

NIPO: 116-19-020-3

En esta nueva andadura del Boletín de Vigilancia Tecnológica del Sector Transformador Plástico que comenzó el primer trimestre de 2021, la Oficina Española de Patentes y Marcas (OEPM) ha iniciado una nueva colaboración con AIMPLAS, Instituto Tecnológico del plástico que se encuadra dentro de una de las actividades de colaboración que la OEPM viene llevando a cabo con diferentes centros tecnológicos para hacer llegar a las empresas e investigadores que los integran, con periodicidad trimestral, una selección de las patentes más recientemente publicadas en el sector de transformación de los materiales plásticos.

AIMPLAS es un Centro Tecnológico con más de 30 años de experiencia en el sector del plástico que aporta soluciones a las empresas, en toda la cadena de valor, desde fabricantes de materia prima a transformadores y usuarios finales. A través de la I+D+i contribuye a resolver los retos que se plantea la sociedad en relación a los plásticos, para mejorar la calidad de vida de las personas y asegurar la sostenibilidad medioambiental.

La Oficina Española de Patentes y Marcas tiene como misión impulsar la innovación y compartir sus resultados como valores y activos de diferenciación y desarrollo tecnológico. Por ello sus dos objetivos principales son proteger la innovación tramitando distintos títulos de propiedad industrial y difundir la información técnica contenida en las patentes a través de sus servicios de Información Tecnológica, uno de ellos estos Boletines.

Como novedad de esta etapa, se reestructura el contenido del Boletín, intentando reflejar la realidad en propiedad industrial de la Industria del Plástico desde el punto de vista de nuevos productos en los principales sectores de aplicación, desarrollos que contribuyen al desarrollo sostenible, mejoras de procesos productivos y nuevos materiales plásticos con propiedades avanzadas. No se ha incluido en este Boletín información sobre la tecnología de impresión 3D, ya que esta aparece recogida en el [Boletín de Vigilancia Tecnología Impresión 3D](#) que la OEPM comenzó a publicar en el 2020 .

A través de las imágenes que representan cada sección y que aparecen en la portada del Boletín, se accede de forma directa a los contenidos de las mismas, donde encontraremos el número de publicación de cada patente, quien la solicita, una pequeña descripción de la invención y el enlace de acceso al texto completo del documento. De forma complementaria, se incluye una selección de novedades extraídas del Observatorio del Plástico junto con noticias sobre actividades relevantes de la OEPM.

Si se desea recibir este Boletín periódicamente basta con cumplimentar el correspondiente [formulario de suscripción](#)

Contenido

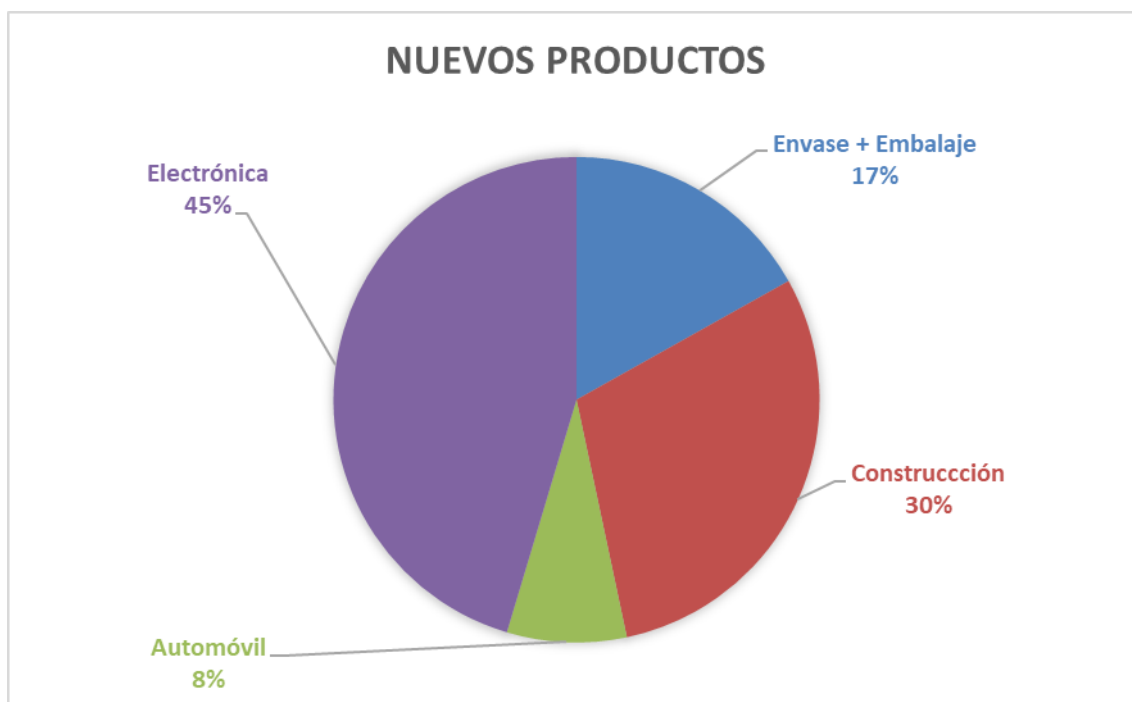


NUEVOS PRODUCTOS

SOSTENIBILIDAD Y
ECONOMÍA CIRCULARNUEVOS PROCESOS
INDUSTRIALESMATERIALES CON
PROPIEDADES AVANZADAS
O MEJORADAS

NUEVOS PRODUCTOS

En el siguiente gráfico se muestra la distribución de las 20.518 familias de documentos de patente recuperadas en este trimestre en el apartado de Nuevos Productos. Tal y como viene ocurriendo, el sector dedicado a la electrónica sigue siendo el que más documentos de patente aporta.



Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

Envase y Embalaje

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2017291054	(VELT-N) VELTEK ASSOC INC	Kit used to deactivate hazardous drugs, comprises first pouch of wipe saturated in hypochlorite solution, second pouch of wipe saturated in thiosulfate solution, and third pouch of wipe saturated in isopropyl alcohol solution

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2021354879	(TUSA-I) TUSAN D W	Device for storing multiple fluids in multiple compartments, has holding lattice for holding second compartment against lid of first compartment and second compartment is aligned with second aperture of lid
WO2022027152	(UYSA-N) UNIV SANTIAGO CHILE	Active polymeric container used for meat products, comprises polystyrene, polylactic acid, polyethylene-vinyl-alcohol, polyamides, polyolefins, celluloses, waxes, paraffins, combination, monolayer, or multilayer with inner coating
WO2022030534	(MITA) MITSUI CHEM INC	Layered body used for food packaging material, comprises paper substrate, anchor coating layer disposed on one surface of paper substrate, and barrier coating layer disposed on one surface of anchor coating layer, where barrier coating layer contains polyurethane resin with gas barrier properties
US2022031926	(DESI-N) DESIGN DEPT INC	Spherical canister for vacuum collection and storage of fluids, has hemispherical components that are seaably connected at beltline to form spherical shape of canister with cavity for storing liquid
KR20220000501	(ONEM-N) ONEMEAT FOOD	Packaging perishable fresh food by supplying perishable fresh food into packaging that creates protective atmosphere by non-stoichiometric reaction of carbon dioxide generating activator and allowing contact of exudates with coating
US2021403219	(ABDU-I) ABDULBAKI M (MILL-I) MILLER S	Nested temperature regulation device for use within shipping container, has fluid bag fixed in interior space, and fluid provided in fluid bag, where fluid bag is configured to rupture upon receiving a compressive or torsional force
US2021394952	(PRAT-N) PRATT CORRUGATED HOLDINGS INC	Blank for use in packaging for beverage containers, has upper telescoping panel and lower telescoping panels that are configured to fold into cavity in closed configuration to partially enclose cavity
AU2021106690	(GVGG-I) G V G (MAAA-I) M A (MJGG-I) M J G (MALA-I) MALAIRAJ S (PANA-I) PANANGAL M (RENU-I) RENUGA P S (SRSS-I) S R S (SANT-I) SANTHOSHKUMAR A W (SUBR-I) SUBRAMANIAN K (TMAA-I) TM A	Preparation of active-pH, intelligent smart packaging used for food products, involves casting pH-indicative film of poly(vinyl alcohol)/chitosan/anthocyanin from hydrogel by blending poly(vinyl alcohol) solution and chitosan solution with anthocyanin as pH indicator and sodium tripolyphosphate
US11110035	(GRAM-N) GRAM TACTICAL LLC	Portable medicament case secured to article to be worn worn by personnel such as soldier, has housing unit whose aperture which assists in removing medicament package from that housing unit when housing units are not joined together in sealed configuration
EP3932249	(INVE-N) INVENTED HERE BV	Bicycle basket for attachment to bicycle, has textile web stretched between upper and lower ring elements and biases upper ring element against lower ring element

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR20210154575	(KIMH-I) KIMHYUNWOO	Easy-to-separate disposable plastic cup, has recycling mark that is displayed during compression so that mark on cylindrical cup is clearly seen three-dimensionally so that efficient classification is possible
US9956174	(NORD-I) NORDAHL J	Cannabis juice puree package comprises frozen structures of Cannabis juice puree comprising non-decarboxylated cannabinoid, particularly cannabidiolic acid and tetrahydrocannabinolic acid, and decarboxylated cannabinoids

Construcción Tejados

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2022064501	(BMIC-N) BMIC LLC	Roofing system that is free of asphalt, comprises a substrate and an adhesive formulation which comprises filler and/or at least one tackifier, at least one process oil, at least one fire retardant, and at least one polymer
US2014215937	(FIRE) FIRESTONE BUILDING PROD CO LLC	Roof assembly of fire-resistant roofing system, has thermoplastic membrane that covers deck and fabric arranged on expandable graphite
US11248377	(WANG-I) WANG C K (WANG-I) WANG C L	Plastic panel for roof of simple building E.G. shed, has concave portion and recess portion that are located on same axis as convex portion and protruding portion, and extension sections that are provided with notch with V-shaped bottom
US2022049142	(BMIC-N) BMIC LLC	Roofing system comprises roof substrate and roofing putty, where roofing putty is present on roof substrate, roofing putty is formulation comprising polysiloxane, filler and silane and roofing putty exhibits specific elongation, when tested according to ASTM D2370
WO2022036131	(BMAT) BUILDING MATERIALS INVESTMENT CORP	Filled coating formulation for preparing roofing materials, E.G. non-asphaltic roofing shingle, comprises crude tall oil-based continuous phase material, resinous hardening agent, polymer, and filler, E.G. calcium carbonate or quartz
KR102302825	(ANYC-N) ANYCALL SERAFIC	Composite waterproof structure with polyurethane coating film composition useful for roof of building based on concrete comprises coating layer comprising polypropylene glycol, polyether polyol, polyester polyol, and polypropylene glycol
DE102020119811	(TEGU-N) TEGUT GUTE LEBENSMITTEL GMBH & CO KG	Green roof for temporary covering of E.G. office building on construction sites, is arranged with several tub modules that are placed side by side and are filled with plants covering building as green roof

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
JP2018171884	(NIPQ) DAINIPPON PRINTING CO LTD	Sheet for forming decorative material, comprises base material, and surface protective layer comprising cured material of curable resin composition comprising ultraviolet absorber, and having preset Martens hardness and elasticity modulus
WO2022017758	(BASE) BASELL POLIOLEFINE ITAL SRL	Polyolefin composition used in sheet or membrane, preferably single-ply roofing sheet or membrane and geomembrane, comprises copolymers of propylene with alpha-olefin, and optionally diene
DE102020118945	(BRUE-I) BRUEGGEMANN D	Layered structure for fastening structures on flat roofs, has attachment that is composed of GRP molded portions that are fixed horizontally with respect to raw ceiling by using plastic rods that are lowered through holes in thermal insulation layer down to concrete of raw ceiling
US2019222172	(PAOF-I) PAO F (THOM-I) THOMAS A	Modular removable roofing installation system I.E. modular smart energy production system, has heat pump connected to heat exchanger, where slate modules and thermal tubing simultaneously operate to generate electricity and hot water

Construcción Conducciones

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CH717717	(NIKL-N) NIKLES INTER AG	Connection system for distributing water in domestic system such as domestic plumbing system, has reinforcing portion that is extending from head portion inside end portion of pipe such that one annular bushing is mechanically clamped on end portion of pipe
US2021372104	(EBBE-N) EBBE AMERICA LC	Pipe fitting for attaching drain fixture to pipe element, has tubular element that is reversible such that tubular portion is selectively installable on pipe element with pipe attachment portion located toward terminal end of pipe element
KR20220010106	(KIMT-I) KIM T (RAHS-I) RA H S	Shower hose filter for use in E.G. home, has filter main body installed in transparent PVC pipe, and PVC pipe wrinkle treatment part for standardizing filter body, where size of filter body is identical with size of PVC pipe
KR102355599	(GREE-N) GREEN PIPE CO LTD	Multi-wall sewer pipe, has extrusion die installed in front of profile extrusion device to form central part, and connection part connected between profiles spirally supplied to winding device such that profiles are integrally coupled

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR20220006708	(SRSY-N) SR SYSTEM	Insert for supporting combine duct (CD) conduit, has annular lower and upper fixing rings that are respectively installed at lower ends and upper ends of installation cap and press-fitted to fix positions of CD conduits
US2022025623	(JIAN-N) JIANGMEN SURRAIN SHOWER CO LTD	Deodorant sewer pipe, has spring and cover move downward to achieve drainage when water flows, and cover resets through elastic force of spring to block sewer pipe body and causes deodorization when water flow does not flow
JP202119325	(GLAN-N) GLANZ TECHNO WORKS CORP	Multi-pipe for a partition unit, has a first tubular element formed in tubular shape with a transparent first plastic and has an elliptical cross section, and hollow portion of first tube is extended in axial direction of tubular elements
KR20210145530	(UYKR) UNIV KOREA RES & BUSINESS FOUND	Expanded polystyrene (EPS) amorphous concrete formwork for forming atypical concrete structure, has pressure plate that is coupled to other end of fixed pipe in transverse direction to press upper surface of EPS formwork main portion
KR102345454	(SUNJ-N) SUNJINECO CO LTD (TOUC-N) TOUCH GREEN CO LTD (KIMY-I) KIM Y K	Pipe regeneration coating device for coating inside of pipe, comprises storage device, in which polyurea resin is stored, where transfer hose is provided for transferring polyurea resin from storage device
WO2021259867	(ROCA) ROCKWOOL INT AS	Method for industrial production of fiber-reinforced aerogel composite material and E.G. pipe structure, involves critical drying of gel, and placing fiber material in bag having opening and soaking material with already activated sol

Construcción Aislamientos

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR102374734	(RHIM-I) RHIM S Y	Construction of clean room for mushroom cultivation, involves forming clean room zone positively pressure-treated to have preset internal atmospheric pressure, by forming primer layer and insulating sheet on reinforced concrete structure and attaching to E.G. steel with enamel-coated surface
WO2022056458	(LEAH-I) LEAHY C H	Insulated block for use in building structures, has first side and second side that are adhesively bonded to thermoset core, and groove component that is configured to receive tongue component from second insulated block

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022046766	(SESF-N) SES FOAM LLC	Low density polyurethane foam for E.G., insulation of a building enclosure comprises contact product of composition having aromatic polyisocyanate component, and composition having E.G., poly ether polyol and polyurethane producing catalyst
KR102370185	(KIME-N) KIM EASY ENG CO LTD	Insulator hanger for use in power distribution arrester for protecting distribution transformer, has rectangular armrest connected to post and insulated hanger body provided with lightning arrester connector along with waterproof resin coating layer
US2022065025	(SHIP-I) SHIPPEN M A	Article of architectural glass insulation comprises plastic foam laminate cover film comprising tulle polyester/nylon mesh film and is releasable on sides of cover film while attaining removability and reusability of cover film when adhered on plastic foam laminate
US2022023817	(UTBA) UT-BATTELLE LLC	Insulation medium comprises multiple microspheres, where each microsphere includes porous core, gas within the porous core and coating layer coating all the exterior surface of the porous core, and the porous core includes porous core material and having an exterior surface
KR20220012469	(LEAD-N) LEAD POWER CO LTD	Flame-retardant insulation board used as internal finishing material or external finishing material of building, comprises polyurethane core, first skin material provided on one surface of core material
EP3940181	(ALFA-N) ALFA SOLARE SPA	Thermally insulating profile for interposing between two profiles made of conductive material for making thermal break system, comprises body obtained by extruding thermoplastic material, extending longitudinally and provided with projections
KR20210145356	(KOPO-N) KOREA POLYTECH CO LTD	Semi-non-combustible insulating material comprises heat insulating material layer and surface layer combined with flame retardant coating layer cured by coating mixture containing sodium silicate on woven or non-woven fabric outermost layer
KR20210153777	(DLEC-N) DL E & C CO LTD	Insulation material comprises polyisocyanurate, surface layer and thermal insulation layer comprising physical blowing agent, polyisocyanate, polyol, polyester polyol mixture, hydroxide compound and polyisocyanurate conversion catalyst
KR102341020	(DTID-N) DTI CO LTD	Manufacture of sheet-type building insulation material involves preparing ink intermediate using E.G. surfactant, antifoaming agent, moisturizing agent and thickener, mixing nano-carbon black pigment, and printing ink on fabric
TWM616644	(CHEN-I) CHEN S	Sound insulation pad, has sheet system made of flexible adhesive sheet made by mixing recycled polyethylene terephthalate products and TPU products, where sheet system is set between first sheet body and third sheet body

Construcción Ventanas

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
ES1284980	(TORR-N) TORRES SANCHEZ SL VICENTE	System for bearings for sliding windows or doors, comprises lower frame with side walls that delimit interior space where wheels are housed and block has hole in which tandem is formed by two wheels and axle joins them
KR20220028205	(KANG-I) KANGSUNGWOO	Eco-friendly window sealing for use in E.G. apartment, has hard bottom surface that is fixed by inserting into window or door, and windproof unit that is made of non-toxic synthetic resin material having double hardness with soft vertical blade
KR102370294	(ACEM-N) ACE METAL CO LTD (SUNB-I) SUN B W	Composite PVC windows for high-rise building comprise fire extinguishing layer containing shell having fire-fighting compound and acrylic-vinyl chloride copolymer resin, and surface layer containing non-halogen flame retardant and PVC resin
KR2022002072	(KIMK-N) KIMKI TEC KOREA CO LTD	Foldable window insect screen, has upper window frame fixed at first horizontal protrusion, first corner connector connected with upper window frame and vertical frame, and second corner connector connected with vertical frame
ES1285565	(MANU-I) JOSE MANUEL G S	Electromechanical pivoting window for building, comprises irregular variable polygonal shape, with two of its vertical sides, one at each lateral end of window and mechanism is housed that makes glazed pane pivot
KR20220014987	(DAED-N) DAEDONG JUNGMILL CO LTD	Window and door bracket for synthetic resin, has fastening protrusion thermocompression-bonded by heat welding machine fixed to outer surface of fitting hole-side reinforcing element, and seating groove formed in an inner side of the wall
CA3116967	(VINY-N) VINYL WINDOW DESIGNS	Sash apparatus for securing in window or door, has multiple segments that are arranged and coupled together at nonstraight angles to form frame such that internal passages are provided within segments in fluid communication with one another
KR20220000081	(TOEN) TSM CO LTD (KIMY-I) KIM Y	High performance insulated window for use in building, has V-shaped elastic coupling unit elastically spaced apart by coupling protrusion, where inner end of heat insulating material is equipped with internal projections

Automoción

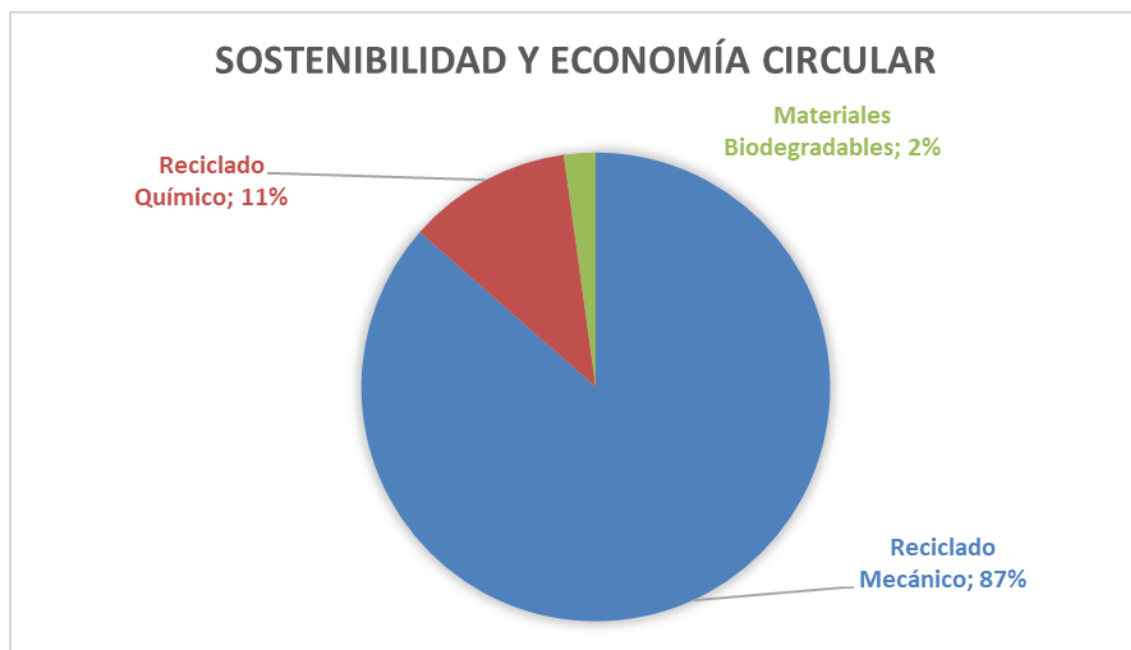
Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN215793439	(GUAN-N) GUANGZHOU JINSHANGJIYAN AUTO ACCESSORIES	Light weight automobile anti-turning frame, has fixing plate for connecting left side plate and right side plate on vehicle body, where main board and side guard board are hollow plastic pieces
GB2596504	(ADHI-I) ADHIKARI S (CHAN-I) CHANDRA Y	Automotive control arm in track motor vehicle, has polymeric material and a sheet of graphene that are provided based paper or carbon nanotube based paper, and polymeric material that is provided reinforced polymeric material
DE102020123312	(NSUM) AUDI AG	Fiber composite assembly for motor vehicle such as passenger car, has reinforcement element which is embedded in foam core and upper cover layer and lower cover layer which surround foam core in form-fitting manner and reinforcement element is positively and non-positively connected to foam core
DE102020120855	(BAYM) BAYERISCHE MOTOREN WERKE AG	Vehicle E.G. motor vehicle has intermediate element which is elastically compressed in z-direction, and that is arranged between spoiler and outer skin component, and which presses spoiler against end stop
DE102020120172	(BAYM) BAYERISCHE MOTOREN WERKE AG	Vehicle flap used as E.G. front flap for use in chassis construction, has fiber-reinforced plastic outer chassis which forms outer skin of vehicle door, and rib structure that is integrally formed on plastic outer chassis
DE102020119196A1	(BAYM) BAYERISCHE MOTOREN WERKE AG	Outer skin component for use as shell component for motor vehicle, comprises outer shell and inner shell, where fiber-reinforced plastic shell is provided with fiber reinforcement, which is embedded in duromer plastic matrix
US2022006209	(YAZA) YAZAKI CORP	Composite material structure for reinforced resins reinforced in vehicle body structure, has insulator formed of insulating material, where part of insulator is embedded in conductive resin portion to prevent connecting portion of conductor from contacting conductive reinforced resin
CN215322909	(QING-N) QINGDAO YAKAI AUTOMOBILE IND & TRADE CO	Injection foaming type refrigeration carriage bottom plate, has glass steel support whose side surface is fixedly provided with first steel plate embedded piece, and inner side surface of glass steel side seal is provided with second piece
WO2022005137	(KOLO) KOLON IND INC	Airbag cushion for use in vehicle, has fiber base, a reinforcing fabric is attached to a portion of the surface of the fiber base and comprises polyester yarn as warp or weft component, the polyester yarn has strength of at least 4.5 G

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR20210151299	(CHAN-N) CHANG JO MACHINERY CO LTD	Lightweight seat frame is useful for the driver's seat of a car comprises composite material made of polypropylene resin and glass fiber mat reinforcement, and bends suitable for the driving seat of car and ribs

VOLVER A
CONTENIDO

SOSTENIBILIDAD Y ECONOMÍA CIRCULAR

En el siguiente gráfico se muestra la distribución de las 1.420 familias de documentos de patente recuperadas en este trimestre en el apartado de Sostenibilidad y economía circular. En el presente trimestre, el volumen de documentos dedicado al reciclaje mecánico ocupa casi el 90% del total.



Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

Materiales Biodegradables

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR102320029	(KANG-I) KANG S	Biodegradable composite resin for forming molded article, comprises biodegradable resin-containing mixed resin containing polylactic acid, inorganic filler, crosslinking agent, and polycaprolactone, bast fiber, hemp, vegetable natural binder chosen from mulberry and starch grass, and compatibilizer
KR20220019617	(BGFE-N) BGF ECOBIO CO LTD (KBFK-N) KBF CO LTD	Biodegradable sheet with antiviral properties used as molded product, comprises polymer resin, polylactic acid-based polymer, composite particles, biodegradable resin, petrochemical resin, inorganic antiviral agent

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022026362	(DANI-N) DANIMER BIOPLASTICS INC	Biodegradable polymeric composition for product package, comprises poly(hydroxyalkanoates), biodegradable polymer chosen from E.G. poly(butylene succinate), poly(butylene succinate-co-adipate), poly(caprolactone), poly(lactic acid), cellulose esters and/or thermoplastic starch, and nucleating agent
WO2022014408	(KANF) KANEKA CORP	Aliphatic polyester-based composition for molded products, comprises poly (3-hydroxyalkanoate) having preset dispersed particle diameter, biodegradable resin containing reaction product of poly(3-hydroxyalkanoate) and peroxide
WO2022006387	(NOUN) UNIV NORTHWESTERN	New fully or partially degradable polymer comprising many first repeating units I.E. phenyl dipropylphosphinate repeating units, useful in liquid formulation for treating or managing condition
DE102020115765	(FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN EV	Expandable granules for production of biodegradable foam bodies as E.G. insulating filling material in construction sector, and as cushioning material, comprise renewable raw material and particulate physical blowing agent
KR20210156397	(RURA) RURAL DEV ADMINISTRATION	Freshness maintenance biodegradable resin composition useful in preparing freshness-maintaining biodegradable container comprises E.G. thermoplastic resin, additive, bioplastic granules, and oxidative biodegradable polymer material
JP6976540	(GREE-N) GREEN TECHNO PLUS KK	Marine biodegradation-promoting additive comprises nitrogen compound and phosphorus compound as active ingredients
WO2021241399	(TEIJ) TEIJIN LTD	Block copolymer used for composition, molded product, medical device, and agricultural and forestry materials, comprises biodegradable segment and another biodegradable segment, where in biodegradable segment, repeating unit comprises glycolic acid units
JP2021191845	(MITU) MITSUBISHI CHEM CORP	Biodegradable resin composition used for forming molded product, comprises biodegradable resin, and cellulose derivative having preset average number of hydroxyl groups and carbon atoms per glucose unit
KR20210148523	(DAEH-N) DAE HA MAN TECH CO LTD	Biodegradable capsule for chemical household products comprises biodegradable polymer selected from E.G., poly beta-hydroxybutyric acid which forms the capsule wall, and core material containing oil phase of perfume and/or oil

Reciclado Mecánico

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
ES1283285	(RECI-N) RECICLAJES BLIMEA SL	Receiving recycling machine used for taking containers from different users, comprises casing with multiple tanks and control unit manages entire system and communications equipment is provided to connect to remote server
ES1282806	(AUGU-I) CESAR AUGUSTO M C	Apparatus for the opening and compression of packages, containers and packaging, comprises two plates facing each other and hinged with a wide-range degree of opening, where upper plate executes folding movement on lower plate
WO2022044031	(CEAT-N) CEAT LTD	Method for thermomechanical devulcanization of rubber, involves processing rubber granules in co-rotating twin screw extruder is carried out at specific screw speed
KR102371533	(AMPE-N) AMPEL CO LTD	Recycled plastic sorting device has classification sensor that is moved through sensor driving unit to obtain reflected signal and identifies material of recycled plastic by comparing acquired signal with stored material reflected signal
KR102323164	(PARK-I) PARK S J	Recycling device for waste plastic sludge, comprises conveying pipe, in which molten material in which waste plastic is melted at high temperature is transferred, where filtration network is installed between transfer pipes to filter out sludge
KR102367721	(NAMM-N) NAM CO LTD MYEONG	Waste tire rubber recycling apparatus, has second rotating element arranged parallel to first rotating element and is provided with driven blade that is continuously impacted by driving blade
US2021370550	(ZEDS-N) ZED SERVICES LLC	Method for upcycling fiber reinforced polymer material, involves separating longitudinal pieces into core material portions to make waste, preparing composite strips, and remanufacturing prepared composite strips into resultant article
EP3957454	(CVST) COVESTRO DEUT AG (BTWO-N) BT-WOLFGANG BINDER GMBH	Separation of waste polymers, E.G. polyurethane foams, involves recording primary spectrum(s) for each polymer sample of supply stream comprising polymer samples from waste
KR20220018147	(RPER-N) RPE INC	Apparatus for recycling display panel, has separation unit inserted between display panel and adhesive layer, where solvent is added to reduce or eliminate adhesive force of adhesive layer into space formed by movement of separation unit
WO2022029647	(BAHI-I) BAHITI F	Plant for recycling plastic materials comprises infeed stage, processing stage for processing plastic material, and extraction stage for extracting plastic material

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP3943268	(UYHA) UNIV HANNOVER LEIBNIZ GOTTFRIED WILHELM	Separating different types of plastic from or in material mixture involves supplying material mixture, melting part of material mixture and separating types of plastics contained in melted part from material mixture based on melt viscosity
WO2022015529	(DOWC) DOW GLOBAL TECHNOLOGIES LLC	Reducing amount of contaminant in thermoplastic polymer, comprises shearing combination comprising contaminated thermoplastics in melt form, water, and dispersing agent, and separating thermoplastics from water and contaminants
US2021402650	(FIBR-N) FIBRECYCLE MATERIALS CORP	Method for manufacturing I.E. wind turbine rotor blade by recycling and reusing fiberglass, involves mixing recycled fibers with thermoplastic to obtain fiber-reinforced intermediate, and performing fiber-reinforced intermediate pelletizing process to obtain fiber-reinforced pellets as feedstock
KR102352367	(JUNG-I) JUNG Y	Label separation device for plastic waste, comprises a shredder for crushing the plastic waste to generate a shredded product, where vibrating separator removes the label pieces attached to the plastic pieces and conveying the shreds
KR20210155998	(ERCO-N) ERCOM CO LTD	Method for regenerating silicone contained in silicone coated nylon fabric, involves cutting silicone-coated nylon fabric into predetermined size, tearing off nylon fabrics, and primary separating silicone by opening nylon fabrics
EP3922665	(KLEI-N) KLEIDERLY UG	Recycling fabric into plastic granules used in manufacture of plastic E.G. goggles, involves collecting fabric containing fabric fibers, pulverizing fabric into powder of fabric particles, pelletizing with binder and extruding mixture of fabric pellets and plastic granules

Reciclado Químico

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102021129921	(LEBN) LEIBNIZ-INST POLYMERFORSCHUNG DRESDEN	Recycling composite material, comprises injecting composite material with adhesion promoter made of low-molecular and/or macromolecular substance with phenolic group into aqueous solution or suspension of laccase and/or peroxidase
WO2022050281	(TEIJ) TEIJIN LTD	Decomposing plastic-containing material used for E.G. recovering inorganic material, by placing plastic-containing material in atmosphere in heating furnace into which low oxygen concentration gas is introduced, and heating in presence of semiconductor material

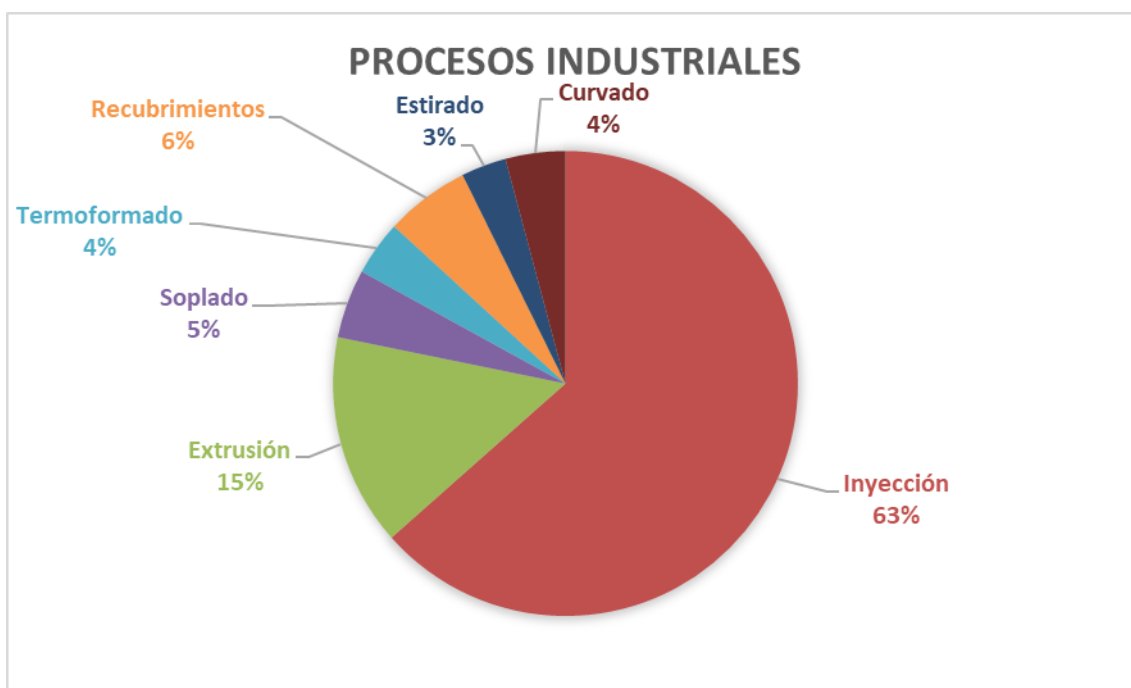
Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
TWI746359	(NYPC) NAN YA PLASTICS CORP	Method for manufacturing polyester film, involves implementing physical remanufacturing industry, which includes physically reproducing part of recycled polyester material and pelletizing it to obtain chemically recycling polyester pellets
WO2022042909	(EVON) EVONIK OPERATIONS GMBH	Hydrolyzing polyurethane produced by reacting active hydrogen containing polyether and organic polyisocyanate includes contacting polyurethane and water in presence of base (alkali metal cation) and catalyst having quaternary ammonium salts
US2022010217	(UNVO) UOP LLC	Converting or recycling waste plastics to monomers such as ethylene, propylene and light olefins, involves heating plastic feed stream to pyrolyze, heating high temperature pyrolysis feed stream to further pyrolyze and recovering monomers
GB2595795	(REVE-N) REVENTAS LTD	Dissolving at least one polymer in solvent to remove additives in plastics, comprises (a) introducing at least one polymer to the solvent in a reactor vessel to form mixture, and (b) operating a mixing device within the reactor vessel for a first time duration
KR20220021779	(KRIC) KOREA RES INST CHEM TECHNOLOGY	Depolymerizing polyethylene terephthalate, comprises hydrolyzing polyethylene terephthalate to depolymerize to terephthalic acid using zeolite-based catalyst
WO2022033962	(IONI-N) IONIQ TECHNOLOGIES BV	Depolymerizing waste polymer material, by releasing at least part of dye in alcoholic solvent without depolymerizing condensation polymer, separating partially decolorized waste polymer and dye and depolymerizing the polymer using catalyst
KR20220017144	(KRIC) KOREA RES INST CHEM TECHNOLOGY	Recycling waste polystyrene to form expanded polystyrene, involves adding methyl tetrahydrofuran to waste polystyrene, adding water to mixture in which polystyrene is dissolved, and filtering polystyrene precipitate to separate polystyrene
KR20220015199	(KSCT) KOREA INST SCI & TECHNOLOGY	Depolymerizing fiber-reinforced composite material useful in textile material for field of automobiles comprise introducing composite material and heterogeneous element precursor into water containing non-condensable solvent
KR102358506	(SDGT-N) SD G & T CO LTD (UYYE-N) UNIV YEUNGNAM RES COOP FOUND	Nylon upcycle processing, involves selecting specific nylon from stocked nylon waste material bulk, melting sample of sorted nylon waste material bulk to test viscosity, and classifying bulk nylon waste material according to viscosity
EP3950252	(RUBB-N) RUBBERSUBSTITUTE4.0 SA	Devulcanizing rubber particles of treated old rubber products E.G. old tires of truck, involves cultivating bacteria of Sporoanaerobacter, Desulfovibrio, Desulfurella and/or Desulfomicrobium with rubber particles

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2021371575	(HONE) NAT TECHNOLOGY & ENG SOLUTIONS SANDIA	Depolymerizable polymer used for producing recyclable plastics, comprises at least one monomeric unit that is cleavable by catalytic olefin metathesis
WO2022026139	(KIMB) KIMBERLY-CLARK WORLDWIDE INC	Decreasing polymer waste material by adding encapsulated microorganism product or genetically modified microorganism to waste material depository, and contacting encapsulated microorganism product with moisture
TWI742994	(NYPC) NAN YA PLASTICS CORP	Manufacture of polyester mist mask involves regenerating part of recycled polyester material, mixing matte regenerated polyester pellet, physical regenerated and chemically regenerated pellet to form polyester masterbatch material, and melting
WO2021261939	(KRIC) KOREA RES INST CHEM TECHNOLOGY	Depolymerization of polymer containing ester functional group used for forming glycol addition monomer, involves contacting mixture containing polymer containing ester functional group, at least one polyhydric alcohol, exchange esterification reaction catalyst and benzene compound and depolymerizing
KR20210154432	(TRIN-N) TRINITY CHEM CO LTD	Recycling of waste airbag fabric involves preparing aqueous solution using nonionic surfactant, anionic surfactant and alkali, immersing waste airbag fabric in aqueous solution, swelling silicone rubber, peeling rubber from nylon fabric, drying nylon fabric, and preparing pelletized nylon material
US2021347960	(UYWV-N) UNIV WEST VIRGINIA	Converting waste plastic to value-added product, comprises contacting waste plastic with catalyst having zeolite, solid acid catalyst and/or rare-earth metal oxide catalyst and applying microwave radiation to reaction mixture
AR119312	(DESA-N) DESARROLLO EQUIPOS IND SA (BERT-I) BERTERO J A (BERT-I) BERTERO J I (BERT-I) BERTERO J J (BERT-I) BERTERO L E	Recycling process for multilayer packaging waste, from clean industrial waste, as well as waste from post-consumer packaging, involves taking both waste streams as raw material to generate good quality molded products
WO2021251962	(HEWP) HEWLETT-PACKARD DEV CO LP	Recovering polymer from a three-dimensional printed object by dissolving polyamide polymer of a three-dimensional printed object in a polyamide-dissolving solvent, separating particulate fusing compound, and evaporating solvent

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CONTENIDO

NUEVOS PROCESOS INDUSTRIALES

En el siguiente gráfico se muestra la distribución de las 12.664 familias de documentos de patente recuperadas en este trimestre en el apartado de Nuevos procesos industriales. Los procesos que mayor actividad innovadora son el de inyección y extrusión.



Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

Inyección

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022054704	(FUFA) FANUC CORP	Injection molding system has control device that is arranged for transmitting inoperable signal to injection molding machine when contact of cooperative robot or hand mounted on tip of cooperative robot with object is detected

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP3970943	(GERR) GERRESHEIMER REGENSBURG GMBH	Injection mold for manufacturing parts for variety of applications, has mold body comprising outer shaping surface, and moveable core comprising inner shaping surface and grasped by automated core changing tool
EP3967472	(GRIT-N) GRITEC AG	Method for converting pipette tips from injection molding machine into packaging containers, involves simultaneously picking up injection molded parts from workpiece carrier by combination gripper
WO2022045005	(FUFA) FANUC CORP	Injection molding machine for producing molded product, has display control unit that causes interrelationships between respective operation initiation conditions pertaining to operation mode to be displayed in prescribed display mode on display unit
EP3964248	(INTE-N) INTEGRA BIOSCIENCES AG	Tubing for attachment to dispensing cassette for accommodation in peristaltic pump, has a hose that is manufactured in the injection molding process and is suitable for completely closing when being clamped over rotor with clamping force
WO2022042933	(BOSC) BOSCH GMBH ROBERT	Method for producing material connection between heating element and housing, involves melting fused structure when carrying out and materially bonded connection is formed
DE102020209584	(CONW) VITESCO TECHNOLOGIES GERMANY GMBH	Injection molding device for encapsulating semiconductor components used in transmission control unit of motor vehicle, has second hollow shaft that is moved into shaft cavity of first hollow shaft and into injection molding channel through hollow shaft opening
US2021358709	(LITF) LITTELFUSE INC	Injection molded base for producing a fuse assembly, prepared by a process comprising covering portion of busbar with sealant, inserting busbar into cavity image of injection molding apparatus, injecting melted plastic into the cavity image and removing the base from the cavity image
WO2022009369	(LIXI) LIXIL CORP	Injection molding tool for cooling and partial solidification of a casting during production, has heat sink provided with cooling channel, where heat sink is manufactured with material including copper by three-dimensional printing process
EP3950253	(TETR) TETRA LAVAL HOLDINGS & FINANCE SA	Molding apparatus for molding opening device onto web of packaging material, comprises mold unit(s), and injection device(s) configured to inject molten polymer into mold unit
WO2022022955	(WALD-N) WALDORF TECH GMBH	Plastic injection molded part packaging method for E.G. medical reaction vessel, involves distributing plastic injection-molded parts of respective shot in arrangement level cavity-clean and evenly distributed to sub-subgroups

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022022389	(ATLV) AUTOLIV DEV AB	Processing device used for injection molding, has a sliding block that is driven by driver to shift relative to mold core in chamber and enter into cavity for predetermined distance at a predetermined time during injection molding
EP3944945	(ZIZA) ZKW GROUP GMBH	Injection molding device for producing component, has contact element that moves outside of cavity is located in third state in which entire cavity is filled with injection molding material
DE102021119232	(ZZZZ-N) Z-WERKZEUGBAU-GMBH	Plastic injection molding tool for producing closure cap, has ejector that is provided for ejecting closure cap, and sliding jaw tool portion that is provided in contact with core in ejection direction before cap is ejected in two regions lying one behind other in ejection direction
EP3940263	(WITT-N) WITTMANN BATTENFELD GMBH	Plastics processing machine I.E. injection molding machine, has feed element for adding lubricant arranged adjacent to axial end region of threaded nut with which lubricant is fed into interior of nut
DE102020117168	(ARBH) ARBURG GMBH & CO KG	Mold closing unit for injection molding machine for processing plastics and other plasticizable materials, has machine base for stable positioning of mold clamping unit in which mold carrier is moved in longitudinal direction
WO2022004736	(SHBU) SHIBAURA MACHINE CO LTD (TOSI) TOSHIBA MACHINE CO LTD	Injection device for injecting material into molded mold, has control unit that controls injection speed in injection process in which injection device injects material into mold based on past speed detection result detected in past
EP3932647	(ACTE-N) ACTEGA ARTISTICA SAU	Control method for high-speed fluid injection system, involves modifying second open position of valve element of fluid injector if value of flow rate is outside range of reference values of flow rate
EP3928947	(TYEL) TE CONNECTIVITY GERMANY GMBH	Housing portion injection-molded from plastic material reinforced with fibers for electrical connector, has main fiber orientation in housing sections, which corresponds to mean value of orientation of fibers in respective housing section
WO2021251040	(NSSK) NISSEI PLASTICS IND CO LTD	Injection device for temperature change of resin material, has preheating unit that is configured to have higher heating performance to heating cylinder than heating unit, and heat insulating unit that is configured to have lower heating performance to heating cylinder than heating unit
WO2021255650	(FLEX-N) FLEX LTD	Method for correcting injection mold alignment for straightness and concentricity, involves measuring plastic portions produced by test production run, and determining whether plastic portions are within tolerance

Extrusión

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022050375	(KANF) KANEKA CORP	Producing polypropylene resin extruded foam particles by melt-kneading composition containing resin mixture containing polypropylene-based resin having branched structure and foaming agent, extruding by die through region having lower pressure and liquid phase, and shredding composition in region
WO2022047133	(ESSE-N) ESSENTIUM INC	Nozzle for producing material extrusion in three-dimensional printer, has shank that is mechanically connected to shank barrel, such that different thermal conductivities of both create heat break in-between
WO2022044884	(SHBU) SHIBAURA MACHINE CO LTD	Screw machine E.G. twin-screw kneading extruder has filter housing that includes space for storing filter store mounted on barrel, vacuum pump that sucks air in screw hole through suction port formed in filter housing so as to be opened in storage space, and filter drive unit which rotates filter
EP3960422	(FIMI-N) FIMIC SRL (TTSC-N) TTS CLEANING SRL	Device for continuous filtration of molten plastic material, has mobile cone that moves between first closing position and second opening position on connection opening that connects outside of main portion with chamber
WO2022036373	(SUPE-N) SUPERIOR PLASTICS EXTRUSION CO INC DBA (PARV-I) PARVATAREDDY H	Coextruded multi-layer polymeric film used in shaped polymeric article E.G. container comprises first layer of two-layer stack comprising polypropylene, and second layer of two-layer stack comprising polypropylene and hydrocarbon resin
US2021403687	(SUMO) SUMITOMO CHEM CO LTD	New ethylene-based polymer useful in a film
EP3943273	(CONW) CONTINENTAL REIFEN DEUT GMBH	Making extrudate for production of body tire component such as pneumatic vehicle tire with apex portion, involves producing or providing sulfur-cross-linkable rubber mixture, where sulfur-cross-linkable rubber mixture comprises one resin
WO2022016206	(POLY-N) POLYLINE PIPE SYSTEMS LTD	Locomotion system for mobile plastics extrusion plant operatively producing monolithic pipe, has controller for controlling track assembly such that plant is displaced commensurate with sensed extrusion rate such that pipe is laid in situ
WO2022018084	(CLEX-N) CLEXTRAL	Die for extruding material rich in protein and water, comprises outer casing centered on axis, and internal member arranged coaxially inside casing external and rotatably mounted around axis with respect to external casing
DE102020118979	(WEBE-N) WEBER MASCHFAB GMBH HANS	Device for the extrusion-based production of three-dimensional object, comprises extrusion unit which is set up for melting an extrusion material and applies a melted extrusion material to a substrate and a detection device

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2021255010	(BUHL) BUEHLER AG	Extruder for production of food and feed for animals, has screw elements and support shaft that are equipped with component for identification selected from group consisting of radio frequency identification label and machine-readable code
EP3915760	(TIRE-N) TIREE OUE	Calibration matrices system for extruding plastic profile, has inner chamber running in longitudinal direction of calibration matrix that is formed between upper half and bottom half in assembled position of upper and bottom halves

Soplado

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2022024077	(PROC) PROCTER & GAMBLE CO	Preform for producing blow molded article, comprises open-ended neck comprising exterior neck polymer road forming exterior surface of neck of preform and interior neck polymer road forming interior surface of neck of preform
EP3960424	(KROE) KRONES AG	Plastic preform E.G. bottle, treating method, involves transporting plastic preforms in row by feed transport device, and increasing transport speed by separating device from receiving area to transfer area during start-up process
WO2022039218	(NASB) NISSEI ASB MACHINE CO LTD	Blow molding device for manufacture of resin-made decorative container, has locking unit which regulates movement of mold clamping plate in mold opening direction by interfering with lower end side of mold clamping plate at mold closing position of blow split mold
EP3939772	(KROE) KRONES AG	Plastic preform forming device E.G. stretch blow molding machine, has medium supply device with pressure inlet to supply flowable medium to control device and two outlets for secondary pressure
DE102020118469	(KROE) KRONES AG	Device for forming plastic preforms into plastic containers, comprises blow mold that forms cavity in which preforms are expanded to form plastic containers, and flow channel conducts flowable medium to inner wall of mouth area to cool it
WO2022004811	(KIRI) KIRIN HOLDINGS KK (MITU) MITSUBISHI CHEM CORP	Polyethylene furanoate used in polyester composition for polyester bottle such as blow-molded bottle for beverage product, has preset intrinsic viscosity measured by dissolving polyethylene furanoate in mixed solvent of phenol/1,1,2,2-tetrachloroethane and measuring

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2021253032	(CPCH) CHEVRON PHILLIPS CHEM CO LP	Ethylene polymer having specified melt index, density, molecular weight, relaxation time and average number of long chain branches useful in article of manufacture, blow molded product and in olefin polymerization process

Transformado

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2022080649	(BOEI) BOEING CO	Apparatus for making contoured composite hat stringer, has punch designed to form composite charge into die cavity, and bladder located within die cavity and configured to constrain cap as contoured hat section is being formed
WO2022046002	(TUSA-N) TUSAS TURK HAVACILIK VE UZAY SANAYII AS	Thermoforming system used in forming process of thermoplastic materials, has control unit that allows frame to be detached from holding apparatus and/or to be attached to holding apparatus
WO2022049330	(EXEL-N) EXEL COMPOSITES OYJ	Pultruded panel profile manufacturing method, involves producing panel profile with sandwich structure that includes core layer in middle, where core layer is made of discrete core elements of different types
WO2022031449	(DUPO-N) DUPONT SAFETY & CONSTR INC	Method for trimming contoured polymeric panel E.G. double curvature panel, involves controlling directional movement of robotic arm by input from three-dimensional drawing software of final shape of panel
EP3933019	(PROC) PROCTER & GAMBLE CO	Manufacture of water-soluble unit dose article used for dosing detergent during wash process, involves thermoforming water-soluble film having preset water capacity, into mold to create open cavity, filling open cavity with detergent composition, closing open cavity, and sealing
ES2890473	(UYCL) UNIV CATALUNYA POLITECNICA (UYCA-N) UNIV CATALUNYA INT FUNDACIO PRIVADA	Continuous forming device for variable geometry rigid composite tubes, has tractor unit that generates rigid composite tube with variable cross section in direction transverse to direction of production to modify cross section of annular consolidator section in controlled manner

Recubrimientos

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP3965125	(KMKM-N) KM CORP SRL	Device for automation of labeling of electrical cable terminals, has laser printer that writes on outer upper flat wall exposed to printing device of printer, and preferably to laser beam of laser printer
ES1285399	(PADI-I) VOLANTE PADILLA J	Machine for implantation of plastic sheets or other materials in ridges of agricultural exploitations, comprises folding arm on which axis is mounted on which plastic coil is installed to be applied on corresponding ridges
WO2021252969	(SOLA-N) SOLARWINDOW TECHNOLOGIES INC	Electricity-generating coating for surface of cargo carrying vehicle E.G. semi-tractor-trailer truck, has conformal organic photovoltaic device that supplies power for on-board and off-board electronic or electrical components or systems
EP3932651	(CARB-N) CARBOLINE INT CORP	Epoxy composition used for preparing coated product, such as slug catchers, knock out drums, reflex drums, amine absorbers and amine regenerators, comprises polyepoxy aniline, rheology modifier, filler and polyamine hardener comprising cyclic hydrocarbon-containing polyamine
WO2021257785	(SAOI) ARAMCO SERVICES CO (SAOI) SAUDI ARABIAN OIL CO (OVER-N) OVERPIPE SAS	Polymer geo-injection apparatus for protecting underground structure, has subsurface ripper that moves through ground in response to movement of mechanized vehicle while receiving and injecting supplied molten polymer into ground

Estirado

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2022063254	(PROC) PROCTER & GAMBLE CO (CHEN-I) CHENG Z (RONG-I) RONG J (YAND-I) YAN D (ZHOU-I) ZHOU L	Container includes laminate, where the laminate includes first layer of machine direction oriented polyethylene, second layer of biaxial oriented polyethylene, and third layer of polyethylene
WO2021256349	(TOYM) TOYOBO KK	Biaxially oriented polypropylene film used for packaging bag has stress in longitudinal direction and width direction, and heat shrinkage in longitudinal direction and width direction, and surface intrinsic resistance of film surface on at least one side
WO2021256348	(TOYM) TOYOBO KK	Biaxially oriented polypropylene film used as E.G. back sheet of solar cell, has preset stress at predetermined elongation in longitudinal direction and width direction, heat shrinkage rate in longitudinal direction and width direction, and laminating strength

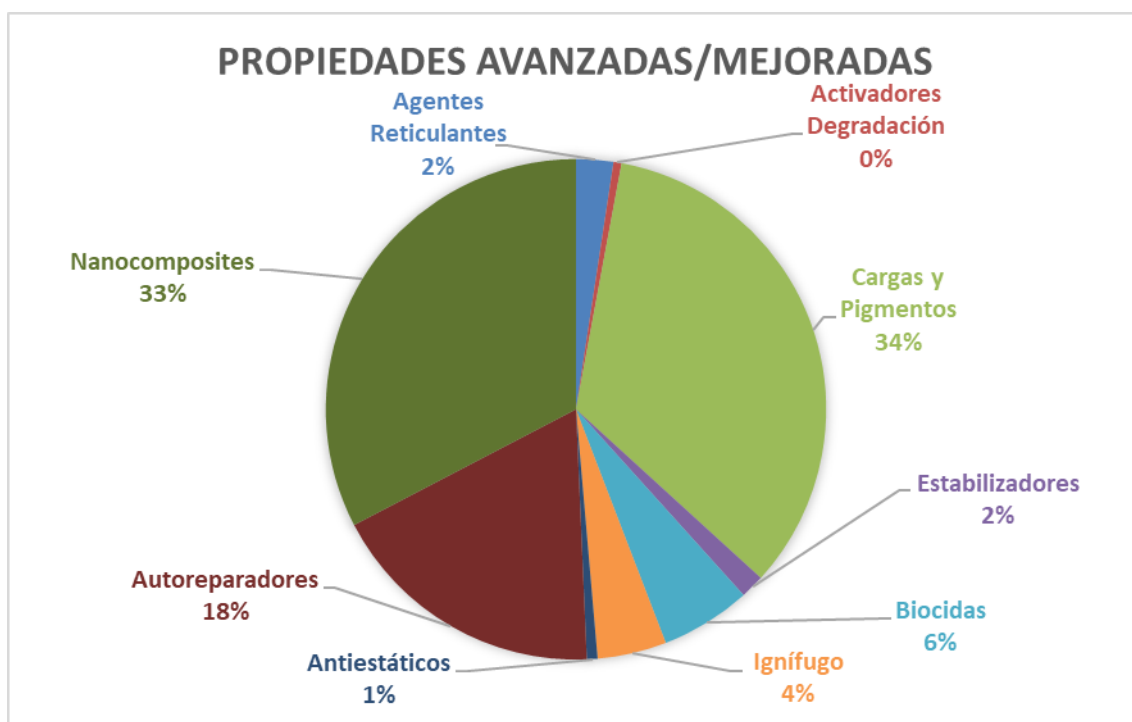
Curvado

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2022018520	(ACER-N) ACERGY FRANCE SAS	Pipeline manufacturing method, involves performing insulation resistance monitoring on cable during application of cable to pipeline, and raising alert if monitoring detects fault in cable applied to pipeline
WO2022014743	(GLDS) LG ELECTRONICS INC	Secondary battery pouch press mold for use in secondary battery industry, has over-forming punches, which are arranged so as to be liftable in press upper dye, shaping punches are arranged in press upper dye so as to be liftable
WO2021255380	(SFRA) SAFRAN AIRCRAFT ENGINES	Method of manufacturing casing made of composite material for aircraft turbomachine, involves mounting removable stopper on drum and abutment of edge against stop

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MATERIALES CON PROPIEDADES AVANZADAS O MEJORADAS

En el siguiente gráfico se muestra la distribución de las 392 familias de documentos de patente recuperadas en este trimestre en el apartado de Materiales con propiedades avanzadas o mejoradas. En este trimestre, el volumen de documentos de patente dedicados a nanocomposites se han igualado a los dedicados a cargas y pigmentos.



Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

Cargas y Pigmentos

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP3954470	(VECO-N) VECOR CERAMIC TILES ITAL SRL (VECO-N) VECOR IP HOLDINGS LTD	Preparing whitened fly ash used as filler in ceramics, paint, rubber and/or plastics by classifying size of fly ash, optionally, contacting size classified fly ash with water, subjecting to exhaustive magnetic separation step, and milling
KR20220008063	(CLSK-N) CLSKOREA CO LTD	Color conversion film use for converting light-emitting diode blue light into white light, involves forming color conversion material by mixing fluorescent material and binder and applying color conversion material blended in mixing surface

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR20220011925	(DAEY-N) DAE YANG MATERIAL CO LTD	Semiconducting resin composition useful in high-voltage and ultra-high voltage power cables comprise base resin I.E. thermoplastic elastomer resin, carbon black and additives I.E. antioxidants, stabilizers, and/or processing aids
KR20220013848	(CATC-N) CAT CO LTD (PARK-I) PARK J H	Natural functional jade paint composition E.G. as indoor paint, comprises acrylic resin, propylene glycol, titanium dioxide, coloring pigment, jade powder, kaolin, diatomite, preservative, thickener, dispersant, antifoaming agent and water
US2021317326	(GENE) GENERAL ELECTRIC CO	Ink composition used for device for backlight apparatus and lighting apparatus, comprises binder material and narrow band emission phosphor(s) having preset particle size, and including green-emitting uranium cation-containing phosphor, and green-emitting manganese cation-containing phosphor
KR20220012568	(EZEK-N) EZEKIEL COSMETIC CO LTD	Composition for discolored cosmetic container dropper, comprises glass or transparent synthetic resin, reversible photochromic pigment, thermochromic pigment, lubricant and binder
WO2022010253	(KOLO) KOLON IND INC	Manufacture of light-transmissive film used for E.G. display device, involves mixing filler dispersion solution prepared by dispersing filler in solvent and light-transmissive resin solution prepared by dissolving light-transmissive resin powder in solvent
KR102349094	(EABI-N) EA BIOS CO LTD	Paint composition for exterior of buildings comprises water, acrylic resin, and nano silica, titanium oxide as pigment, calcium carbonate and silica as filler, organo-modified siloxane as antifoaming agent
JP2021183674	(UENO-N) UENO FINE CHEM IND LTD	New liquid crystal polymer used in composition for producing article I.E. fibers, comprises structural unit derived from polymerizable compound(s) chosen from carboxylic compound, structural unit derived from 4-hydroxybenzoic acid, and structural unit derived from 6-hydroxy-2-naphthoic acid
JP2021187969	(SUMB) SUMITOMO BAKELITE CO LTD	High dielectric resin composition useful for forming cured product for printed wiring board for semiconductor device, comprises epoxy resin and inorganic filler
JP2021183690	(NIRA) UNITIKA LTD	Thermally conductive resin composition used in molded product, E.G. electrical parts and automobile parts, comprises polyamide resin comprising crystalline polyamide resin and amorphous polyamide resin, and thermally conductive filler
KR102340400	(UYKR) UNIV KOREA RES & BUSINESS FOUND	Colored radiant cooling element comprises color-realization layer which reflects near-infrared rays of incident sunlight and absorbs specific visible rays of incident sunlight to implement at least one color, wavelength-conversion absorption light-emitting layer, and radiation cooling layer

Agentes Reticulantes

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2021262776	(DOWC) DOW GLOBAL TECHNOLOGIES LLC (DOWO) DOW SILICONES CORP	Forming crosslinked composition used for article by thermally treating a composition comprising olefin/silane interpolymers, and cure catalyst selected from E.G., metal alkoxide and metal carboxylate in the presence of moisture
JP2021195495	(BRID) BRIDGESTONE CORP (KAOS) KAO CORP	Rubber composition used for tire, comprises rubber component containing diene-based rubber, crosslinking agent, and benzoic acid derivative having methoxy groups and having at least methoxy group at para position with respect to carboxyl group, filler, thermosetting resin, and methylene acceptor
DE102020209894	(CONW) CONTINENTAL REIFEN DEUT GMBH	Sulfur-crosslinkable rubber mixture useful for treads of pneumatic vehicle tires, comprises diene elastomer, anti-aging agent including benzimidazole derivatives, and anti-aging agent including mono- and bisphenol derivatives
WO2021261008	(FUJF) FUJI FILM CORP	Modified gelatin for manufacturing hydrogel comprises lysine residues and lysine residues comprising a pendent side chain carrying a thiol group

Estabilizadores

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2021366629	(TESL-N) TESLA NANOCOATINGS INC	Corrosion prevention composition for metal substrate, comprises sacrificial metal particles, where sacrificial metal particles comprise metal selected from nickel, molybdenum, or cobalt, and sacrificial metal particles are not passivated
US2021363360	(BEAE) BE AEROSPACE INC (GOOR) GOODRICH CORP	Component used in cabin of aircraft and ground transportation vehicle comprises component body defining touch point, and including antimicrobial material operable to deactivate microbe arranged in contact with surface of touch point

Biocidas

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR20220019617	(BGFE-N) BGF ECOBIO CO LTD (KBFK-N) KBF CO LTD	Biodegradable sheet with antiviral properties used as molded product, comprises polymer resin, polylactic acid-based polymer, composite particles, biodegradable resin, petrochemical resin, inorganic antiviral agent
KR20220010467	(NTRI-N) NTRIUM INC	Antibacterial film for attaching on lift buttons, comprises antibacterial polyethylene terephthalate layer containing multiple antibacterial substances formed on inner surface of polyethylene terephthalate copolymer
WO2021261638	(CARD-N) CARDNATION CO LTD	Antibacterial overlay film used for manufacturing plastic cards for preventing spread of virus and bacteria due to card use, comprises antibacterial metal ion, chitosan, hyaluronic acid, and plastic resin
US2021363359	(PEGA-N) PEGASUS ENVIRONMENTAL RES & INVESTMENT	Antimicrobial formulation as direct additive into coating composition or as surface coating used in E.G. bandage, plaster and paint, has sodium pentaborate, di-sodium tetraborate decahydrate, titanium diborite, titanium borate, sodium pyrithione, zinc pyrithione and/or benzethonium chloride
WO2021260701	(SAVE-N) SAVE FOODS LTD	Antimicrobial composition used to prolong activity of fungicide, control pathogen related decay of edible matter and reduce dose of fungicide applied to substrate comprises acid component of inorganic acid and carboxylic acid and fungicide
WO2021250092	(DANT-I) DANTZIGUIAN K A (KASP-I) KASPARIAN A H	Antibacterial or antiviral multilayers material used to cover trolley handle, and door handle, comprises tie binding layer with adhesive face, and active treatment layer comprising anti-bacterial and/or anti-viral agents

Ignífugos

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102022100398	(GMTG-N) GMT GUMMI-METALL-TECH GMBH	Material mixture used for fire-retardant cover layer for spring element, comprises rubber, and flame retardant comprising polyol compound, preferably pentaerythritol, phosphorus-containing compound, preferably ammonium polyphosphate, and nitrogen-containing compound, preferably melamine
DE102020209713	(SIGE) SGL CARBON SE	Semi-finished product for scrim used in component for production of fire protection panel, comprises fibers, matrix and graphite salt

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR102342633	(BOSU-N) BOSUNG IND CO LTD	Coating composition for coating heating device, comprises water-soluble acrylic resin, water-soluble silicone resin, primer, flame retardant, silver powder, rosin resin, fragrance, pigment, and fluidizing agent

Autorreparadores

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
KR102367474	(ZING-N) ZINGA KOREA CO LTD	Self-healing underwater curing solvent-free coating agent used in underwater structure, comprises self-healing agent, polysiloxane-based precursor, graphene, bisphenol-based epoxy polymer, and hydrophobic aromatic amine curing agent
JP6985548	(ELED) DENKA CO LTD	Repair mortar material for use in repair and reinforcement work of concrete structure in civil engineering and architectural fields, comprises cement, expansive material, polymer emulsion, fiber, fine aggregate, and expansion material
WO2022005223	(KRIC) KOREA RES INST CHEM TECHNOLOGY	New self-healing polyurethane polymer used for forming porous article E.G. web-film used as functional display film, comprises structural unit derived from polycarbonate-based polyol, structural unit derived from cycloaliphatic polyisocyanate, and structural unit derived from aliphatic polyol
DE102020207981	(VEGA) VEGA GRIESHABER KG	Sensor device for detecting fill level and density or pressure of medium in process container of self-healing protective device, comprises sensor having measuring probe that has self-healing protective device is set up to close abrasion
KR20210153875	(KRIC) KOREA RES INST CHEM TECHNOLOGY	Self-healing artificial skin is formed by chemically bonding self healing hydrogel and self healing elastomer with heterogeneous self healing
US2020203035	(UABR) UNIV ALABAMA	Flexible, self-healing, conductive composition comprises conductive polymer which is entangled with acidic polyacrylamide, conductive polymer comprises polyaniline, polypyrrole, polythiophene, polyselenophene

Nanocomposites

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2013216779	(TENE) UNIV TENNESSEE RES FOUND	Method for casting nanostructure using E.G. cellulose acetate in acetone for replication, involves replicating nanoholes by applying solution of polymer into template, and removing replica from substrate after solvent is dissipated
KR20220014944	(JCCO-N) JCCOM CO LTD	Manufacture of polymer nanocomposite heat-dissipation sheet used for E.G. semiconductor, involves applying crosslinked polymer nanocomposite heat-dissipation composition to upper surface of base film, drying, laminating and curing into polymer nanocomposite layer, and separating nanocomposite layer
US10857724	(FABK) FACEBOOK TECHNOLOGIES LLC	Method for fabricating nano-sized structure during nanoimprint lithography demolding, involves curing resin element, and removing template from resin element after curing resin element
US11220574	(NIAG-N) NIAGARA BOTTLING LLC	Fabricating many polyethylene terephthalate nanofibers for textiles, by utilizing precursor material to fabricate nanofiber mat, supplying counter-current air flow to cool the nanofibers and extruding and spinning polymeric resin material
WO2022013511	(COMS) COMMISSARIAT ENERGIE ATOMIQUE	Polymer-matrix nanocomposite for hot extrusion of filaments, comprises polymer matrix, boron nitride nanotubes and dispersing agent comprising at least one Lewis base function, such as amine, phosphine, alkoxyalkane, ketone, thioether and/or sulfoxide
US11207795	(APPY) APPLE INC	Mold apparatus for forming ceramic, comprises first mold portion and second mold portion, surface coating, and passivation layer of material selected from group consisting of graphite, tool steel, and stainless steel
TW202136386	(AMAZ-N) AMAZING COOL TECHNOLOGY CORP (TSEN-I) TSENG W L	Manufacture of graphene ester particles for diaphragm, involves melt-mixing polymer material and graphene powder, sequentially mixing tackifier, toughener and dispersant, and making molten material into polyester chips of graphene
US10766167	(UYPR-N) UNIV PRINCE MOHAMMAD BIN FAHD	Making polyolefin-carbon nanomaterial composite involves E.G. mixing graphene nanoplatelets with low density polyethylene powder to form mixture, ball milling the mixture in high-energy shaker and molding the formed composite powder
US10709937	(CALW) CALLAWAY GOLF CO	Formation of core used for golf ball, involves mixing core material comprising 1,4-polybutadiene, and compression molding core containing core material, graphene material, polyisoprene, zinc diacrylate, zinc oxide, and peroxide initiator

VOLVER A
CONTENIDO

NOTICIAS

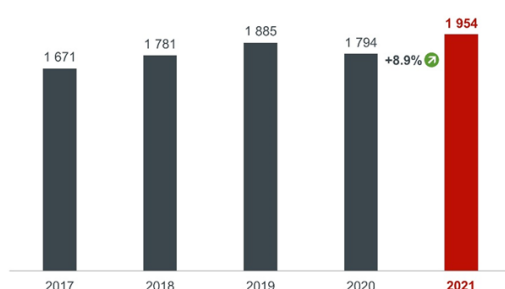
NUEVO RÉCORD DE SOLICITUDES DE PATENTE EUROPEA DE ORIGEN ESPAÑOL SEGÚN EL ÍNDICE DE PATENTES 2021 DE LA OFICINA EUROPEA DE PATENTES

El 5 de abril de 2021, la Oficina Europea de Patentes (OEP) publicó los datos estadísticos correspondientes al Índice de Patentes 2021 que recoge el número de solicitudes de patente europea presentadas en dicha oficina durante el pasado año.

Número de solicitudes

En el año 2021 se presentaron un total de 188.600 solicitudes, lo que supone un crecimiento del 4,5% respecto al año anterior y el dato más alto hasta la fecha. Este crecimiento fue impulsado preferentemente por China y Estados Unidos. España, Italia y los países nórdicos también mostraron sólidos crecimientos.

Crecimiento de las solicitudes de patentes desde España en la OEP



European Patent Office 2022

España ocupa el puesto número 17 del ranking con 1.954 solicitudes de patente europea de empresas e inventores de origen español presentadas en 2021. Este dato es un 8,9% superior al del año 2020 y, además, representa la tasa de crecimiento más alta de los últimos diez años para nuestro país. Las solicitudes de patentes españolas crecieron muy por encima de la media de la Unión Europea, del 2,7%, y alcanzaron su mayor número de la historia.

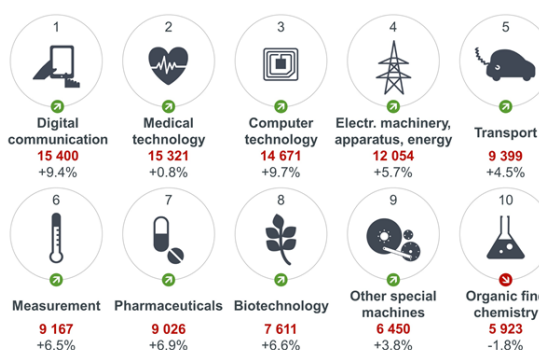
Tecnologías

En el ámbito europeo, la comunicación digital y la tecnología informática registraron el mayor crecimiento, demostrando la transformación digital, seguidas de fuertes aumentos en los productos farmacéuticos y la biotecnología, lo que subraya los altos niveles de innovación en vacunas y otras áreas médicas.

En el caso de España, las tecnologías sanitarias y de energía limpia son los principales impulsores de las innovaciones españolas. Las tecnologías sanitarias, agrupadas en productos farmacéuticos, tecnología médica y biotecnología, representan aproximadamente una cuarta parte de todas las solicitudes de patentes en la OEP de España. Las tecnologías de energía limpia se incluyen dentro del sector 'maquinaria eléctrica, aparatos, energía' que ha experimentado un incremento del 22,2%.

También es de destacar que el sector 'motores, bombas, turbinas', tuvo el mayor incremento de todos los campos tecnológicos, siendo este del +77,4%, respecto del año anterior.

TOP 10 Technical fields with most patent applications 2021



European Patent Office 2022

Solicitantes

Principales solicitantes de patentes en la OEP desde España en 2021

(por número de registro de patentes)

TOP 10

1	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC)	85
2	AMADEUS	33
3	AUTOTECH ENGINEERING	22
4	FUNDACION TECNALIA RESEARCH & INNOVATION	20
5	UNIVERSIDAD AUTÓNOMA DE BARCELONA	14
5	UNIVERSITAT POLITÈCNICA DE CATALUNYA	14
7	DALPHI METAL ESPAÑA	13
7	CENTRO NACIONAL DE INVESTIGACIONES ONCOLÓGICAS CARLOS III	13
7	SOLTEC INNOVATIONS	13
10	UNIVERSITAT POLITÈCNICA DE VALÈNCIA	12

European Patent Office 2022

Las empresas asiáticas lideran el ranking de solicitantes europeos, siendo la empresa china de telecomunicaciones, Huawei, el principal solicitante de patentes en la OEP con 3. 544 solicitudes, seguido por el líder del año pasado, Samsung, y LG, ambos de Corea del Sur.

En el caso de España, son los institutos de investigación y las universidades los que desempeñan un papel fundamental en la innovación: seis de los diez principales solicitantes son organizaciones científicas y aportaron el 64% de solicitudes del total.

Regiones españolas con mayor número de solicitudes

Cataluña, la Comunidad de Madrid y el País Vasco representan el 64% de las solicitudes de patentes presentadas ante la OEP desde España, con 653, 381 y 223 solicitudes, respectivamente. En el ranking de ciudades (área metropolitana), Barcelona lidera con 385 solicitudes de patentes seguida de Madrid (371 solicitudes).

Fuente: Oficina Europea de Patentes

Más información:

[Índice de Patentes de la Oficina Europea de Patentes 2021](#)

[Infografía](#)

ENTREGA DE LOS PREMIOS NACIONALES DE INNOVACIÓN Y DISEÑO 2021

El pasado 21 de marzo, en un acto presidido por Sus Majestades los Reyes, y acompañados por la ministra de Ciencia e Innovación, Diana Morant, se entregaron los Premios Nacionales de Innovación y Diseño 2021, que concede cada año el Ministerio de Ciencia e Innovación.

Estos premios reconocen la innovación y el diseño como factores esenciales para aumentar la competitividad, el rendimiento económico y la calidad de vida de los ciudadanos. Con ellos se pretende fomentar la cultura del diseño y de la innovación en España, tanto en el ámbito empresarial como en el conjunto de la sociedad.

En esta última edición, los galardonados han sido:



- **Premio Nacional, modalidad “Trayectoria Innovadora”:** **Eduardo Anitua Aldecoa.** Por encarnar el espíritu innovador al servicio de la sociedad, mejorando la salud de las personas y su calidad de vida. El doctor Anitua es un referente mundial en el campo de la medicina regenerativa y la implantología oral, y un ejemplo indiscutible de cómo llevar la innovación a diversos campos con una buena transferencia de conocimiento y la colaboración público-privada. Además, es autor de la tecnología de Plasma Rico en Factores de Crecimiento (Endoret®), la cual, se aplica en diferentes áreas de la medicina.
- **Premio Nacional, modalidad “Gran Empresa”:** **Cosentino S.A.** Por alcanzar una posición líder a nivel global, en la producción y distribución de superficies innovadoras de alta tecnología y respetuosas con el medio ambiente cumpliendo con los más altos estándares de responsabilidad social corporativa, y apostando por un modelo estratégico de gestión de la I+D+I con la implementación de centros propios de investigación y desarrollo tecnológico.
- **Premio Nacional, modalidad “Pequeña y Mediana Empresa”:** **CerTest Biotec S.L.** Por la solidez de su estrategia empresarial basada en la I+D+I, con la que ha respondido a las necesidades de la sociedad española durante la crisis sanitaria ocasionada por la pandemia de COVID-19, convirtiéndose en referente a nivel mundial en la investigación y desarrollo de soluciones para el diagnóstico *in vitro* con aplicaciones humanas, y estando presentes en los mercados de 130 países.
- **Premio Nacional, modalidad “Profesionales”:** **Jaime Hayon Benchimol.** Por ser referente a nivel internacional del diseño español y uno de sus mejores embajadores destacando en ámbitos como la iluminación, mobiliario, hábitats y diseño de espacios públicos.
- **Premio Nacional, modalidad “Empresas”:** **Expormim S.A.** Por unir los valores de la artesanía tradicional con la vanguardia del diseño de mobiliario de alta calidad, desde una perspectiva de sostenibilidad medioambiental.
- **Premio Nacional, modalidad “Jóvenes Diseñadores”:** **Danny Saltaren Andrade.** Por ser uno de los mayores exponentes nacionales en el campo del diseño digital y el emprendimiento innovador, claves en la transformación digital de la economía española.
- **Mención Especial en Diseño 2021, modalidad “Profesionales”:** **Ramón Úbeda Castro.** El jurado ha reconocido a Ramón Úbeda como una figura excepcional y transcendental en la investigación, la divulgación, la gestión estratégica, la comunicación y la generación de contenido de calidad, pilares fundamentales del ecosistema del Diseño.

La mayoría de los galardonados ha apostado por hacer uso de los Derechos de Propiedad Industrial para proteger sus innovaciones como, por ejemplo:

Eduardo Anitua [ES2602737](#), [ES2662385](#)

Cosentino S.A. [ES2899180](#), [ES2335638](#)

CerTest Biotec S.L. [ES2212928](#), [ES2759622](#)

Jaime Hayon Benchimol [USD764825S](#)

Expormim S.A [WO2006042877](#)

[Más información](#)

VISITA A ESPAÑA DEL DIRECTOR GENERAL DE LA ORGANIZACIÓN MUNDIAL DE LA PROPIEDAD INTELECTUAL (OMPI), DAREN TANG

El Director General de la Organización Mundial de la Propiedad Intelectual (OMPI), Daren Tang, visitó España los días 10 a 13 de febrero.

Con este motivo, la Oficina Española de Patentes y Marcas junto con el Ministerio de Cultura y Deporte y el Instituto de Empresa (IE School of Global and Public Affairs), organizó un evento público "Innovating for a better future. Youth and IP", lema elegido este año para celebrar el *Día Mundial de la Propiedad Intelectual e Industrial*. Durante el encuentro, Daren Tang mantuvo una inspiradora conversación con jóvenes creativos e innovadores, para abordar el papel que tiene la Propiedad Intelectual e Industrial en el marco del emprendimiento y la innovación, sobre todo en las pequeñas y medianas empresas y startups.

El evento contó con la presencia de Paula Babiano, fundadora y CEO de Balbisiana; Núria Amigó, CEO y Co-fundadora de Biosfer Teslab; Ernesto Cebollero, abogado especialista en propiedad intelectual e industrial; cantantes y compositores como Valeria Castro y Jacobo Serra, y Lara Rodríguez y Lara Marín, creativas vinculadas al sector de los videojuegos.

Como principales conclusiones de este encuentro se extraen la necesidad de crear un ecosistema propicio para la innovación, como principal desafío de los países a la hora de apoyar el camino a recorrer entre idea y su realidad, y la importancia de los activos protegidos mediante propiedad intelectual e industrial como perspectiva de negocio y carta de presentación.

El Director General de la OMPI, Daren Tang, instó a España a creer en su gran talento y a no tener miedo ni timidez a la hora de exportar, puesto que el mercado nacional se queda pequeño. En declaraciones de Daren Tang: "España ha sido un motor de innovación tecnológica. Muchos de vuestros científicos han hecho importantes hallazgos a lo largo de los siglos. Uno de los padres de la biología es también español. Y me doy cuenta cuando hablo con emprendedores españoles. ¡Salid a conquistar el mundo, dejad de ser tan tímidos!".

Más información:

[Vídeo de la jornada-canal OEPM Youtube](#)

[Vídeo: La Propiedad Intelectual y la Juventud: Innovando para un futuro mejor](#)

