]; MEZQUITA JERSON [US]; SCHWARTZ JAMES [US]	Aseptic printer system and method
EP4438654	EMS CHEMIE AG [CH]	Materials for powder bed fusion technologies and using such materials in a layer-by-layer process
WO2024150259	FOND DEMOCENTER SIPE [IT]	Biometric model of fibrosis
EP4403529	SWAROVSKI D KG [AT]; UNIV DEGLI STUDI PADOVA [IT]	Photocurable sol-gel compositions
WO2024203945	PROTERIAL LTD [JP]	Metal powder for molding, and molded article
WO2024163355	VADIENT OPTICS LLC [US]	Anamorphic gradient-index microlenses for coupling with photonic integrated circuits & three-dimensional gradient index (grin) microlens arrays for light-field and holographic imaging and displays

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024149597	BLZ BAYERISCHES LASERZENTRUM GEMEINNUETZIGE FORSCHUNGSGESELLSCHAFT MBH [DE]; FRIEDRICH ALEXANDER UNIV ERLANGEN NUERNBERG KOERPERSCHAFT DES OEFFENTLICHEN RECHTS [DE]	Method for additively manufacturing a medical and/or pharmaceutical product, and corresponding product
WO2024168243	WEST PHARMACEUTICAL SERVICES INC [US]	Container systems and methods for cryogenic storage and delivery of bioink
WO2024188844	EVONIK OPERATIONS GMBH [DE]; KARLSRUHER INSTITUT FUER TECH [DE]	Functionalized recombinant bacterial collagen-like proteins
WO2024204625	MITSUI CHEMICALS INC [JP]	Photocurable composition, three-dimensional molded article, dental product, (meth)acrylate, and monomer composition
WO2024166632	TOKUYAMA DENTAL CORP [JP]	Curable composition for three-dimensional stereolithography, method for producing same, method for producing three-dimensional stereolithographic model, and method for producing dental restoration
EP4414106	VBN COMPONENTS AB [SE]	3D printed metal with controlled carbide size and method of producing the same

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Dispositivos



Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
EP4424493	UNIV ZIELONOGORSKI [PL]	Method of automatic levelling of a 3D printer table movable along the z-axis
EP4438299	PERI SE [DE]	Device and method for additive manufacturing of a component
EP4393679	PPHU POLIGRAF WIESLAW KASPROWIAK [PL]	Head assembly with a pressing element for an additive manufacturing device
EP4429874	UAB VITAL3D TECH [LT]	Method and system for elongating voxel in multiphoton fabrication
EP4424494	UNIV ZIELONOGORSKI [PL]	Method of automatic levelling of a x-axis beam of a 3D printer having a table movable along the y-axis
WO2024196130	SEOUL NATIONAL UNIV R&DB FOUNDATION [KR]	Method for manufacturing submicron fluidic channel and submicron fluidic channel manufactured thereby
WO2024145980	UNIV NANJING AERONAUTICS & ASTRONAUTICS [CN]	Heated-bed deformation tolerance structure for large-sized continuous fiber high-temperature 3D printer
WO2024172874	UNIV CARNEGIE MELLON [US]	Process mapping for additive manufacturing using melt pool topological features
WO2024185500	JUJO PAPER CO LTD [JP]	Powder material for three-dimensional shaping and three-dimensionally shaped object
WO2024168109	3D SYSTEMS INC [US]	Method for manufacturing low modulus articles
WO2024168112	3D SYSTEMS INC [US]	Method for manufacturing low modulus articles
WO2024185499	JUJO PAPER CO LTD [JP]	Powder material for three-dimensional shaping and three-dimensionally shaped object
EP4424458	PRATT & WHITNEY CANADA [CA]	Adaptive repair with two braze material and ct scans
EP4424457	PRATT & WHITNEY CANADA [CA]	Adaptive repair with two braze material and structured light scans
WO2024205399	INNOTECH EUROPE B V [NL]	Extruder system and additive manufacturing printer, comprising such an extruder, and a method of printing a product with such an additive manufacturing printer
WO2024194551	SAFRAN ADDITIVE MFG CAMPUS [FR]	Method for additive manufacturing of a part
WO2024157520	MITSUBISHI HEAVY IND LTD [JP]	Three-dimensional laminate molding device and three-dimensional laminate molding method
WO2024195259	HITACHI LTD [JP]	Additive manufacturing condition determining device, additive manufacturing condition determining method, and additive product manufacturing method
WO2024180651	TECH RES ASSOCIATION FUTURE ADDITIVE MANUFACTURING [JP]	Three-dimensional additive manufacturing device, fabricated surface monitoring method, and information processing program

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024206807	VULCANFORMS INC [US]	Systems and methods for broadband wavelength monitoring during additive manufacturing processes
WO2024197260	WILLIAMS CHRISTOPHER B [US]; KUBALAK JOSEPH [US]	Methods and systems for large-scale additive manufacturing with robotic conveying
WO2024156018	ROHRMOSER FLORIAN [AT]	Extrusion head for additive manufacturing
WO2024191936	STRATASYS INC [US]	Tray assembly of an additive manufacturing system
WO2024155773	STRATASYS INC [US]	3D printer with supported umbilical to print head
WO2024183838	PRAGOSTROJ S R O [CZ]	Corexy type motion system
WO2024132371	BOSCH GMBH ROBERT [DE]	Printhead for a 3D printer
WO2024148020	VIRGINIA TECH INTELLECTUAL PROPERTIES [US]	Small-scale solid-state additive manufacturing tools and designs
WO2024141281	SECO TOOLS AB [SE]	Detachable build plate
EP4411073	CHINA THREE GORGES CORP [CN]; CHINA THREE GORGES CONSTRUCTION ENG CORPORATION [CN]	Multi-functional concrete 3D printing device and use method
EP4397493	GEN ELECTRIC [US]	Apparatus and method to manage temperature and stress in a part during additive manufacturing
EP4403284	FREEMELT AB [SE]	Powder smoke detection during additive manufacturing
WO2024156016	ROHRMOSER FLORIAN [AT]	Extrusion head for additive manufacturing
WO2024141380	NIKON SLM SOLUTIONS AG [DE]	Technique for temperature control of a three-dimensional workpiece generated via additive manufacturing
WO2024148309	UNIV CONNECTICUT [US]	Printers for manufacturing constructs for regenerative medicine
WO2024189178	XOLO GMBH [DE]	Apparatus for performing at least one local polymerization process of a polymerizable material for the continuous additive manufacturing of at least one three-dimensional object
WO2024187866	SHANGHAI LUNKUO TECH CO LTD [CN]	Method and apparatus for 3D printing
WO2024199696	COUTAZ FABRICE GABRIEL [CH]	Material extrusion system and device using the same
WO2024189652	ISMO BIO PHOTONICS PVT LTD [IN]; S I IKRAM KHAN [IN]	An automated system and method to produce a personalized 3D printed organoids
WO2024134955	EBARA CORP [JP]	Powder supply device
EP4438298	PERI SE [DE]	Device and method for additive manufacturing of a component
WO2024150294	STARTECHNO COMPANY LTD [JP]; S LAB INC [JP]	Three-dimensional modeling apparatus
WO2024182310	TEXTRON AVIATION INC [US]	Nozzle scraping system for a 3D printer

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Productos



Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024192136	ALIGN TECH INC [US]	Photocurable polymers and compositions for 3D printing resins
WO2024172769	NAT UNIV SINGAPORE [SG]; NAT UNIV HOSPITAL SINGAPORE PTE LTD [SG]	Peek-ha composite material with magnesium silicate for medical use
WO2024163970	ZEROBRUSH INC [US]; PAI NIDHI [US]; PAI AKASH [US]; ANDERSON WILLIAM [US]; CLARK JOSIAH [US]; TAYLOR RICHARD K [US]; MORSE SPENCER [US]	Methods of designing and making customized dental care systems
EP4403781	GD SPA [IT]	Method to interlock two components of an automatic machine for manufacturing or packing consumer articles
WO2024194589	SAFRAN AIRCRAFT ENGINES [FR]; SAFRAN HELICOPTER ENGINES [FR]	Metal powder for additive manufacturing method
WO2024177412	UNIV GACHON IND ACAD COOP FOUND [KR]	Hypothalamic-pituitary biochip and method for manufacturing same
WO2024153923	RAMBO IMPLANT LTD [GB]	Dental implant
WO2024200984	DECATHLON [FR]	Sports article made by means of an additive manufacturing process and method for manufacturing such an article
EP4417422	FERRARI SPA [IT]	Rear frame assembly equipped with an integrated heat exchanger and motor vehicle comprising the same
WO2024189461	ADDYX S R L [IT]	Sacrificial element for the production of ribbed bodies of composite material
EP4406740	BE AEROSPACE INC [US]	Water port closure assembly
WO2024167832	WESTINGHOUSE ELECTRIC CO LLC [US]; ARMSTRONG CLINTON B	Advanced manufacturing heat pipe segment with integral printed wick
WO2024190951	INDUSTRY ACADEMIC COOPERATION FOUNDATION GYEONGSANG NATIONAL UNIV [KR]; CHO HYUNKYU [KR]	Method for guiding tooth preparation by using augmented reality, and apparatus for performing same
WO2024170242	EXOCAD GMBH [DE]	Closing holes in a three-dimensional digital preparation model
WO2024200983	DECATHLON [FR]	Shoe with removable sole and method for manufacturing such a shoe
WO2024173319	BAE SYS INF & ELECT SYS INTEG [US]	Integrated additively manufactured modular aperture antenna
ES2977558	CONSEJO SUPERIOR INVESTIGACION [ES]	Material de almacenamiento de energía térmica basado en materiales de cambio de fase infiltrados en una estructura altamente porosa cerámica obtenida mediante impresión 3D
WO2024199608	KK WIND SOLUTIONS AS [DK]	An electrical panel with an electrical conductor manufactured by additive manufacturing
WO2024199606	KK WIND SOLUTIONS AS [DK]	Multifunctional electrical busbar

Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024151882	STEVENS INSTITUTE OF TECHNOLOGY [US]	Creation of 3D hierarchically channeled scaffolds for regenerative medicine using the 3D-printed polyelectrolyte structures as inverse sacrificial templates
WO2024201476	STRATASYS LTD [IL]	Formulations usable in additive manufacturing of 3D objects that feature an elastomeric material
ES2977942	CONSEJO SUPERIOR INVESTIGACION [ES]; UNIV MADRID AUTONOMA [ES]	Catalizador estructurado en 3D basado en carbon activo
WO2024194578	SAFRAN VENTILATION SYSTEMS [FR]; SAFRAN ELECTRONICS & DEFENSE ACTUATION [FR]	Method for manufacturing a squirrel-cage rotor for an electric machine
WO2024180438	SOLVENTUM INTELLECTUAL PROPERTIES COMPANY [US]	Ceramic veneers and continuous additive manufacturing method for making ceramic veneers
WO2024199598	KK WIND SOLUTIONS AS [DK]	A flexible electrical conductor
EP4420910	FERRARI SPA [IT]	Front frame assembly equipped with an integrated radiator and motor vehicle comprising the same
WO2024177413	UNIV GACHON IND ACAD COOP FOUND [KR]	Human testicular tissue biochip and manufacturing method therefor
WO2024176032	PETROMAC IP LTD [NZ]	A sensor transportation device
WO2024199601	KK WIND SOLUTIONS AS [DK]	Temperature regulation of an electrical system
WO2024181920	AGENCY SCIENCE TECH & RES [SG]; SINGAPORE HEALTH SERV PTE LTD [SG]	A bioactive poly(lactic-co-glycolic acid) (plga) material, related printed structure and related methods thereof
WO2024146782	SIGNIFY HOLDING BV [NL]	Artificial skylight device
WO2024199602	KK WIND SOLUTIONS AS [DK]	An electrical conductor with integrated air guides
WO2024194817	VERIGRAFT AB [SE]	Nerve grafts for peripheral nerve regeneration
WO2024199584	ASK CHEMICALS GMBH [DE]	Method for the layered construction of bodies by 3D printing with a water-glass-containing binder and a processing additive
WO2024173322	BAE SYS INF & ELECT SYS INTEG [US]	Resistively loaded tightly coupled dipole array additively manufactured modular aperture
WO2024147124	MASSIVIT 3D PRINTING TECH LTD [IL]	Additively manufactured mold, having fast production rate, and self changes, correction, and repair capabilities

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Procesamiento de Datos



Nº PUBLICACIÓN	SOLICITANTE Y PAÍS DE ORIGEN	CONTENIDO TÉCNICO
WO2024139251	XIAN SPACE ENGINE COMPANY LTD [CN]	Additive manufacturing forming method for head having special-shaped capillary structure of liquid rocket engine
WO2024168126	3D SYSTEMS INC [US]	Method for manufacturing low modulus articles
WO2024157243	NANO DIMENSION TECH LTD [IL]	Inspecting a product made by additive manufacturing
WO2024146788	SIGNIFY HOLDING BV [NL]	A method for manufacturing a 3D item by means of fdm printing
WO2024179131	SHANGHAI LUNKUO TECH CO LTD [CN]	Method and device for managing consumables on 3D printing spool holder
WO2024134832	MITSUBISHI ELECTRIC CORP [JP]	State analyzing device, additive manufacturing system, and state analyzing method
WO2024148084	3D SYSTEMS INC [US]	Additive manufacturing by extruding inhibited crystallization polymers
EP4414101	PRATT & WHITNEY CANADA [CA]	Adaptive overhaul using ct scan single data set
WO2024191835	ALIGN TECH INC [US]	Additive manufacturing systems with error correction and associated methods
WO2024151558	ALIGN TECHNOLOGY INC [US]	Methods for generating support structures for additively manufactured objects
EP4414105	XEROX CORP [US]	Machine learning feature feed rates for 3D printing
WO2024146545	SHENZHEN CREALITY 3D TECH CO LTD [CN]	Method and apparatus for determining image correction data, and electronic device and storage medium
WO2024175853	SAFRAN ADDITIVE MFG CAMPUS [FR]	Method for additive manufacturing of a metal part
WO2024184642	STRATASYS POWDER PRODUCTION LTD [GB]	Method for dimensional compensation of a 3D object to be formed by an additive manufacturing apparatus
EP4420811	CONCEPT LASER GMBH [DE]; GE ADDITIVE GERMANY GMBH [DE]	Additive manufacturing methods and systems
WO2024192449	SENDANCE GMBH [AT]	Method for integrating electrical components into a printed body
WO2024179527	XIAN BRIGHT LASER TECH CO LTD [CN]	Multi-laser scanning control method and apparatus, device, and computer storage medium
WO2024151669	CARLSMED INC [US]; CASEY NIALL PATRICK [US]; NICOLAU RODRIGO JUNQUEIRA [US]	System for edge case pathology identification and implant manufacturing
WO2024140186	SHANGHAI MEINAIER TECH CO LTD [CN]	Three-dimensional high-precision positioned printing method and device
WO2024178514	ASPECT BIOSYSTEMS LTD [CA]	Bioprinting methods and systems



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