

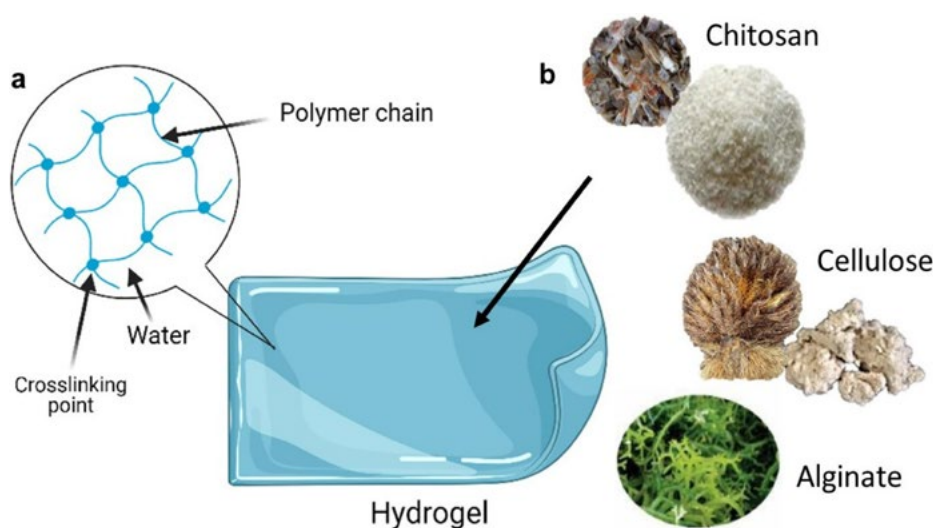
OBJETIVOS DE DESARROLLO SOSTENIBLE



BOLETÍN BIOCIRCULARIDAD: BIOENERGÍA Y BIOPRODUCTOS

Hidrogeles de origen biológico: panorama reciente de patentes

Los hidrogeles son redes poliméricas tridimensionales reticuladas capaces de absorber y retener grandes cantidades de agua o fluidos biológicos sin perder su integridad estructural. Sus propiedades fisicoquímicas, como su elevada capacidad de hinchamiento, porosidad, permeabilidad, flexibilidad y la posibilidad de ajustar sus propiedades mecánicas mediante diferentes estrategias de reticulación, los convierten en materiales de gran interés para aplicaciones avanzadas en numerosos sectores industriales.



Fuente. Syed Azhar et al. Nanostructured Lipid Carriers–Hydrogels System for Drug Delivery: Nanohybrid Technology Perspective (2024)

En los últimos años, los hidrogeles de origen biológico (*bio-based hydrogels*) han experimentado un notable crecimiento impulsado por la búsqueda de materiales más sostenibles y respetuosos con el medio ambiente. Estos hidrogeles se obtienen a partir de biopolímeros procedentes de fuentes renovables, como plantas, animales o microorganismos, entre los que destacan polisacáridos como el alginato, la celulosa, el quitosano o el ácido hialurónico, así como proteínas como el colágeno o la gelatina. Además, muchos de estos biopolímeros pueden obtenerse a partir de subproductos o residuos de las industrias agroalimentaria, forestal, pesquera o biotecnológica, favoreciendo la valorización de biomasa y el impulso de modelos de biocircularidad. Frente a los hidrogeles sintéticos convencionales, presentan ventajas como su biodegradabilidad, biocompatibilidad y menor impacto ambiental, características que han favorecido su creciente implantación tanto en el ámbito científico como en el industrial.

La posibilidad de modificar químicamente estos biopolímeros o combinarlos con otros materiales ha permitido obtener hidrogeles con propiedades adaptadas a aplicaciones muy diversas. En el ámbito biomédico destacan por su elevada biocompatibilidad y su similitud con la matriz extracelular, lo que favorece su utilización en medicina regenerativa, ingeniería de tejidos, cicatrización de heridas y sistemas de liberación controlada de fármacos. En agricultura, su elevada retención de agua contribuye a mejorar la humedad del suelo, reducir la lixiviación de fertilizantes y favorecer una liberación gradual de nutrientes. En el sector alimentario, pueden emplearse en envases activos e inteligentes para controlar la humedad o incorporar compuestos funcionales. En cosmética, su capacidad de hidratación, biocompatibilidad y posibilidad de incorporar ingredientes activos los convierten en materiales idóneos para formulaciones destinadas al cuidado de la piel y del cabello. Asimismo, en el ámbito ambiental, sus redes porosas y la presencia de grupos funcionales reactivos los convierten en materiales prometedores para la adsorción de contaminantes, el tratamiento y remediación ambiental, purificación de aguas, control de emisiones y degradación de residuos. Además, estos avances han favorecido la obtención de materiales funcionales avanzados, como aerogeles, materiales compuestos ligeros y materiales inteligentes o estímulo-responsivos, capaces de modificar sus propiedades en respuesta a cambios de pH, temperatura, luz u otros estímulos externos, ampliando aún más su potencial de aplicación en sectores de alto valor añadido.

A pesar de los importantes avances alcanzados, la transferencia de estos materiales a escala industrial continúa planteando desafíos relacionados con la optimización de sus propiedades mecánicas, la estabilidad durante su uso, la escalabilidad de los procesos de producción y la disponibilidad de materias primas homogéneas. No obstante, el creciente interés por sustituir materiales de origen fósil y desarrollar soluciones más sostenibles sigue impulsando la investigación y la innovación tecnológica.

Con el objetivo de ofrecer una visión del estado actual de la innovación en este ámbito, la Tabla 1 recopila ejemplos representativos de solicitudes de patente publicadas durante el primer semestre de 2026 relacionadas con hidrogeles de origen biológico. Las solicitudes se clasifican según su principal área de aplicación y se presentan en orden cronológico de publicación. Esta selección permite identificar las principales tendencias tecnológicas, los sectores con mayor actividad innovadora y las oportunidades que ofrecen estos materiales biobasados. El texto completo de cada documento puede consultarse en la base de datos Espacenet haciendo doble clic en el número de publicación.

Tabla 1. Solicitudes de patente publicadas durante el primer semestre de 2026 relacionadas con hidrogeles de origen biológico, clasificadas por área de aplicación.

MEDICINA Y SALUD		
Neurología y sistema nervioso		
Nº Publicación	Solicitante (País)	Título
WO2026120254A1	Medjeduse et al. (Francia)	Novel use of a chitosan-based hydrogel for the treatment of a nervous tissue lesion
US20260124234A1	Univ City New York Res Found (Estados Unidos) et al.	Method for treating a neurological disorder in an animal

<i>Medicina regenerativa e ingeniería de tejidos</i>		
Nº Publicación	Solicitante (País)	Título
WO2026101336A1	Matrixcell Bio Co Ltd et al. (Corea del Sur)	Hyaluronic acid-gelatin-based hydrogel composition
WO2026099839A1	Univ de Coimbra (Portugal)	Alginate-based hydrogel, methods and uses thereof
WO2026080718A1	Univ Pittsburgh Commonwealth Sys Higher Education (Estados Unidos)	3D bioprinting platform for generation of functional primary and HPSC-derived organoids in hydrogel constructs
WO2026076451A1	Ocucell Inc (Estados Unidos)	Hydrogels and methods of making the same
WO2026071377A1	Biobricks Co Ltd (Corea del Sur)	Extracellular matrix-based adhesive composition comprising methacryloyl-substituted gelatin
WO2026072931A1	Univ Rice William M (Estados Unidos)	Supramolecular and covalent collagen mimetic hydrogels and nanostructures with cation- π interactions
WO2026057820A1	Hooke Bio Ltd (Irlanda)	A method of assaying a cell culture model
WO2026039464A1	Univ Clarkson (Estados Unidos)	A tunable, biocompatible, nanoparticle-crosslinked hyaluronic acid-type I collagen hydrogel using diels-alder click chemistry for regenerative medicine applications
WO2026037844A1	EMPA (Suiza)	Non-swelling cold water species gelatin hydrogels for 3D bioprinting
WO2026029346A1	Korea Inst Sci & Tech et al. (Corea del Sur)	Decellularized placenta-derived amniotic membrane-based hydrogel using supercritical fluid and organic solvent system, use thereof, and method for preparing same
<i>Cuidado de heridas, dermatología y dispositivos médicos</i>		
Nº Publicación	Solicitante (País)	Título
WO2026087362A1	Consejo Superior de Investigaciones et al. (España)	Ocular insert for use in the treatment of dry eye
WO2026071983A1	Ongkasuwan Pattana (Tailandia)	The compound formulations for the treatment and delivery of drugs on open wounds, closed wounds and donor site wounds
CN121648047A	Wuhan Wodelipai Medical Devices Co Ltd (China)	Non-animal-derived carboxyethyl chitosan hydrogel for injection as well as preparation method and application of non-animal-derived carboxyethyl chitosan hydrogel
EP4707321A1	Grow Innovations Sdn Bhd (Malasia)	Biobased hydrogel coated elastomeric article and methods of making the same
WO2026047615A1	Tristarquality SNC (Italia)	Injectable device
CN121534220A	Univ Foshan (China)	Squama-derived recombinant keratin hydrogel wound dressing and preparation method thereof
WO2026030096A1	Alafair Biosciences Inc (Estados Unidos)	Sodium alginate and hyaluronic acid blended hydrogel matrix
US20260021220A1	Yoshimura Takashi (Estados Unidos)	Hydrogel film composition and method for treating skin conditions
<i>Liberación de fármacos y terapias sistémicas</i>		
Nº Publicación	Solicitante (País)	Título
WO2026019964A1	Barker Elizabeth Diana (Estados Unidos)	Starch-based hydrogel for administration of therapeutic anticancer agents
WO2026008804A1	Recobia Therapeutics (Francia)	Pharmaceutical formulation comprising a protein and functionalized chitosan for subcutaneous administration

COSMÉTICA Y CUIDADO PERSONAL

Nº Publicación	Solicitante (País)	Título
WO2026093641A1	Medhydrate OY (Finlandia)	A natural hydrating hydrogel composition, method for producing and using the same
WO2026043015A1	Korea Inst Sci & Tech et al. (Corea del Sur)	Composition for preventing hair loss or promoting hair growth, comprising decellularized placenta-derived amniotic membrane-based hydrogel

ALIMENTACIÓN Y ENVASES

Nº Publicación	Solicitante (País)	Título
CN121845122A	Univ Jiangsu Ocean (China)	Enteromorpha insoluble dietary fiber-sodium alginate-pea protein composite gel and preparation method thereof
CN121817438A	Univ Zhejiang Technology (China)	Instant-heating stream fish pre-prepared dish product and preparation method of instant-heating stream fish pre-prepared dish product
CN121400496A	China National Bamboo Res Center et al. (China)	Preparation method of antibacterial and antioxidant loaded liquid preservative film of bamboo nanocellulose

AGRICULTURA

Nº Publicación	Solicitante (País)	Título
CN121824209A	Anhui Pumao Agricultural Tech Co Ltd (China)	Hydrogel fertilizer and preparation method thereof
WO2026069124A1	Beadroots SRL (Italia)	Polymer compound and related production process
CN121342594A	Univ Shanghai Jiaotong et al. (China)	Biochar-reinforced hydrogel slow-release fertilizer and preparation method thereof

MEDIOAMBIENTE

Nº Publicación	Solicitante (País)	Título
WO2026112204A1	Hiro Tech Inc (Estados Unidos)	Integrated fungal encapsulation and material embedding systems for controlled biotransformation of polymeric and absorbent articles
CN121819778A	Yellow River Inst of Hydraulic Research et al. (China)	Modified chitosan-based material as well as preparation method and application thereof
CN121378800A	Univ Central South et al. (China)	Preparation method of lignin-based dual-network hydrogel and application of lignin-based dual-network hydrogel in soil remediation of mining area

MATERIALES FUNCIONALES E INDUSTRIALES

Nº Publicación	Solicitante (País)	Título
US20260098141A1	Univ Indiana Trustees (Estados Unidos)	Compostable polymer aerogels, processes and intermediate mixtures for their fabrication, and components formed therewith
CN121405976A	Qingdao Yuantong Medical Tech Co Ltd (China)	Bio-based conductive hydrogel as well as preparation method and application thereof
US20260022385A1	Univ Saint Louis (Estados Unidos)	DNA aptamers that bind to alginate gels

PATENTES BIOENERGÍA

BIOCOMBUSTIBLES SÓLIDOS		
Nº Publicación	Solicitante (País)	Contenido técnico
US20260109909A1	Battelle Energy Alliance LLC (USA)	Methods of forming a biomass feedstock and related biomass particles and systems. A method of forming a biomass feedstock comprises comminuting biomass into biomass fragments, densifying the biomass fragments into biomass pellets, thermally treating the biomass pellets to form thermally treated biomass pellets, and reducing a particle size of the thermally treated biomass pellets to form biomass particles. The biomass particles exhibit substantially the same properties throughout a volume of the biomass particles. Also disclosed are biomass particles and a biomass processing system.
KR20260088087A	Daeyoung Bio Energy Co Ltd (South Korea)	Solid Fuels Manufacturing Method Excluded Drying Process for Agricultural By-products.
EP4763952A1	E3 Carbon GmbH (Germany)	System and method for refining combustible pellets or wood chips. A system (1) for refining pellets or wood chips (2) by heat comprises a driven rotatable drum (3) which extends along and is rotatable around a longitudinal axis (4). The drum (3) has a product inlet (6) for receiving the pellets (2) or wood chips at a first end (7) of the drum (3) and a product outlet (8) for dispensing the pellets (2) at a second end (9) of the drum (3). The drum (3) comprises multiple baffles which, upon rotation of the drum (3), are adapted to circulate the pellets or wood chips (2) in the drum (3) and to convey the pellets or wood chips (2) from the product inlet (6) to the product outlet (8) along a conveying direction (12). The baffles extend parallel to the longitudinal axis (4) from the first end (7) towards the second end (9) of the drum (3). The baffles are mounted at equal angular distances from one another in a circumferential direction of the drum (3), thereby forming multiple openings through which a heating medium streams into and out of the drum (3). The system (1) further comprises a housing (110) surrounding the drum (3). The housing (110) comprises an inlet port (13) for introducing the heating medium into the housing (110) and towards the drum (3) and an outlet port (14) for dispensing the heating medium from the housing (110) and away from the rotatable drum (3). The system (1) further comprises a heating system (15) for heating the pellets or wood chips (2) in the drum (3) comprising at least one heating circuit (16) with the heating medium and with a heat source (17). The heating circuit (16) has a supply line (19) connecting the heat source (17) and the inlet port (13) of the housing and a return line (20) connecting the outlet port (14) of the housing (110) and the heat source (17). The heating medium is superheated steam, which is supplied through the supply line (19) from the heat source (17) to the inlet port (13) of the housing (110), streams through the housing (110) and through the rotatable drum (3) and returns through the return line (20) from the outlet port (14) to the heat source (17). The heat source (17) is adapted to deliver heat to the heating medium to produce superheated steam.
KR20260060835A	E & Water Co Ltd et al. (South Korea)	Method for manufacturing granular activated carbon and lignin solid fuel using bamboo material. The present invention relates to the manufacture of granular activated carbon and lignin solid fuel coal, and more specifically, to a method for manufacturing granular activated carbon and lignin solid fuel coal using bamboo raw materials, wherein lignin components are extracted from bamboo having lignin and cellulose as main components to produce lignin solid fuel coal, and granular activated carbon is produced from the cellulose components remaining after the extraction of lignin components.
EP4755995A1	Melia (France)	Method for producing wood pellets. The invention relates to a method for manufacturing wood pellets from woody green waste, comprising the following steps: collecting woody green waste (1); coarse grinding the woody green waste (2); fine grinding the first ground material and a second ground material of softwood (3) by feeding the first and second ground materials into at least one defibrating mill; drying the first and second defibrated ground materials (4) in at least one dryer; mixing the first and second defibrated ground materials (5) in at least one mixer; and pelletizing the resulting mixture (6) in at least one pellet press. The invention also relates to an installation for carrying out the method according to the invention.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026088809A1	Mitsubishi Ube Cement Corp (Japan)	Biomass solid fuel production system. The present disclosure describes a biomass fuel production system with which it is possible to suppress the cost of producing biomass solid fuel. This biomass solid fuel production system comprises first fuel production equipment configured to produce a first biomass solid fuel, and second fuel production equipment configured to produce a second biomass solid fuel. The first fuel production equipment includes: a first heating device configured to heat a first biomass raw material to generate the first biomass solid fuel; a first combustion furnace configured to combust a first pyrolysis gas generated by heating the first biomass raw material in the first heating device to generate a first combustion gas; and a first flow path configured to introduce a first low-temperature combustion gas that, of the first combustion gas, is discharged from the first heating device after heating of the first biomass raw material into the second fuel production equipment in order for the first low-temperature combustion gas to be used in production of the second biomass solid fuel.
WO2026063185A1	Mitsubishi Ube Cement Corp (Japan)	Biomass solid fuel manufacturing device, and biomass solid fuel manufacturing method. The present invention pertains to a biomass solid fuel manufacturing device provided with a rotary kiln, wherein a kiln body of the rotary kiln is provided with: a first heating zone which has a plurality of first lifter blades and heats biomass molded bodies; and a second heating zone which has a plurality of second lifter blades and further heats the biomass molded bodies heated in the first heating zone. The plurality of first lifter blades and the plurality of second lifter blades are configured such that the quantity of the biomass molded bodies scraped up per unit length of the kiln body is higher in the first heating zone than in the second heating zone.
WO2026105435A1	Nippon Steel Eng Co Ltd et al. (Japan)	Solid fuel and method for producing same. This solid fuel comprises: a biomass carbonized material having at least 74 mass% of fixed carbon on an anhydrous ash-free basis; and an inorganic binder having a CaO content of at least 50 mass% in a dry state.
WO2026094442A1	Panasonic Housing Solutions Co Ltd (Japan)	Method for producing woody biomass-derived product, and woody biomass-derived product. The present disclosure addresses the problem of providing a woody biomass-derived product production method in which a woody biomass pulverized material capable of removing insoluble inorganic components from woody biomass and reducing ash content is obtained, and a high-quality woody biomass-derived product is produced from the woody biomass pulverized material. This woody biomass pulverized material production method includes a processing step and a production step. The processing step includes a sieving step. In the sieving step, the woody biomass pulverized material is screened using a screen having a mesh size of 400 µm or more, thereby separating an oversize fraction retained on the screen from an under size fraction passing through the screen, and the oversize fraction is recovered. In the production step, the woody biomass-derived product is produced from at least one of the oversize fraction and a compressed woody biomass obtained by compressing the oversize fraction.
WO2026132469A2	Phytorestore (France)	Method for manufacturing a fuel product for a boiler. The present invention relates to a fuel product for a boiler, the fuel product resulting from the mixing and compacting of lignocellulosic materials, wherein the lignocellulosic materials have a proportion PC by weight (relative to the total weight of the fuel product for a boiler) of lignocellulosic materials derived from at least one European and/or tropical/desert cane such that $20 \leq PC \leq 50\%$.

GASES DE PIRÓLISIS/GASIFICACIÓN/COMBUSTIÓN (SYNGAS Y OTROS)

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026099123A1	Basf SE (Germany)	Process for synthesis gas production by gasification from biomass. The present invention concerns a process for gasification of biomass with reduced fouling of the gasification equipment in which at least one pretreated first feedstock F1 having a deformation temperature of 700 to 1000 °C (determined according to ISO 540:1995) and at least one pretreated second feedstock F2 having a deformation temperature of 1100 to 2000 °C are converted in at least one gasifier into synthesis gas. The present invention further concerns a production plant for converting agricultural residues from fast growing plants into synthesis gas which is suited for said process.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026107618A1	Changzheng Engineering Co Ltd (China)	Gasification system and method for total heat recovery via waste heat boilers. Disclosed in the embodiments of the present invention are a gasification system and method for total heat recovery via waste heat boilers. The system comprises a gasification chamber, a radiant waste heat boiler, a slag pool chamber, a convective waste heat boiler, a quencher and a circulating-gas treatment device, wherein a mixture of biomass and an oxidizer is gasified in the gasification chamber to generate high-temperature crude syngas and molten slag; the high-temperature crude syngas is output from a gas outlet of the radiant waste heat boiler to the convective waste heat boiler, the convective waste heat boiler exchanges heat with the high-temperature crude syngas by means of a heat-exchange tube, and the cooled high-temperature crude syngas is output to the quencher; the quencher quenches the high-temperature crude syngas and outputs quenched low-temperature crude syngas through a syngas outlet; and the circulating-gas treatment device transmits a portion of the low-temperature crude syngas to a circulating-gas inlet of the radiant waste heat boiler, forming a mixture of low-temperature crude syngas and high-temperature crude syngas in the radiant waste heat boiler, thereby reducing the temperature of the high-temperature crude syngas. In the present invention, the outlet temperature of the radiant waste heat boiler is maintained within an optimal range by means of circulating-gas quenching.
CN121914782A	East China Engineering Science & Tech Co Ltd (China)	Biomass gasification synthesis gas purification and conversion heat coupling system and method. The invention discloses a biomass gasification synthesis gas purification and conversion heat coupling system and method. The biomass gasification synthesis gas purification and conversion heat coupling system comprises a raw material gas heater, a hydrogenation furnace, a detoxification tank, a humidifier, an inlet and outlet heat exchanger and a heat insulation furnace which are communicated in sequence, the feed gas heater is provided with a first heat release side and a first heat absorption side; an inlet of the hydrogenation furnace is communicated with an outlet of the first heat absorption side; the inlet of the detoxification tank is communicated with the outlet of the hydrogenation furnace; a purified synthesis gas inlet of the humidifier is communicated with an outlet of the detoxification tank; an inlet of the second heat absorption side of the inlet-outlet heat exchanger is communicated with the humidified synthesis gas outlet, and an outlet of the second heat release side is communicated with an inlet of the first heat release side; an inlet of the adiabatic furnace communicates with an outlet of the second heat absorption side, and an outlet of the adiabatic furnace communicates with an inlet of the second heat release side. According to the invention, efficient utilization of energy is realized through coupling of biomass gasification synthesis gas hydrogenation detoxification and adiabatic shift reaction heat.
CN121930878A	Harbin Inst Of Technology et al. (China)	Reciprocating type moving bed synthesis gas preparation device based on mixed filtering combustion. The invention provides a reciprocating type moving bed synthesis gas preparation device based on mixed filtering combustion, and particularly belongs to the technical field of synthesis gas preparation through biomass gasification. A porous medium filled in a reactor main body is used as a core, and a gas supply system capable of periodically switching the gas flow direction and a solid fuel adding and discharging system located in the axial middle of the reactor main body are combined to jointly form a core reaction structure of reciprocating type filtering combustion; the porous medium serves as a heat accumulator and a reaction carrier, when the airflow direction is alternately changed, waste heat of a combustion area can be efficiently recycled, inlet air is preheated, the combustion area reciprocates in a bed layer, internal efficient circulation of energy is achieved, and the heat utilization efficiency and the temperature uniformity are remarkably improved. The reactor comprises a reactor main body, wherein the reactor main body is filled with a porous medium; the gas supply and flow direction switching system is connected to two ends of the reactor main body; and the solid fuel adding and discharging system is arranged on the reactor main body.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121801605A	Hunan Liquid Sunshine Energy Tech Co Ltd (China)	Garbage carbonization and gasification integrated treatment system and treatment method. The invention discloses a garbage carbonization and gasification integrated treatment system and method. The system comprises a drying device, a carbonization device, a combustion device, a fly ash filtering device, a POX reaction device and a heat exchange device, the carbonization device comprises a carbonization chamber and an external heating chamber arranged outside the carbonization chamber in a sleeving mode, and the drying device communicates with the carbonization chamber; the carbonization chamber is communicated with the combustion device and the fly ash filtering device, the combustion device is communicated with an external heating chamber and used for enabling combustion gas to participate in indirect heat exchange in the carbonization process, the fly ash filtering device, the POX reaction device and the heat exchange device are sequentially communicated, the heat exchange device is communicated with the heat exchange pipeline, and the heat exchange pipeline penetrates through the external heating chamber. The method is used for enabling effective synthesis gas to participate in indirect heat exchange in the carbonization process. The treatment method is implemented through the treatment system. According to the system and the method, high-calorific-value pyrolysis gas can be efficiently reformed, the heat efficiency is high, and operation is stable.
CN121873844A	Jiangsu Power Design Institute Co., Ltd. of China Energy Engineering Group (China)	Tar self-cracking and gasifying agent coupled biomass gasification system and control method. The invention discloses a tar self-cracking and gasifying agent coupled biomass gasification system and a control method, and the system comprises a gasification unit which is used for converting a biomass raw material into crude fuel gas; the tar cracking unit is used for carrying out tar cracking on the crude fuel gas to obtain cracked gas; the purification unit is used for purifying the pyrolysis gas and separating phenol-containing wastewater; the energy recycling unit is used for recycling flue gas waste heat generated in the cracking process so as to preheat gasification air fed into the gasification unit; the wastewater back-spraying unit is used for spraying the phenol-containing wastewater back to the gasification unit; and an intelligent control unit. Firstly, high-temperature flue gas waste heat is recycled through the energy recycling unit, and internal cyclic utilization of cracking energy consumption is achieved. Secondly, by introducing the wastewater back-spraying unit, consumption of fresh water is reduced, tar cracking is promoted, and the quality of synthesis gas is improved. And finally, dynamically coordinating flue gas heat distribution, waste water back-spraying amount and gasifying agent proportion through an intelligent control unit, and keeping efficient and stable operation of the system.
WO2026136072A1	Praxair Technology Inc et al. (USA)	Integration of a hot oxygen burner with pyrolysis processes. The present invention relates to a method and system for integration pyrolysis with gasification to increase the yield of saleable products from biomass feedstocks. By modifying the pyrolysis system to produce byproducts and reduce liquid yield, in conjunction with a hot-oxygen burner gasifier, the overall conversion efficiency of syngas per mass of biomass fed into the system is increased.
CN121950368A	Shanghai Hoto Eng Inc (China)	Biomass gasification system and gasification method. The invention relates to a biomass gasification system and a gasification method. The gasification system comprises a pressurized feeding unit, a fluidized bed gasification unit, a deslagging unit, an entrained-flow bed high-temperature cracking unit, a synthesis gas washing unit, a slag water unit and a gasification agent conveying unit, the fluidized bed gasification unit comprises a fluidized bed gasification furnace and a high-temperature cyclone separator; the fluidized bed gasification furnace is connected with the pressurized feeding unit, the gasifying agent conveying unit, the high-temperature cyclone separator and the deslagging unit; the entrained-flow bed high-temperature cracking unit comprises an entrained-flow bed high-temperature cracking furnace, and the entrained-flow bed high-temperature cracking furnace is connected with a high-temperature cyclone separator, a gasifying agent conveying unit, a synthesis gas washing unit and a slag water unit. Compared with the prior art, the invention couples the advantages of the fluidized bed and the entrained-flow bed, and has the characteristics of wide raw material applicability, high effective gas content, no tar, low energy consumption and the like.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026105608A1	Sumitomo Heavy Industries (Japan)	Starting material charging device, synthesis gas generation system, and starting material charging method. A starting material charging device 2 comprises a woody starting material charging unit 211 that charges a woody starting material that includes wood as principal component as a solid starting material into a gasification furnace 11 that gasifies solid starting materials to generate a synthesis gas that includes hydrogen and carbon monoxide, a plastic starting material charging unit 212 that charges a plastic starting material that includes plastic as a principal component as a solid starting material into the gasification furnace 11, and an H ₂ /CO ratio monitoring unit 22 that monitors the H ₂ /CO ratio of the synthesis gas generated by the gasification furnace 11. The plastic starting material charging unit 212 adjusts the amount of the plastic starting material that is charged into the gasification furnace 11 such that the H ₂ /CO ratio is at or above 2.
CN121780203A	Univ Tsinghua (China)	Organic solid waste gasification system and organic solid waste treatment method. The invention provides an organic solid waste gasification system and an organic solid waste treatment method. The organic solid waste gasification system comprises an organic solid waste treatment device, a first gas generation device, a second gas generation device and a synthesis gas blending device. The organic solid waste treatment device comprises a gasification part and a melting part located below the gasification part. The gasification part is used for gasifying the organic solid waste to generate first synthesis gas; and the melting part is used for melting the organic solid waste residues. The first gas generation device is connected with the melting part, and the melting part combusts brown gas to provide heat for the organic solid waste treatment device. The second gas generation device is used for generating oxygen and hydrogen and conveying the oxygen to the gasification part, and the gasification part utilizes the oxygen as a gasification agent to gasify the organic solid waste. And the second gas generating device is also used for conveying hydrogen to the synthesis gas blending device. And the synthesis gas blending device is connected with the organic solid waste treatment device and is used for receiving the first synthesis gas and blending the first synthesis gas with hydrogen to generate second synthesis gas.

BIOGÁS/BIOMETANO

Nº Publicación	Solicitante (País)	Contenido técnico
SE2430528A1	Alamin Abdulsalam Michael (Sweden)	Self-Heating Biodigester System Utilizing Biogas Kinetic Energy Conversion via Mini Wind Turbine in Enclosed Box. The Self-Heating Biodigester System enhances biogas production by maintaining optimal fermentation conditions and converting biogas kinetic energy into electricity without combustion. Its core component, the BioTherm Capsule [200], ensures stable mesophilic (20°C to 40°C) or thermophilic (50°C to 60°C) conditions using multi-layer insulation. A mini wind turbine [140] generates electricity by utilizing biogas pressure, enhanced by a gas pressure enhancer [320] with an expandable ball [322] and springs [326]. A Programmable Logic Controller (PLC 110) regulates biogas flow, energy generation, and temperature. Expandable biogas storage bladders (500, 600, 700) store and release biogas at controlled pressures for efficient electricity generation. The compact design allows indoor and outdoor installation, making it ideal for small and mid-sized biodigesters. The system is scalable for larger applications, offering flexible, space-efficient solutions for various environments.
WO2026078302A1	Arciplug Oy (Finland)	Method for manufacturing a reactor for biogas production. The invention relates to a method for manufacturing a reactor intended for biogas production. The biogas is produced by anaerobic digestion of biofeedstock. The reactor comprises a tubular reaction chamber (10) formed by a bottom (2), walls (W), and a roof (4), and an external supporting frame structure (20) for the reaction chamber (10) to stiffen and support the reaction chamber (10) from the outside against forces caused by the feedstock. A supporting frame structure (20) is formed, which is provided with several vertical posts (21) on both sides of the reactor (1), as well as several horizontal anchoring elements (22), to which the concrete reinforcements (25) of the wall (W) are attached. The outer wall formwork elements (3a) are detachably attached between the vertical posts (21), in connection with installation elements (23) belonging to the vertical posts. The inner wall formwork elements (3b) are detachably connected to each other at a distance from the outer wall formwork elements (3a), so as to form, together with the outer formwork elements (3a), a wall formwork structure (3) comprising the horizontal anchoring elements (22) and a filling space (S). Concrete is cast into the filling space (S) within the formwork structure (3), whereby the concrete, upon drying, forms the wall (W) of the reactor chamber (1). The outer and inner wall formwork elements (3a, 3b) are detached from their attachments.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026127359A1	ATE Co Ltd (South Korea)	System and method for removing hydrogen sulfide and increasing biogas generation using iron salts and biochar. Disclosed are a system and method for removing hydrogen sulfide and increasing biogas generation using iron salts and biochar. The disclosed system for removing hydrogen sulfide and increasing biogas generation using iron salts and biochar comprises: an anaerobic digestion tank that receives organic waste resources and performs anaerobic digestion of the organic waste resources by using anaerobic microorganisms; and an iron salt-biochar supply device that selectively supplies only one of iron salts and biochar or supplies both iron salts and biochar to the anaerobic digestion tank to reduce the concentration of hydrogen sulfide in biogas generated in the anaerobic digestion tank and increase the amount of biogas generated.
WO2026117867A1	Greenlane Renewables Global Ltd (Canada)	Biogas upgrading system and method of operating same. A method for upgrading a biogas feed stream to produce a product stream that complies with a prescribed RNG specification that specifies a limit for total inert gas constituents and less than 2.0 Mol% CO ₂ . The method comprises reducing CO ₂ concentration to between 0.2 Mol % and 0.005 Mol%, and removing N ₂ from the biogas only to a level necessary to comply with the limit for total inerts. The disclosed system comprises sensors for determining concentrations of total inerts and CO ₂ in said biogas, a controller programable to select a predetermined target CO ₂ concentration for said gaseous RNG between 0.2 Mol% and 0.005 Mol% as a function of the concentrations of total inerts and CO ₂ , and a plurality of membrane-based gas separation stages to which said biogas feed stream can delivered and be processed into a process stream with the target CO ₂ concentration.
WO2026114500A1	Kanadevia Inova AG (Switzerland)	Biogas plant and operation method. The present invention relates to a method for use in a biogas plant having at least one digester (12) and a thermal treatment unit (50), the method comprising the steps of : a) anaerobically digesting an organic biomass (18) in at least one digester (12) through microorganisms at a temperature below 50 ° C to produce methane-containing biogas (16) and a digestate (14); b) removing a major fraction (32) of the digestate (14) from the digestion process after a fast retention time t and subjecting at least part of said major digestate fraction (32) to a thermal treatment in a thermal treatment unit (50) at a temperature above 175 ° C for at least one minute, wherein the thermal treatment step involves at least one treatment selected from the group consisting of pyrolysis, torrefaction, gasification, hydrothermal gasification, hydrothermal carbonization and hydrothermal liquefaction; and c) retrieving a minor fraction (34) of the digestate (14) from the digestion process after an inoculum retention time T that is longer than the fast retention time t, returning said minor digestate fraction (34) into the digestion process and mixing the minor digestate fraction with the organic biomass (18) within the digester (12).
US20260138075A1	Obeo Biogas (Canada)	System and method for performing a regenerative desulfurization of raw biogas. System and method for performing a regenerative desulfurization of raw biogas. Raw biogas comprising hydrogen sulfide is injected in a container containing a material adapted for capturing and converting into solid sulfur the hydrogen sulfide. Biogas without hydrogen sulfide is extracted from the container, the hydrogen sulfide being captured and converted into the solid sulfur by the material. The injection of the raw biogas comprising the hydrogen sulfide in the container is then stopped. A regeneration gas heated at a predetermined temperature is injected in the container, the temperature allowing extraction of the sulfur from the material in the form of sulfur compound(s). The regeneration gas and the sulfur compound(s) are extracted from the container. The injection of the regeneration gas in the container is then stopped. A control device controls the execution of the regenerative desulfurization, using collected data representative of operating conditions of the system.
WO2026114702A1	Soluciones Sicnova SL et al. (Spain)	A method and a compact equipment to increase the calorific value of biogas by microreaction. The present invention discloses a method and a compact equipment to increase the calorific value of biogas by methanation of CO ₂ with H ₂ (Sabatier reaction), relayed on a microreaction system that use geometric periodic open cellular structures (POCS), in which the catalytic system is embedded, to intensify the gas reaction. The compact equipment enables the delocalized biogas producers to benefit the CO ₂ fraction by increasing the calorific value of gas, avoiding the emission of this gas to atmosphere.

Nº Publicación	Solicitante (País)	Contenido técnico
US20260070018A1	Stearns Conrad and Schmidt Consulting Eng Inc (USA)	Biogas halogen processing systems and methods. A method to produce a halogen-depleted gas. The method provides a gas derived from and/or including a source of biogas, mixing the gas with a source of hydrogen to produce a processed gas mixture including an acid, and separating the acid from the processed gas mixture. Sulfur, oxygen, carbon dioxide removal processes are integrated into the method. Production of secondary products, and removal thereof, are included. Pre and post processing may be integrated. Also, production of products from the processed gas.
WO2026109921A1	Totalenergies Onetech et al. (France)	Transition metal-exchanged gis-type zeolite for biogas upgrading. The present invention relates to a GIS-type zeolite that has been modified to incorporate transition metal cations as part of its exchangeable cations. The invention also relates to the use of such zeolites in sorptive separations, in particular in the selective separation of carbon dioxide from methane and/or nitrogen.
WO2026063520A1	Univ Waseda et al. (Japan)	Co-production method and co-production facility for high-concentration methane-containing biogas and carbonated concrete. The purpose of the present invention is to provide a co-production method and co-production facility which are capable of simultaneously performing: purification of biogas containing methane gas at a high concentration; and production of carbonated concrete. Provided are a method and facility for co-producing high-concentration methane-containing biogas and carbonated concrete, wherein biogas is brought into contact with a concrete composition, and carbon dioxide in the biogas is immobilized on the concrete composition, thereby performing production of cured carbonated concrete and purification of biogas containing methane.

BIOALCOHOLES (BIOETANOL, ETC.)

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026081020A1	Carbon Utilized Inc (Canada)	Method of producing ethanol. There is provided a process of producing ethanol. The process includes processing a starch derivative-comprising slurry via a reactive process, including fermentation, with effect that at least a fermentation product, that includes ethanol, and a gaseous by-product material, that includes gaseous carbon dioxide, is produced, and processing the gaseous by-product material via a reactive process, with effect that a liquid material product, including ethanol, is produced. The concentration of ethanol, within the produced fermentation product, has a value that is at least 40% of the end of batch concentration of ethanol within the fermentation product, and no more than 95% of the end of batch concentration of ethanol within the fermentation product.
WO2026078145A2	Celtic Renewables Ltd (Great Britain)	Process for the manufacture of acetone, butanol and / or ethanol. The invention relates to a process for the manufacture of acetone, butanol and / or ethanol, the process comprising the steps of: i. Providing a plurality of co-products obtained from the yeast propagation processes and / or processes to provide yeast extract; ii. Combining the plurality of co-products from step (i) with a supplementary carbohydrate source and one or more fermentative micro-organisms to create a fermentation culture; and iii. Fermenting the fermentation culture of step (ii) to provide a product comprising butanol, acetone and / or ethanol. The invention further relates to a composition provided by said process, the composition comprising acetone, butanol and/or ethanol.
US20260159858A1	Fluid Quip Tech LLC(USA)	Modified dry grind method and system for biochemical and/or biofuel production. A modified dry grind method and system for biochemical and/or biofuel production, such as alcohol, in which dried grain (e.g., corn) feedstock is initially wetted prior to being milled to reduce the complexity and the amount of electricity typically consumed in the grain handling and milling part of a dry grind process. In one example, the method and system can include mixing a grain feedstock with a liquid in a holding tank to initially wet the grain. Then, the mixture can be subjected to a milling step in which the grain can be broken down, such as by a disc mill, into smaller ground pieces. Prior to being milled, the mixture of wet corn and liquid can be subjected to a dewatering device to remove liquid from the wet grain. Once milled, the milled grain can be further subjected to traditional, modified traditional, or non-traditional dry grind steps to produce biofuel and/or biochemicals.
US20260132429A1	Gevo Inc (USA)	Processes and systems for fermentative alcohol production and recovery. Disclosed are systems and methods for producing renewable alcohols by fermentative processes and recovering the product alcohols by extraction. The disclosure also provides processes and systems for converting renewable alcohols to transportation fuels or blending renewable alcohols with transportation fuels, such as gasoline, jet fuel, and diesel fuels.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121628683A	Harbin Institute of Technology (China)	System for preparing methanol through biomass supercritical carbon dioxide gasification. The invention provides a system for preparing methanol by biomass supercritical carbon dioxide gasification, which takes a gasification furnace as a core, integrates catalytic reforming and synthesis gas regulation, and systematically solves the problems of high tar content and low carbon conversion rate in methanol preparation from biomass. Supercritical carbon dioxide efficiently dissolves and cracks tar in the gasification furnace, and steam catalytic reforming of the first reactor is combined, so that the tar content is reduced by more than 50%, and the risks of pipeline blockage and catalyst deactivation are eliminated. Meanwhile, solid carbon in the biomass can be efficiently converted into CO through supercritical carbon dioxide, and the carbon conversion rate is increased by 20%-30% compared with that of traditional biomass gasification. Hydrogen-rich gas generated by removing CO ₂ in the second reactor is mixed with the residual first gasification product, so that the H ₂ /CO ratio is regulated and controlled to be about 2.0, carbon elements are directionally converted into methanol synthesis raw materials in the whole process, the economical efficiency and the environmental protection property of the process are remarkably improved, and an efficient and stable engineering solution is provided for biomass green methanol industrialization.
US20260159804A1	Kyungpook Nat Univ Ind Academic Coop Found (South Korea)	CO₂-fixing microorganism. The present disclosure relates to a microorganism that fixes carbon dioxide, presenting a new strategy capable of contributing to achieving carbon neutrality in bioprocesses through development of a CO ₂ fixing yeast using <i>S. cerevisiae</i> , wherein, to address the redox imbalance problem and increase CO ₂ fixation efficiency, a form-I RuBisCO-based CO ₂ fixation pathway was established in a xylose isomerase-based xylose metabolic strain, the fermentation rate and productivity were remarkably improved by deleting the endogenous reductase genes GRE3 and YPR1, which induce xylitol accumulation, resulting in a significant increase in a yield of ethanol production along with efficient CO ₂ fixation, the finally developed SJ11 ΔGΔ strain had significantly reduced xylitol accumulation, greatly improved fermentation rate, and maximized CO ₂ fixation efficiency and ethanol productivity compared to existing strains.
WO2026119799A1	Novozymes AS (Denmark)	Methods of saccharifying cellulosic material. The invention relates to methods of saccharifying a cellulosic material comprising subjecting said cellulosic material to cellulolytic enzyme activities and potato protein. The invention also relates to processes of producing desired fermentation products, such as ethanol, using a saccharification method of the invention.
WO2026090486A1	Ohio State Innovation Foundation (USA)	Engineered Clostridium cells and methods for use thereof. Disclosed herein is an engineered <i>Clostridium tyrobutyricum</i> cell, wherein the overexpression of a heterologous aldehyde/alcohol dehydrogenase (adhE2) and a heterologous carboxylic acid reductase increases production of biobutanol, and method of use thereof. Further disclosed herein is a method of biosynthesizing butanol, comprising fermenting the engineered <i>C. tyrobutyricum</i> cell with growth media and a carbohydrate-containing source.
EP4763828A1	Pyletech Energy Ltd (Cyprus)	Methods and systems for converting biomass to methanol. The present disclosure relates to a system [100] for converting biomass to methanol and methods of performing the same. The system [100] comprises a gasification reactor [102], air-separation unit [112], electrolysis unit [114], water-gas shift reactor [124] and methanol synthesis reactor [116]. Preferably, the system [100] comprises a bypass conduit [136] for diverting a portion of syngas produced by the gasification reactor [102] so that it does not pass through the water-gas shift reactor [124].
WO2026082656A1	Sulzer Management AG (Switzerland)	An electrified process and plant for single distillation unit purification of bioethanol or similar compounds. The present invention relates to a process of separating a target composition containing at least one oxygen containing organic compound as target compound having a lower boiling point than water or forming a minimum boiling azeotrope with water optionally in admixture with water from a crude composition having been produced in a biocatalyzed process and containing the at least one oxygen containing organic compound as target compound, water and biomass, wherein the process comprises the steps of feeding the crude composition into a single distillation unit, distilling it therein and withdrawing from the single distillation unit an overhead composition as target composition, a bottom composition and optionally a side composition, wherein a portion of the overhead composition is refluxed into the single distillation unit, wherein compressed vapor is injected into the single distillation unit, wherein the compressed vapor is produced by compressing vapor of a refrigerant having been obtained by evaporating the refrigerant by heating it with the overhead composition, wherein the refrigerant comprises, based on the total weight of the refrigerant, at least 70% by weight of water.

BIODIÉSEL

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026084801A1	Chevron USA Inc (USA)	Filterability of fuel blends containing biodiesel. A method for reducing filter blocking tendency of a fuel composition is described. The fuel composition includes biodiesel component and renewable diesel component or petroleum diesel component. The method involves dosing the fuel composition with imidazoline or diamine with hydrocarbyl ether substituent additive.
US20260167995A1	Hajibarati Majid (Iran)	Process of producing biofuel using microorganisms and carbon dioxide extracted from industrial chimneys. The invention of a process of producing biofuel using microorganisms and carbon dioxide extracted from industrial chimneys includes the separation and purification of carbon dioxide utilizing absorption and disposal towers and the use of solvents such as monoethanolamine. The purified CO2 is then injected into the cyanobacteria cultivation system in shallow pools with insulated walls and a glass or polycarbonate coating. Through aeration and mechanical stirring, photosynthesis and the growth of cyanobacteria, such as the <i>Synechocystis</i> sp. PCC 6803, is maximized. The cyanobacteria biomass is separated using centrifugation, dried, and ground. The lipids present in the biomass are extracted using solvents such as hexane or methanol under controlled conditions. The extracted lipids are then converted into biodiesel in a chemical reactor through a transesterification process with alcohol and a catalyst, while glycerol is collected as a by-product for use in the cosmetic and personal care industries.
CN121591678A	Hanjiang Normal Univ (China)	Solid organic acid, preparation method thereof and application of solid organic acid in preparation of biodiesel. The invention discloses a solid organic acid, a preparation method thereof and an application of the solid organic acid in biodiesel preparation, and the solid organic acid is prepared by heating and reacting 2, 5-dimercapto-1, 3, 4-thiadiazole and sultone (1, 3-propane sultone or 1, 4-butane sultone) at 110-150 DEG C in a nitrogen atmosphere in the presence of triethylamine. The preparation method of the solid organic acid is simple to operate, the prepared solid organic acid shows excellent catalytic activity and catalytic stability when catalyzing esterification of fatty acid and methanol to prepare biodiesel, and the biodiesel with the yield of 97% or above can be obtained through reaction at the mild temperature for a short time. And after the reaction is finished, unreacted methanol and generated water are removed through rotary evaporation, the solid organic acid can be automatically precipitated and separated out, and the solid organic acid can be recycled through simple filtration. Therefore, the solid organic acid prepared by the method has a good industrial application prospect in the field of biodiesel preparation by catalyzing fatty acid esterification.
EP4756032A2	Indian oil Corp Ltd (India)	Process for production of microbial oil. The invention relates to the process for conversion of organic rich feed stock or industrial byproduct or CO2 derived intermediates into tailor made microbial oil. This process involves the addition of growth inducers and providing intermittent temperature-shock to induce the biomass yield and oil accumulation. The mutated yeast used herein improves the synthesis trait of tailor-made chain length and process conditions herein to improve the production yield of biomass and oil quality. The mutated yeast was subject to process optimization with varied temperature-shock conditions and the presence of growth inducers. The produced microbial oil has potential application for biodiesel, biolubricants and bio-additives.
WO2026120327A1	Reg Biofuels Germany GmbH (Germany)	Production of an alkali-glyceroxide-methanol catalyst for biodiesel production. A process for preparing a base catalyst suitable for catalyzing numerous reactions, including a transesterification reaction for making biodiesel. The process includes preparing an anhydrous alkali glyceroxide by combining an alkali metal hydroxide with glycerol. The alkali metal hydroxide and glycerol mixture is distilled to remove water at an elevated temperature to produce the alkali glyceroxide. Methanol is added to the alkali glyceroxide solution then the product stream is cooled. The vaporized methanol condenses back into the solution producing the resultant alkali glyceroxide-glycerol/methanol catalyst. The addition of methanol to the alkali glyceroxide helps reduce viscosity and keep the alkali glyceroxide /methanol catalyst product in a liquid state as the catalyst cools to ambient temperatures.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121759241A	Shandong Shangjia Renewable Resources Tech Co Ltd (China)	High-calorific-value biodiesel based on modified formula and preparation method of high-calorific-value biodiesel. The invention relates to the technical field of biodiesel, in particular to high-calorific-value biodiesel based on a modified formula and a preparation method thereof. The preparation method comprises the following steps that S1, catering waste grease is pretreated, and pretreated catering waste grease is obtained; S2, carrying out esterification treatment on the pretreated catering waste grease, and adopting a composite treatment agent in the treatment process to obtain a crude product; S3, the crude product is subjected to catalytic cracking quality improvement, and a cracking product is obtained; S4, carrying out hydrogenation saturation treatment on the cracking product to obtain a mixed alkane product; and S5, carrying out purification and fractionation on the mixed alkane product to obtain the high-calorific-value biodiesel. According to the invention, after oil and alcohol are adsorbed into the spaces, the concentration of reactants is locally improved, and the reactants are limited around acidic sites, so that the reaction efficiency is greatly improved, the conversion efficiency of the biodiesel is effectively improved, and the calorific value performance of the biodiesel is further improved.
CN121869393A	Shanghai Zhongqi Environment Tech Co Ltd (China)	Method for preparing high-purity biodiesel by one-step method based on synergistic catalysis of kitchen waste oil by magnetic bifunctional catalyst. The invention particularly discloses a one-step method for preparing high-purity biodiesel based on synergistic catalysis of kitchen waste oil by a magnetic bifunctional catalyst. Comprising the following steps: (1) preparing a ferroferric oxide magnetic core, and coating the surface of the ferroferric oxide magnetic core with a porous silicon dioxide middle layer; through selective modification, a sulfonic acid group is loaded on the inner surface of the silicon dioxide shell as an acid center, and calcium magnesium oxide nanoparticles are loaded on the outer surface as an alkaline center, so that the catalyst is obtained; (2) putting the pretreated kitchen waste oil, short-chain alcohol and the catalyst into a reactor, and reacting for 2-4 hours at the temperature of 65-75 DEG C and the pressure of 0.3-0.8 MPa to obtain reaction liquid; and (3) sucking out the catalyst from the reaction liquid by using an external magnetic field, and carrying out standing, liquid separation and distillation on the reaction liquid to obtain the high-purity biodiesel. According to the invention, synergistic catalysis of acid and alkali active centers is realized on a single magnetic catalyst, and the problem of mutual neutralization of acid and alkali sites is solved.
CN121852485A	Sichuan Linchen Biological Energy Tech Co Ltd (China)	High-catalytic-efficiency lipase-mediated biodiesel production method. The invention discloses a high-catalytic-efficiency lipase-mediated biodiesel production method, and belongs to the technical field of biodiesel preparation, and the method comprises the following steps: S1, taking waste animal and vegetable oil as a raw material, filtering the raw material to remove impurities, washing the raw material to remove phospholipid and inorganic acid, and adjusting the pH value to 5-5.5 to obtain pretreated waste animal and vegetable oil; S2, preparing a slow-release emulsifier, mixing the slow-release emulsifier with the pretreated waste animal and plant grease, uniformly stirring, sequentially adding water and liquid lipase, and continuously stirring to obtain a uniform oil-water interface reaction system; S3, methanol is added into the oil-water interface reaction system by a metering pump at 40 DEG C for reaction, after the reaction is finished, standing and settling are carried out, a heavy phase is discharged, a light phase is obtained, the light phase is heated to 70-80 DEG C, methanol is evaporated, and the biodiesel is obtained. The invention solves the problem of low enzymatic reaction efficiency caused by unstable oil-water interface in the existing reaction process.
US20260117265A1	Texas A & M Univ Sys (USA)	Electro-biodiesel empowered by co-design of microorganism and electrocatalysis. The subject invention pertains to environmentally-friendly compositions, methods and systems for the production of diesel biofuels. More specifically, the subject invention integrates electrocatalysis and microbial bioconversion to generate lipids from carbon dioxide in a way that increases energy efficiency over known biomass-derived diesel production and significantly reduces land use.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121945079A	Univ Shandong Jianzhu (China)	Bifunctional catalyst and application thereof in microwave-assisted preparation of biodiesel. The invention discloses a bifunctional catalyst and application thereof in microwave-assisted biodiesel preparation, and belongs to the technical field of catalysis. Cobalt metal is introduced into a ZIF-8 skeleton, when the MOFs derivative is prepared through calcination, a magnetic center can be constructed through introduction of transition metal, and the magnetic loss capacity of a derivative material is adjusted, so that the prepared catalyst has high wave absorbing performance in an industrial microwave field of 2.45 GHz, microwave energy can be effectively absorbed and converted into heat energy, and the catalyst can be used for preparing the MOFs derivative. Therefore, the energy utilization efficiency of a reaction system is improved, the catalytic performance of the catalyst is finally improved, the microwave-assisted biodiesel preparation efficiency is further improved, and the method has good application value and prospect in the technical field of catalysis.

SAF (SUSTAINABLE AVIATION FUELS)

Nº Publicación	Solicitante (País)	Contenido técnico
US20260139194A1	Chevron USA Inc (USA)	Sustainable aviation fuel and method for its production. An aviation fuel composition including an aromatic-based product generated by fluid catalytic cracking of a lipid feedstock in the presence of a fluid catalytic cracking, wherein the aromatic-based product comprises at least 50 vol. % aromatics, and a paraffinic-based product comprising normal paraffins and iso-paraffins in an amount of at least 85 vol. %. The aviation fuel composition meets the ASTM D1655-24b specification with the added requirements in Annex A1 and/or the ASTM D7566-24d, Annexes A1-A8 specification requirements.
CN121759253A	China Sciences Group Holding Co Ltd (China)	Biogas comprehensive utilization system for preparing sustainable aviation fuel raw oil. The invention discloses a biogas comprehensive utilization system for preparing sustainable aviation fuel raw oil, comprising: a biomass fermentation device for producing biogas; the moving bed water-based chemical looping hydrogen production device is used for producing hydrogen by taking methane and steam in the biogas as raw materials and capturing carbon dioxide produced in the hydrogen production process; the carbon dioxide dry reforming device is used for converting methane and carbon dioxide in the biogas and carbon dioxide from the moving bed water-based chemical looping hydrogen production device into synthesis gas; the Fischer-Tropsch synthesis reaction device is used for mixing synthesis gas from the carbon dioxide dry reforming device with hydrogen from the moving bed water-based chemical-looping hydrogen production device to synthesize hydrocarbon products, the biogas is pretreated and then divided into two paths, one path enters the moving bed water-based chemical-looping hydrogen production device, and the other path enters the moving bed water-based chemical-looping hydrogen production device; and the other path enters the carbon dioxide dry reforming device. The utilization rate of biomass can be increased.
CN121825603A	Diandui Tech Hefei Co Ltd (China)	Preparation device and method of sustainable aviation fuel. The invention discloses a sustainable aviation fuel preparation device and method. The device comprises a raw material gas inlet, a water vapor inlet and an electrolysis unit, the electrolysis unit comprises an anode inlet, an anode outlet, a cathode inlet and a cathode outlet, and the raw material gas inlet is connected with the anode inlet through a desulfurization unit; the anode outlet is sequentially connected with the anode drying unit, the synthesis gas compressor, the SAF synthesis unit, the water removal unit, the hydrogenation unit, the light hydrocarbon separation unit and the SAF separation unit, the water vapor inlet is connected with the cathode inlet, and the cathode outlet is sequentially connected with the cathode drying unit, the hydrogen compressor and an outlet of the synthesis gas compressor. The hydrogen compressor is also connected with an inlet of the hydrogenation unit; the device is characterized in that the light hydrocarbon separation unit is further connected with the anode inlet, the SAF synthesis unit is further connected with the cathode inlet, and the SAF separation unit is further connected with the light hydrocarbon separation unit through the cracking unit. The method provided by the invention can achieve the effect of improving the comprehensive utilization rate of energy and materials.

Nº Publicación	Solicitante (País)	Contenido técnico
US20260171194A1	Hubei Tianji Bioenergy Co Ltd (China)	Screening method for raw materials of high-yield sustainable aviation fuel. Disclosed is a screening method for raw materials of high-yield sustainable aviation fuel, comprising the following steps: obtaining composition and content of fatty acid in different waste animal and vegetable oils; obtaining the theoretical limit yields of sustainable aviation fuel prepared from different fatty acids; calculating the theoretical yields of sustainable aviation fuel produced from different waste animal and vegetable oils as raw materials based on their fatty acid composition and content, as well as the theoretical limit yields of sustainable aviation fuel prepared from different fatty acids; selecting appropriate animal and vegetable oils as raw materials for producing sustainable aviation fuel based on the theoretical yields of sustainable aviation fuel. This disclosure provides guidance for enterprises to efficiently produce high-yield and high-value lipid-based bio-jet fuel.
WO2026131179A1	IFP Energies Now (France)	Producing a sustainable aviation fuel by oligomerisation of light olefins. The present invention relates to an improved kerosene base. The present invention also relates to any composition comprising the kerosene base, to a process for its preparation and to its use as fuel in the field of aviation. The present invention also relates to a process for producing the kerosene base from an olefinic feedstock comprising olefinic compounds comprising at least 20% by weight of olefins having a number of carbon atoms that is greater than or equal to 4 (C4+), based on the total weight of the feedstock: a) a step of oligomerising the olefinic feedstock and obtaining an effluent, b) a step of mixing a first olefinic stream comprising at least some of the effluent resulting from step a) or a first paraffinic stream obtained after hydrogenation of at least some of the effluent resulting from step a), with a hydrocarbon stream comprising hydrocarbon compounds having 8 carbon atoms.
CN121825658A	Petrochina Co Ltd (China)	Method for producing biological aviation kerosene raw material from waste oil. The invention provides a method for producing a biological aviation kerosene raw material from waste oil. The method comprises the following steps: S1, removing moisture and solid impurities in the waste grease, and then adding an adsorbent for adsorption decoloration; s2, mixing the adsorbed and decolorized waste grease with low-carbon alcohol, and carrying out deacidification reaction under the action of an acid catalyst to obtain crude fatty acid methyl ester; and S3, mixing the crude fatty acid methyl ester with a dechlorination complexing agent to perform dechlorination reaction, separating out the dechlorination complexing agent after the reaction is finished, extracting to remove a water-soluble chlorine-containing compound to obtain dechlorinated fatty acid methyl ester, and performing reduced pressure distillation to obtain the biological aviation kerosene raw material. The dechlorination complexing agent is one or more of ethylene diamine tetraacetic acid disodium salt, diethylenetriamine pentaacetic acid and nitrilotriacetic acid. The method provided by the invention can effectively remove impurities such as metal and non-metallic elements in the waste grease, and meets the requirements of a hydrogenation device on grease raw materials.
CN121759244A	Univ Dalian Tech (China)	Green method for preparing sustainable aviation fuel through propylene oligomerization-hydrogenation. The invention belongs to the technical field of sustainable aviation fuel preparation processes, and provides a green method for preparing sustainable aviation fuel through propylene oligomerization-hydrogenation. The method comprises the following steps: dehydrating, desulfurizing and purifying green propylene, performing selective oligomerization in a fixed bed reactor by adopting a solid acid catalyst at the temperature of 70-180 DEG C, under the pressure of 2-5MPa and at the air speed of 1-3h ⁻¹ to prepare an olefin oligomer, and rectifying to obtain unreacted propylene and C6 olefin; C6 olefin is separated and mixed with fresh propylene for recycling, the obtained C9-C15 olefin passes through a fixed bed reactor, a nickel-based catalyst is adopted for catalytic hydrogenation, the temperature is controlled to be 60-150 DEG C, the pressure is controlled to be 1-3 MPa, the H2/olefin molar ratio is controlled to be 2: 1-3: 1, the air speed is controlled to be 1-3 h ⁻¹ , it is ensured that olefin is completely saturated while cracking is avoided, after a product is subjected to gas-liquid separation, gas-phase H2 is recycled, and the C9-C15 olefin is recycled. And rectifying the liquid phase to obtain the sustainable aviation fuel meeting the ASTM D7566 standard.
CN121852079A	Univ Tsinghua (China)	Process and system for converting municipal solid waste into sustainable aviation kerosene component. The invention relates to a process and a system for converting municipal solid wastes into sustainable aviation kerosene components. The system comprises a cracking device, a condensing device, a solid waste treatment device, a gas purification device, an extraction device, a hydrogenation reaction device and a rectification device. According to the system and the process provided by the invention, the municipal solid wastes are converted into high-added-value products, the environmental benefits and the economic benefits are improved, and meanwhile, the conversion efficiency of the municipal solid wastes into sustainable aviation kerosene components is also improved.

Nº Publicación	Solicitante (País)	Contenido técnico
US20260159769A1	UOP LLC (USA)	Process for upgrading fischer-tropsch oil to synthetic paraffinic kerosene. Processes for converting Fischer-Tropsch products into synthetic paraffinic kerosene which can be used to make aviation. The process schemes provide the possibility of different degrees of isomerization of an unconverted oil recycle to maximize the distillate yields. Different process schemes can be employed depending on the type of Fischer-Tropsch feed, e.g., the distillate to wax ratio in the Fischer-Tropsch oil. The present invention provides routes to produce sustainable aviation fuel (SAF) from a Fischer-Tropsch complex with a lower level of isomerization leading to better SAF yields.
CN121825580A	Xinjiang Lyuyi Qihang Energy Tech Co Ltd (China)	System for preparing SAF by microwave heating of biomass. The invention discloses a system for preparing sustainable aviation fuel (SAF) by microwave heating of biomass. The system comprises a microwave pretreatment unit, a microwave conversion unit and a microwave hydrogenation fractionation unit which are sequentially connected, and an energy recovery unit and an intelligent alarm unit which are respectively connected with the three units. The microwave pretreatment unit is used for drying, degreasing and structure loosening of biomass raw materials; the microwave conversion unit is used for pyrolyzing, hydrolyzing and gasifying the pretreated biomass to generate an intermediate product; the microwave hydrogenation fractionation unit is used for hydrodeoxygenation and fractionation of the intermediate product to generate SAF; the energy recovery unit is used for recovering waste heat of each unit and assisting in heating; the intelligent alarm unit is used for regulating and controlling operation parameters of each unit. According to the system, the problems of uneven heating and the like in the prior art are solved through the multi-feed-port microwave cavity, the dielectric additive adding device and the microwave drying and loosening integrated device, and efficient, stable and low-energy-consumption conversion preparation of SAF from biomass is achieved.

BIOHIDRÓGENO

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026067547A1	Beijing Full Peng Tech Co Ltd (China)	Generator for hydrogen production from biomass. Disclosed in the present invention is a generator for hydrogen production from biomass, which generator belongs to the field of hydrogen production from biomass. The generator comprises: a pressure-bearing housing, wherein the pressure-bearing housing is divided into a first chamber and a second chamber arranged one above the other by a partition plate, a burner being provided at the top of the first chamber, and a slag-water outlet being provided at the bottom of the second chamber; and a gasification reactor, which is located in the first chamber and is in communication with the first chamber, wherein the gasification reactor comprises a combustion chamber and a steam generation chamber, the combustion chamber comprising a first combustion chamber and a second combustion chamber sequentially arranged from top to bottom, the diameter of the first combustion chamber being greater than the diameter of the second combustion chamber, the top of the first combustion chamber being connected to the burner, the bottom of the second combustion chamber being connected to the top of the steam generation chamber, and the steam generation chamber being in communication with the second chamber. The present invention can achieve hydrogen production from biomass, and has a high carbon conversion rate and thermal efficiency.
WO2026101452A1	Green Energy Invest Holding Pte Ltd (Singapore)	Method and system for hydrogen production. Disclosed herein is a method and system are provided for generating hydrogen from biomass through continuous thermochemical processing. Biomass is fed into a reaction chamber along a defined processing pathway, where it undergoes a primary thermochemical reaction to yield an intermediate gas containing hydrogen, carbon monoxide, and vapor-phase compounds. These vapor components are further processed in a secondary thermochemical step to enhance hydrogen content and reduce undesirable byproducts. The method includes active control of at least one of the temperature and residence time along the processing pathway to optimize hydrogen yield and purity. Both thermochemical processes operate concurrently and progressively along the pathway. The corresponding system comprises a reaction chamber integrated with a heating assembly configured to perform both thermochemical stages. Temperature and/or residency duration are precisely regulated to improve process efficiency and hydrogen purity, with the reaction stages occurring in tandem along the processing route.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121852095A	Harbin Inst of Technology (China)	Biomass cracking gasification hydrogen production device and method based on continuous injection filtering combustion. The invention relates to a biomass pyrolysis gasification hydrogen production device based on continuous injection filtering combustion, which comprises a reactor, a collecting bin and a fuel bin, the top of the reactor is provided with a feed port and a gas outlet, the bottom of the reactor is provided with a discharge port, the bottom of the reactor is communicated with the collecting bin, the discharge port is provided with a rotary grating, and the reactor is provided with a fuel inlet. The fuel inlet is located in the lower side wall of the high-temperature reaction area of the reactor and connected with a fuel conveying pipe, an outlet of the fuel bin is connected with the fuel conveying pipe, the collecting bin is connected with the steam generator and the air compressor, and the outer end of the fuel conveying pipe is connected with the air compressor. The invention further relates to a method for producing hydrogen through biomass pyrolysis gasification by adopting the device. According to the invention, the powdery biomass fuel can be continuously injected into the high-temperature reaction zone in the reactor, so that the fuel can be stably and efficiently combusted and gasified under the condition of super adiabatic temperature, synthesis gas which is high in calorific value and does not contain obvious pyrolysis tar is obtained, and nearly complete conversion of the fuel is realized.
CN121610536A	Hefei Comprehensive Science Center Environment Research Inst (China)	Method for enhancing hydrogen production of anaerobacter thermosaccharolyticus by utilizing polyaluminum chloride. The invention discloses a method for enhancing hydrogen production of anaerobacter thermosaccharolyticus by using polyaluminum chloride, and belongs to the technical field of hydrogen production by microbial fermentation. A method for enhancing hydrogen production of anaerobacter thermosaccharolyticus by using polyaluminum chloride comprises the following steps: S1, preparation of a seed solution: inoculating a strain into a seed culture medium for activation and amplification culture to obtain the seed solution; and S2, fermentation hydrogen production: inoculating the seed solution into a fermentation culture medium containing polyaluminum chloride, and carrying out anaerobic fermentation to obtain hydrogen. According to the method, the high-performance hydrogen production strain is combined with a polyaluminum chloride strengthening strategy, so that a considerable hydrogen production effect is obtained, and important technical support and reference value are provided for resource utilization of biomass wastes and industrial production of clean hydrogen energy.
KR20260052432A	UIF, Univ Industry Foundation Yonsei Univ (South Korea)	Primer Selecting Method for producing biohydrogen by using pure and mixed strains together and Molecular Biological Reactor Diagnosis and Operation Method by using pure and mixed strains together. The present invention is a method for selecting primers for biohydrogen production performed by a control server having a database and computational functions, wherein the method comprises: a step A100 in which at least one pure strain at the species level is selected as a target strain for each hydrogen-producing strain, hydrogen-consuming strain, and non-hydrogen-producing strain, respectively, in order to identify microorganisms involved in hydrogen production, hydrogen consumption, and non-hydrogen production in the biohydrogen production process at the control server; a step A200 in which a primer candidate group for each target pure strain is selected for each hydrogen-producing strain, hydrogen-consuming strain, and non-hydrogen-producing strain selected in the step A100; and a step A300 in which primers are finally selected for each hydrogen-producing strain, hydrogen-consuming strain, and non-hydrogen-producing strain from the primer candidate group of the step A200 by utilizing gDNA obtained through the cultivation of each target pure strain for which primer candidate groups were selected for each hydrogen-producing strain, hydrogen-consuming strain, and non-hydrogen-producing strain.
CN121781175A	Univ Central South (China)	Biological hydrogen type electrolytic tank. The invention discloses a biological hydrogen type electrolytic tank, and relates to the technical field of biological hydrogen production. The biological hydrogen type electrolytic tank is composed of an anode-microchannel electrolytic tank-proton exchange membrane (PEM)-cathode structure; the anode material adopts TiO ₂ -C spraying modified carbon cloth, and the carbon cloth provides adsorption sites for shewanella, can digest organic matters generated by the II-stage device and generate bioelectricity, so that the electrolysis voltage is reduced; the micro-channel electrolytic cell is made of a nickel plate material, so that heat transfer and liquid flow are promoted, and pressure is reduced; a TiO ₂ -C-coated Co-Ni-FeO-coated SiO ₂ catalyst is adopted as a cathode material, and the limitation of a single metal activity point is broken through. According to the method, BioH ₂ -MEC and a novel catalyst are designed through a light-electricity-biology synergistic electrolytic catalysis system, high-oil-content chlorella obtained after dark reaction and by-products such as acetic acid and ethyl alcohol are electrolyzed with high efficiency and low energy consumption, hydrogen and by-product rhzomorph are further obtained, and the energy conversion rate and economic benefits of the system are improved.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121780314A	Univ Henan Agricultural (China)	System and method for converting agricultural and forestry wastes by coupling photosynthetic hydrogen production with microwave pyrolysis. The invention is suitable for the technical field of biomass energy conversion, and provides a photosynthetic hydrogen production and microwave pyrolysis coupled agricultural and forestry waste conversion system and method, and the system couples a photosynthetic biological hydrogen production device and a microwave pyrolysis device in sequence. The method comprises the following steps: firstly, carrying out photosynthetic fermentation on agricultural and forestry wastes, and converting easily degradable components by utilizing microorganisms to generate hydrogen; and then the fermentation tailings are subjected to microwave pyrolysis, and refractory components are converted into hydrogen, biochar and pyrolysis gas. Through cascade integration of a biological method and a thermochemical method, efficient and oriented conversion of all components of the agricultural and forestry waste is achieved, the total energy recovery efficiency and the resource output value are remarkably improved, clean hydrogen, high-adsorbability biochar and liquid chemicals are synchronously produced, and remarkable economic and environmental benefits are achieved.
CN121610407A	Univ Shandong Technology (China)	Bacillus velezensis with hydrogen production performance and application thereof. The invention discloses bacillus velezensis with hydrogen production performance and application of the bacillus velezensis, and relates to the field of microorganisms. The bacillus velezensis is preserved in China General Microbiological Culture Collection Center (CGMCC) on November 19, 2025, the preservation address is No.3, No.1 yard, Beichen West Road, Chaoyang District, Beijing, and the preservation number is CGMCC No.36679. The bacillus velezensis has the multi-enzyme secretion capability of amylase, cellulase, protease and lipase, and can produce hydrogen by using saccharide, cellulose and grease organic wastes at the same time. When glucose is used as a substrate, the hydrogen production capacity of the strain can reach 1.43 mol H ₂ /mol glucose, the hydrogen production performance of the strain on kitchen garbage and other composite organic waste is excellent, and high-value conversion of low-value organic waste can be achieved. The invention fills the technical blank of multi-metabolic potential hydrogen-producing strains, and provides an efficient strain for papermaking, oil expression and resource utilization of agricultural organic solid wastes.
CN121735204A	Univ South China Tech (China)	Method for coupling biomass adsorption enhanced hydrogen production with CO₂ in-situ conversion. The invention discloses a method for coupling biomass adsorption enhanced hydrogen production with CO ₂ in-situ conversion, aiming at the problem of disposal of CO ₂ generated in a CaCO ₃ thermal decomposition (CaCO ₃ = CaO + CO ₂) process in an adsorption enhanced hydrogen production technology, the CO ₂ conversion process is directly coupled to the interior of an adsorption enhanced hydrogen production system, the biomass adsorption enhanced hydrogen production is coupled with CO ₂ in-situ conversion, and the CO ₂ in-situ conversion process is directly coupled to the interior of an adsorption enhanced hydrogen production system. According to the method, a closed loop of internal cyclic utilization of materials is realized, in-situ resource utilization of CO ₂ is realized, high energy consumption and economic cost generated in links of CO ₂ compression, transportation, storage, monitoring and the like in a traditional CCS technology are effectively avoided, and meanwhile, a new way is provided for efficient and clean utilization of biomass energy. The method has important engineering application value and environmental benefits.
CN121638972A	Univ Tianjing (China)	Biomass green hydrogen product preparation system evaluation method based on multi-dimensional coupling indexes. The invention discloses a biomass green hydrogen product preparation system evaluation method based on a multi-dimensional coupling index, and relates to the technical field of environmental energy engineering, and the method comprises the steps: building a full-life-cycle material flow and energy flow data list through building a technological process model covering biomass green hydrogen product preparation multiple technical paths; and multi-dimensional collaborative evaluation of environment-economy-planning-resource efficiency of the biomass green hydrogen product preparation system is realized. 18 intermediate point indexes and three types of end point damage conversion mechanisms are fused, and a standardized evaluation system is established in combination with a planning target value and an industry reference, so that the systematicness and comparability of environmental impact evaluation are remarkably improved. Fixed asset investment, operation cost and multivariate income flow are integrated, a total factor financial accounting list and a green hydrogen product profit and loss balance selling price index system are constructed, a process economic feasibility threshold value is accurately identified, and project full life cycle income and risk evolution characteristics are considered.

OTROS BIOCOMBUSTIBLES (DIÉSEL RENOVABLE; PRECURSORES: BIO-OILS, BIO-NAFTAS, BIO-HEAVY OILS; BIOPROPANO; BIOBUTANO; BIO-LPG; BIOCOMBUSTIBLES MARINOS; BIO-DIMETIL ÉTER)

Nº Publicación	Solicitante (País)	Contenido técnico
US20260167882A1	Afton Chemical Corp (USA)	Demulsifier for renewable diesel. Described herein are fuel performance additives suitable for renewable diesel, renewable diesel including such additive, methods of improving the demulsibility of renewable diesel using fuel performance additives, and the use of a fuel performance additive to improve the demulsibility of renewable diesel. The fuel performance additive includes a quaternary ammonium salt and an alkoxylated alkyl phenol formaldehyde resin demulsibility agent.
US12617677B1	Boeing Co (USA)	Process and apparatus for producing renewable fuels. Aspects of the present disclosure generally relate to processes and apparatus for producing fuels and fuel compositions. In an aspect, a process for converting a carbon-containing feedstock is provided. The process includes drying a carbon-containing feedstock comprising biomass to form a terpene stream and a dried carbon-containing material, and hydrotreating the terpene stream to form a first hydrocarbon stream. The process further includes gasifying the dried carbon-containing material to form syngas, converting the syngas to a second hydrocarbon stream, and introducing the first hydrocarbon stream and the second hydrocarbon stream to form a fuel composition.
GB2701768A	Calor Gas Ltd (Great Britain)	Biopropane production process. A process for the selective production of biopropane from bio-derived aliphatic C3 ketones, aliphatic C3 aldehydes, or a combination thereof, wherein the process comprises contacting: (a) a feedstream comprising one or more aliphatic C3 ketones, one or more aliphatic C3 aldehydes, or a combination thereof and (b) hydrogen in the presence of a catalyst system comprising: (i) an alkali metal doped nickel catalyst material, and (ii) a zeolite catalyst material, heteropolyacid catalyst material, or a combination thereof; and wherein the feedstreams (a) and (b) are contacted at a temperature of from 100 °C to 300 C and a pressure of from 2 atm to 30 atm. In another aspect, a process for the selective production of biopropane from bio-derived aliphatic C3 alcohols, wherein the process comprises contacting: (a) a feedstream comprising one or more aliphatic C3 alcohols and (b) hydrogen in the presence of a catalyst system; wherein the catalyst system comprises: (i) a nickel catalyst material, and (ii) a zeolite catalyst material, heteropolyacid catalyst material, or a combination thereof; and wherein the feedstreams (a) and (b) are contacted at a temperature of from 100C to 300C and a pressure of from 2 atm to 30 atm.
CN121628658A	China Tobacco Guangdong Ind Co (China)	Method for preparing C10-C18 alkane from tobacco waste. The invention provides a method for preparing C10-C18 alkane by utilizing tobacco waste, which comprises the following steps: (1) mixing the tobacco waste and a solid acid catalyst, heating and reacting to obtain hydrolysate; (2) mixing the hydrolysate with an alkali catalyst for reaction to obtain a C10-C20 condensation product; (3) mixing and reacting the C10-C20 condensation product with a Ni-based catalyst and an alcohol solvent to obtain an oil-phase intermediate; and (4) mixing the oil-phase intermediate with a metal-loaded deoxidation catalyst and an alkane solvent for reaction to obtain the C10-C18 alkane, the process of the heating reaction in the step (1) is multi-section heating. According to the method provided by the invention, full-chain conversion from the agricultural and forestry wastes to the high-quality liquid fuel is realized, and a new technical approach is provided for green transformation and renewable fuel development of the tobacco industry.
KR102954089B1	DK Yueop Co Ltd (South Korea)	Bio heavy oil production method. The method comprises a first step (S1) of performing an esterification reaction by mixing a low-grade high-acid value oil with ethylhexyl alcohol under an acid catalyst and removing the generated moisture; a second step (S2) of washing the remaining acid catalyst after the esterification reaction and removing the moisture and acid catalyst through an oil-water separator; a third step (S3) of heating the mixture or dehydrating it under a vacuum to remove the remaining moisture after the washing process; a fourth step (S4) of recovering the ethylhexyl alcohol used in the esterification reaction using a distillation column after dehydration and purifying the reaction byproduct to extract bio-heavy oil; and a fifth step (S5) of mixing the extracted bio-heavy oil with vacuum-refined oil to produce a final product meeting bio-heavy oil specifications, wherein in the first step, the low-grade high-acid value oil consists of raw materials such as vegetable oil, waste cooking oil, palm oil, and waste oil, and the low-grade high-acid value oil is mixed with the ethylhexyl alcohol under an acid catalyst and for 1 to 3 hours at 60 to 100°C A method for producing bio-heavy oil characterized by performing an esterification reaction and removing the generated moisture to prevent a reversible reaction from occurring, thereby operating under a vacuum state of 350 mmHg or less.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121911385A	Energy Research Inst of Jiangxi Academy of Sciences (China)	Steel slag/expanded graphite compound for preparing bio-oil through biomass hydrothermal liquefaction, preparation method and application. The invention belongs to the technical field of preparation of bio-oil by a biomass hydrothermal liquefaction method, and particularly relates to a steel slag/expanded graphite compound for preparing bio-oil by biomass hydrothermal liquefaction as well as a preparation method and application of the steel slag/expanded graphite compound. The steel slag/expanded graphite compound comprises steel slag, expandable graphite, a dispersing agent and water in a mass ratio of 1: (0.05-0.1): (0.001-0.003): (0.6-1.0), and the expandable graphite is prepared by the following steps: oxidizing crystalline flake graphite by using an oxidizing agent to obtain graphite oxide, and intercalating the graphite oxide by using urea. Steel slag and expandable graphite are mixed and then subjected to ball milling treatment, particles of the steel slag and the expandable graphite are refined, and the expandable graphite is embedded into pores and cracks of the steel slag; the problem that pure steel slag is easy to agglomerate is solved, original pores of the steel slag are opened by thermal stress generated by expansion of the expandable graphite, reverse chambering is performed, the pores are communicated, meanwhile, a steel slag matrix is promoted to generate new microcracks, the specific surface area of the steel slag is greatly increased, and active sites on the surface of the steel slag are fully exposed; the utilization efficiency of the steel slag and the yield of the bio-oil are greatly improved.
WO2026126134A1	Eni SpA (Italy)	Fuel mixture comprising marine fuel and bio-oil. Fuel mixture comprising: (a) from 65% by weight to 98% by weight, preferably from 70% by weight to 97% by weight, of marine fuel; (b) from 2% by weight to 35% by weight, preferably from 3% by weight to 30% by weight, of bio-oil with a glyceride content comprised between 70% by weight and 100% by weight, preferably between 75% by weight and 100% by weight, with respect to the total weight of the bio-oil; the sum of (a) + (b) being equal to 100; wherein said marine fuel has the following characteristics: - a density, at 15°C, comprised between 890 kg/m ³ and 1020 kg/m ³ , preferably comprised between 910 kg/m ³ and 1010 kg/m ³ ; - a kinematic viscosity, at 50°C, comprised between 6 mm ² /s and 1950 mm ² /s, preferably comprised between 20 mm ² /s and 1900 mm ² /s, more preferably comprised between 35 mm ² /s and 1850 mm ² /s; - a total amount of hot post-filtration sediment (TSA - Total Sediment Aged) less than or equal to 0.1% m/m; - an acidity (TAN - Total Acid Number) less than or equal to 1 mg KOH/g, preferably comprised between 0.05 mg KOH/g and 0.5 mg KOH/g; - a Conradson carbon residue (CCR) less than or equal to 20% m/m. Said fuel mixture can advantageously be used, as such, or mixed with other renewable or fossil marine fuels, in combustion engines for ships.
KR20260057305A	The K S Corp (South Korea)	Bio-heavy oil manufacturing Method including enzyme-based degumming and water removal process. The present invention relates to a method for producing bio-heavy oil including an enzyme-based degumming and moisture removal process, comprising: a raw material storage and supply step (S1); an enzyme degumming step (S2); a moisture removal step (S3); and a bio-heavy oil storage step (S4); wherein in the raw material storage and supply step (S1), the raw material is stored in a storage tank (1) and supplied to a main reactor (4) through a mixer (7); in the enzyme degumming step (S2), degumming is performed using lipase or esterase within the main reactor (4); in the moisture removal step (S3), the process of removing moisture in the main reactor (4) uses a solid adsorbent such as silica gel or zeolite; and in the bio-heavy oil storage step (S4), the bio-heavy oil from which moisture removal is completed is stored in a storage tank (5)
US20260139195A1	US Navy (USA)	Sustainable 2-Alkyltetrahydrofuran Fuels for Compression Ignition Engines. The current invention describes a high-throughput catalytic process for the production of diesel fuel from domestic agricultural products, furfuraldehyde and plant fatty acids. In the present process, reacting medium and long chain fatty anhydrides (such as capric, caprylic, lauric and palmitic) with furfuraldehyde by a Perkin condensation produces 2-n-alkenylfurans. In a second step, the 2-n-alkenylfurans are hydrogenated to form 2-n-alkyltetrahydrofurans. Basic fuel property testing (melting point, density, kinematic viscosity, derived cetane number and calorific value) of the 2-n-alkyltetrahydrofurans indicates they are potentially useful as fuels for diesel engines. One mixture composed of 2-octyl- and 2-decyltetrahydrofuran had the best combination of fuel properties including a low melting point (-39° C.), high cetane number (63.1), high flash point (98.2° C.) and low viscosity (2.26 mm ² /sec, 40° C.) which compares favorably with specifications for diesel #2 and biodiesel.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121593928A	Zhang Yinghua (China)	Fuel oil supply system of biomass fuel oil external combustion engine automobile and control method. The invention discloses a fuel oil supply system of a biomass fuel oil external combustion engine automobile and a control method. When the temperature in an inner box is lower than 0 DEG C, the voltage of low-voltage direct current is increased, and when the temperature in the inner box is higher than 1 DEG C, the voltage of the low-voltage direct current is decreased; when an automobile is started, the permanent magnet synchronous motor drives the external combustion engine to rotate, then the fuel oil pump is started, fuel oil near the stainless steel expansion pipe is pumped out, and the fuel oil is sprayed out of the fuel oil nozzle through the fuel oil electric control valve and is ignited by air plasma flames. Generated high-temperature and high-pressure gas enters an air cylinder of the rotary piston engine through an air inlet valve to push a rotary piston to rotate, hot gas coming out of the rotary piston engine enters the thermomagnetic motor to amplify alternating current of the thermomagnetic motor to drive a rotor of the thermomagnetic motor to rotate, and waste heat gas coming out of the thermomagnetic motor enters the exhaust pipe. One part enters a fuel tank heating pipe, and the other part enters a cab heating pipe.

MATERIALES BIOBASADOS

BIOPOLIMEROS Y BIOPLÁSTICOS		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026098502A1	Basf SE (Germany) et al.	Bio-based polyamide composition having high laser transmittance. The present invention relates to a polyamide composition comprising the following components based on the total weight of the polyamide composition: (A) 30-60wt% of a polyamide blend comprising a semi-aromatic co-polyamide and an aliphatic polyamide; and (B) 40-70wt% of a reinforcing agent; wherein at least one of the semi-aromatic co-polyamide and the aliphatic polyamide is derived from a bio-based monomer. The present invention also relates to an article produced through the polyamide composition.
WO2026097174A1	Biopolatis Solution Inc (Canada)	Method for producing compostable bioplastics. A method for producing a bioplastic from organic feedstock from food and agriculture sources is described, which involves creating a blend of organic feedstock, catalyst(s), starch(es) and plasticizer(s), which is fed through a reactive extruder. The catalyst(s) are metal ions. By controlling the operating conditions of the reactive extruder and the catalysts and amylose content of the starch(es), compostable bioplastics can be created with controlled tensile strength and elasticity without the use of extraction steps that create environmentally harmful waste products.
US20260167805A1	Jain Bhav (USA)	Synthetic bioplastic and method of making the same. A synthetic bioplastic may include approximately 1.125 parts by weight of apple peel agar powder; approximately 1.125 parts by weight of orange peel agar powder; approximately 1.125 parts by weight of sargassum agar powder; approximately 1.125 parts by weight of a water-activated polyurethane formula; and approximately 110 parts by weight of water.
WO2026110812A1	Kaneka Corp (Japan)	Method for producing polyhydroxyalkanoate. The present invention addresses the problem of providing a method for producing PHA, the method being capable of suppressing a decrease in molecular weight and suppressing the generation of fine powder. The problem is solved by a method for producing PHA, the method comprising: (a) a step for enzymatically treating a culture solution containing PHA-containing bacterial cells to obtain a PHA aqueous suspension; (b) a step for heating the obtained aqueous suspension at (Tm-50) °C to (Tm-25) °C; (c) a step for further heating the obtained aqueous suspension at (Tm-17) °C to (Tm-2) °C; and (d) a step for cooling the obtained aqueous suspension, wherein the pH of the aqueous suspension during the heating is 2.0 to 5.0.
KR20260071903A	Nakdonggang National Inst of Biological Resources (South Korea)	KGP1-12 Novel Chlorella sp. KGP1-12 microalgae that produces high levels of polyhydroxyalkanoate and method for inducible production of polyhydroxyalkanoate using thereof. The present invention relates to a novel Chlorella genus KGP1-12 microalgae used in the production of poly-3-hydroxybutyrate (PHB) and polyhydroxyalkanoate (PHA) derived from the same monomer, and more specifically, to a novel Chlorella sp.) KGP1-12 microalgae; a composition for producing poly-3-hydroxybutyrate and/or polyhydroxyalkanoic acid comprising said microalgae; and a method for producing poly-3-hydroxybutyrate and/or polyhydroxyalkanoic acid by culturing said microalgae.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026104760A1	NG Nordic Finland OY (Finland)	A fermentation process. According to an example aspect of the present invention, there is provided a continuous fermentation process for producing at least one polyhydroxyalkanoate. The process comprises the steps of: producing a fermentation broth comprising a biomass in at least one primary bioreactor, and passing the fermentation broth through secondary bioreactors for producing at least one polyhydroxyalkanoate. In the process the biomass comprises at least one microorganism capable of producing the at least one polyhydroxyalkanoate, and pH within the bioreactors is maintained in the range of 6 to 8 by addition of a carbon source and a nitrogen source. The carbon source is a volatile fatty acid or a mixture of volatile fatty acids, and the nitrogen source is ammonia, ammonium hydroxide, or an ammonium salt or a combination thereof, and the carbon source and the nitrogen source are added to the at least one primary bioreactor in a molar ratio ranging from 5:1 to 30:1, and to the secondary bioreactors in a molar ratio ranging from 70:1 to 150:1.
WO2026071767A1	Univ Ewha Ind Collaboration et al. (South Korea)	Recombinant microorganism having ability to produce pha copolymer, and method for producing pha copolymer using same. The present invention relates to a recombinant microorganism having the ability to produce a polyhydroxyalkanoate (PHA) copolymer, and a method for producing a PHA copolymer using same. More particularly, the present invention relates to a recombinant microorganism having the ability to produce a PHA copolymer containing 3-hydroxyalkanoate (3-HHx) as a monomer, in which a gene encoding a PHA synthase derived from an Aeromonas sp. strain is introduced or amplified, and to a method for producing a PHA copolymer using same.
WO2026127648A1	Univ Korea Res & Bus Found (South Korea) et al.	Method for producing polyhydroxyalkanoate using microalgal biomass hydrolysate. The present invention relates to a method for producing polyhydroxyalkanoate using a microalgal biomass hydrolysate. According to the present invention, PHA productivity can be improved by using a microalgal biomass hydrolysate for PHA production, and the chain length of PHA can be controlled according to the accumulation levels of lipids and carbohydrates in microalgae. Accordingly, the present invention provides the advantage of enabling the customized production of PHA having physical properties suitable for various applications. In addition, the present invention can replace existing biomass and can be effectively applied to PHA production processes requiring cost-effectiveness and eco-friendliness.
WO2026083069A1	Univ Nottingham (Great Britain)	PHB production in methylotrophs with reduced Phaz activity. Methods for the production of poly-3-hydroxybutyrate (PHB) in methanotrophic bacteria are disclosed. The methods involve genetic deletion of the PhaZ and/or PhaZ2 enzymes (or orthologues thereof), or reduction of their catalytic activity. The methods are particularly suited to methanotrophic species such as M. parvus, M. rosea, M. trichosporium. Related methods, uses, and products are also disclosed.
WO2026109952A1	Virginia Tech Intellectual	Method for producing polyhydroxyalkanoates from biomass. A method for producing a polyhydroxyalkanoate from biomass is described herein. The method can include providing a biomass stream; treating the biomass stream in an anaerobic digestion reactor to provide a treated biomass stream comprising volatile fatty acids; contacting the treated biomass stream with halophilic microorganism to produce the polyhydroxyalkanoate intracellularly; and extracting the polyhydroxyalkanoate from the halophilic microorganism.

BIOCOMPOSITES

Nº Publicación	Solicitante (País)	Contenido técnico
US20260092192A1	Armstrong World Ind Inc (USA)	Wood-fiber cement building panels and methods for manufacturing. A building panel includes a substrate having a first major surface opposing a second major surface. The substrate includes a composite body having a cellulosic matrix and a binder composition including magnesium sulfate and magnesium oxide, a first coating including sodium silicate, and a water-resistant coating including one or more of magnesium sulfate, paraffin, and silicone.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026089958A1	California Inst of Techn et al. (USA)	Tunable biocomposite materials and related particulate, compositions, methods and systems. Methods for engineering a tuned biocomposite, engineered bio-powders used therein, and the resulting biocomposite, are described, as well as method for engineering the biopowder and related devices methods and systems The engineered bio-powder comprises discrete particles derived from a dried biomass and is characterized by a specific biochemical composition of protein, lipid, and carbohydrate content, as well as by a controlled particle aspect ratio distribution. The method for engineering the biopowder comprises pulverizing the biomass to achieve a target particle morphology, such as a granular powder for stiffness or a filamentous powder for toughness, and then consolidating the powder via an aqueous plasticization or a thermo-mechanical route. The method for engineering the biopowder and/or to manufacture the biocomposite from the engineered biopowder can include incorporating additives, such as fillers, and applying surface treatments, like a bio-epoxy coating, to engineer interfacial adhesion.
GB2701289A	Cellment Ltd (Great Britain)	Biocomposite. A composite comprising a particulate and cellulose binders, in particular a primary binder (e.g. potato starch) and a secondary binder (e.g. a first and a second cellulose material). This may be a hydroxylated cellulose such as hydroxypropylmethyl cellulose (HPMC) or cellulose fibres. The particulate material may be sand, coffee grounds, etc. Strong, rigid composite materials can be used in manufacturing or art, and are more acceptable than non-biodegradable and non-recyclable alternatives.
WO2026128659A1	Ecovative LLC (USA)	Mycelium-based biopolymer composites with isocyanate crosslinking and integrated bio-based fillers. A method of forming a mycelium-based biopolymer composite from a mycelium-based biopolymer sheet, panel or slab that has been exposed to deacetylation, utilizes isocyanate chemistry, polyurethane infusion, and/or bio-based fillers to create a robust, hydrophobic, and highly customizable material. The resulting biopolymer composite may be used as a durable mycelium leather alternative, with enhanced flexibility, moisture resistance, and structural integrity.
US20260139120A1	Endeavor Composites Inc (USA)	Method for fabricating composite materials with direct capture nanoscale particles and sustainable macroscale fibers using a wet-laid process. A method of manufacturing composites is described herein. The composites are made from a composite materials including electrochemically-synthesized carbon structures manufactured using CO2 as a carbon source. The composite structures can further include cellulosic fibers and carbon waste fibers. The composites are manufactured in a system for dispersing the polymer composite material in a medium. The system includes a vessel configured to receive a volume of a medium including a quantity of fibers; one or more agitators that each comprise a stirring element that is movable in a pattern within the vessel to mechanically agitate the medium; and a drive system connected to the one or more agitators, the drive system comprising a gear assembly configured to translate rotation of the gear assembly into a pattern of movement for a respective stirring element.
US20260132284A1	Equilisyn LLC (USA)	Agricultural-waste-based composite articles and resin systems for their fabrication. A bio-based molded article is formed from a composition that includes a cross-linkable resin and agriculture (agro) waste in the form of at least one of particles and fibers.
RO139596A2	Institutul Nat de Cercetare Dezvoltare Textile Pielarie (Romania)	Composition for polymeric biocomposites based on butadiene-styrene block copolymer, polypropylene and coffee grounds. The invention relates to elastic-plastic materials for polymeric biocomposites based on butadiene-styrene block copolymer, polypropylene and coffee grounds, the materials having applicability in the footwear industry, automotive industry and other fields. According to the invention, the elastic-plastic materials are polymeric biocomposites with the following composition, expressed in parts by weight: 100 parts of butadiene-styrene block copolymer, 50...90 parts of polypropylene, 3...8 parts of polypropylene grafted with maleic anhydride, 0...1 parts of antioxidant, 0...1 parts of stearic acid, 0...4 parts of alkylphenol resin, 0...0.8 parts of dihydrated tin chloride, 1...30 parts of coffee grounds, 0...5 parts of polydimethylsiloxane and they may also contain 0...10 parts of other ingredients such as plasticizers and flowing agents.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026084009A1	Oji Holdings Corp (Japan)	Cellulose fibers, aqueous dispersion of cellulose fibers, rubber composite material and method for producing same, rubber compound, and crosslinked rubber composition. The present invention relates to providing: cellulose fibers which, when added to a rubber component, achieve an excellent modulus improvement effect in a low elongation region in a crosslinked rubber composition obtained after crosslinking, and which can maintain a satisfactory tensile elongation of the crosslinked rubber composition; an aqueous dispersion of said cellulose fibers (an aqueous cellulose fiber dispersion); a rubber composite material containing a rubber component and said cellulose fibers; a rubber compound containing said rubber composite material and a crosslinking agent; a crosslinked rubber composition obtained by crosslinking said rubber compound; and a method for producing the rubber composite material. When the cellulose fibers according to the present invention are subjected to centrifugal separation as an aqueous dispersion having a solid content concentration of 0.2 mass% under the conditions to obtain a precipitate and a supernatant liquid, the precipitate includes coarse cellulose fibers and has an irregular freeness of 950 mL, and solid matter in the supernatant liquid includes fine fibrous cellulose having fiber diameters of 100 nm or less. Conditions: Centrifugal separation at 12,000 G for 10 minutes.
WO2026094407A1	Shinetsu Chemical Co et al. (JP)	Biomass-resin composite and method for producing same. This biomass-resin composite has non-chemically modified biomass nanofibers dispersed in at least one resin, and does not contain, as a dispersant, a dispersant soluble in water or a water-soluble alcohol other than the biomass nanofibers.
WO2026116600A1	Univ Chung Ang Ind Acad Coop Found (South Korea)	Method for preparing biopolymer-based phase change heat dissipation composite and phase change heat dissipation composite prepared thereby. The present invention provides a method for preparing a biopolymer-based phase change heat dissipation composite, the method comprising: a step for inducing an esterification reaction between polyethylene glycol (PEG), which is a phase change material, and poly lactic acid (PLA), which is a biopolymer, using a catalyst to prepare a phase change matrix; a step for mixing the phase change matrix with a thermally conductive filler to prepare a mixture; and a molding step for molding the mixture. The phase change heat dissipation composite prepared by the method has excellent stability due to suppressing leakage of the phase change material, and exhibits high thermal conductivity and mechanical properties.

PRODUCTOS Y MATERIALES TRANSFORMADOS (FILMS, LAMINADOS ACABADOS, PANELES, TEJIDOS, CÁPSULAS, ENVASES, ETC.)

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026102791A1	China Leather and Footwear Research Inst Co Ltd (China)	Biomass nanofiber membrane, and preparation method therefor and use thereof. The present invention provides a biomass nanofiber membrane, and a preparation method therefor and a use thereof. The biomass nanofiber membrane is formed by interweaving fibers. The diameter of the fibers ranges from 100 nm to 280 nm. The fibers are derived from fiber raw materials, including a modified polysaccharide, gelatin, and a collagen peptide; and in parts by mass, the content of the modified polysaccharide is 8-24 parts, the content of the gelatin is 4-12 parts, and the content of the collagen peptide is 2-10 parts. The biomass nanofiber membrane of the present invention is derived from biomass materials, and has the advantages of good biocompatibility and being environmentally friendly and low-carbon. The biomass nanofiber membrane of the present invention has the advantages of a small fiber diameter, high strength, high toughness, etc., effectively increasing the loading capacity of active components; and in addition, the increase in the strength and toughness can improve the use experience of consumers.
EP4711125A1	Corapack SRL (Italy)	Breakable film for beverage extraction capsules, method of manufacturing the same and related capsule. A breakable composite film, the manufacturing method thereof, and a related capsule for extractable substances are disclosed, wherein the film comprises: a first support layer (2) of PLA-based nonwoven fabric, coupled, by means of a first adhesive layer (4), to a cellulose based barrier layer (3), so as to define an inner side on said support layer (2) and an outer side on said barrier layer (3), wherein said barrier layer (3) is coupled on the outer side, through a second adhesive layer (7), to a fracture control layer (5) based on microperforated paper having a plurality of micro-holes (6) with a diameter between 0.25 and 0.80 mm, and wherein said adhesive is in an amount from 1.5 to 3.5 g/m ² , preferably between 2 and 2.5 g/m ² .

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026120902A1	ES Indorama Ventures Co Ltd (Japan) et al.	Heat-fusible composite fiber and nonwoven fabric using same. The present invention provides: a heat-fusible composite fiber allowing for a reduction in the consumption of fossil resources and enabling the production of a bulky nonwoven fabric that is resistant to shrinkage during processing; and a nonwoven fabric using the same. The heat-fusible composite fiber is formed from a polylactic acid resin as a core component and a polyethylene resin as a sheath component, wherein the biomass-derived carbon content of the sheath component is 40% or more, and the fiber length heat shrinkage when applying a heat treatment at 130°C for 30 min is 1% or less.
WO2026093260A1	Fitesa Germany GmbH (Germany)	Nonwoven fabric and process for forming the same. The present invention provides a A nonwoven fabric comprising a plurality of spunbond fibers that form a nonwoven web, wherein the fibers are continuous monocomponent fibers which comprise one or more polylactic acids, wherein the one or more polylactic acids are present in an amount in the range of from 67.5-99.49 wt%, based on the total weight of the monocomponent fibers, wherein the monocomponent fibers further comprise a calcium carbonate in an amount which is in the range of from 0.5-30 wt%, based on the total weight of the monocomponent fibers, wherein the calcium carbonate has an average particle size in the range of from 1 µm to 6 µm, wherein the monocomponent fibers also comprise at least one secondary alkane sulfonate which is present in an amount of 0.01-2.5 wt%, based on the total weight of the monocomponent fibers, and wherein the nonwoven web has a side with a surface having a bonded area, and wherein the bonded area is more than 9% of the total surface of the side. In addition, the invention further provides a process for preparing the nonwoven fabric, and an article comprising the nonwoven fabric.
WO2026085526A1	Monosol LLC (USA)	Water-soluble films with polyvinyl alcohol (PVOH) and natural polymer blends. Water-soluble films comprising: a film-forming resin; and optionally, a plasticizer; wherein: the film-forming resin comprises a mixture of a water-soluble polyvinyl alcohol (PVOH) and a biopolymer (or natural polymer); the PVOH is present in an amount up to about 40 wt.%, based on the total weight of the film-forming resin; and the biopolymer is present in an amount of at least about 60 wt.%, based on the total weight of the film-forming resin; with the provisos that: (a) when the biopolymer comprises pullulan, pullulan is not the sole biopolymer in the film; and (b) when the biopolymer comprises starch, starch is not the sole biopolymer in the film. Multiple combinations of biopolymers are contemplated.
WO2026094443A1	National University Corporation Kyoto Inst of Technology et al. [Japan]]	Method for producing polylactic acid film, and polylactic acid film. This method for producing a polylactic acid film includes: an unstretched film production step for producing an unstretched film which is formed of a resin composition that contains at least one selected from a poly-DL-lactic acid, a poly-DL-lactic acid derivative, and a copolymer with a polylactic acid; an immersion step for immersing the unstretched film in water for a preset immersion time; and a stretching step for stretching the unstretched film in a first direction that is orthogonal to the thickness direction of the unstretched film after the immersion step. In the immersion step, the temperature of the water is 36°C to 38°C inclusive and the immersion time is 24 hours to 96 hours inclusive.
WO2026093186A1	Nestle SA (Switzerland)	Pulp-based container for beverage or foodstuff prepatation system. The invention concerns a container for use with a beverage preparation machine for preparing a beverage and/or foodstuff, the container for containing a beverage component and comprising a cup-shaped body portion having a storage portion for storage of the beverage component and an outwardly extending flange portion having a rim with a rim diameter D, wherein at least the flange portion is formed of a molded pulp-based material through molding of a pulp composition comprising: - an amount of cellulose fibers; - an amount of a sizing agent; - an amount of a wet strength agent, and - optionally, an amount of a dry strength agent. The invention also relates to a method of forming a container comprising a flange portion formed of a molded pulp-based material through molding of a pulp composition, for use with a beverage preparation machine for preparing a beverage and to a method of preparing a beverage and/or foodstuff using said container.
WO2026068820A1	Sika Tech AG (Switzerland)	Sustainable acoustic damping material. The invention relates to an acoustic damping material comprising: a) At least one thermoplastic polymer TP, b) At least one plasticizer PL, c) At least one tackifying resin TR, d) At least one wax W, e) At least 15 wt.-%, preferably at least 25 wt.-% of at least one solid particulate filler F, wherein the at least one plasticizer PL comprises at least one bio-based plasticizer and/or the at least one tackifying resin TR comprises at least one bio-based tackifying resin and/or the at least one wax W comprises at least one bio-based wax.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026115408A1	Stora Enso OYJ (Finland)	Thermoformable paperboard-based laminate and a method for manufacturing said laminate. The present invention relates to a thermoformable paperboard-based laminate comprising: a paperboard layer, said paperboard layer comprising: 50-99 wt% kraft fibers based on the total fiber content of the paperboard layer, and 1-50 wt% recycled fibers based on the total fiber content of the paperboard layer, wherein said recycled fibers are treated to remove fines, and refined to a Schopper Riegler value in the range of 14-30 as measured according to ISO 5267- 1; at least one compostable barrier layer applied on at least one side of the paperboard layer, wherein the barrier layer comprises a semicrystalline polyhydroxyalkanoate (PHA) polymer with strain at break of at least 5%; wherein the laminate exhibits a stretchability of at least 3% in the machine direction (MD) and a stretchability of at least 5% in the cross direction (CD).
WO2026096447A1	Western Research Inst (USA)	Lignocellulosic valorization for asphalt products. Methods of valorization of lignocellulosic feedstocks via bio-solvents to produce asphalt products are provided. In one embodiment, a method of valorizing a lignocellulosic feedstock includes: providing a lignocellulosic feedstock; contacting the lignocellulosic feedstock with a bio-solvent at a temperature selected from the range of 120 °C to 450 °C, thereby generating a liquid phase and a residue, the residue being an insoluble solid; distilling the liquid phase, thereby generating a distillate and a product; and producing.

BIOCHAR

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026122405A1	Abtech Industries Inc (USA)	Biochar materials for abatement of pollutants. Material compositions usable for abatement of various pollutants include particles of modified biochar material that are adhered to styrene-butadiene-styrene granules embedded in an M-Class rubber material. A modified biochar material is formed by additional heating of conventional biomass-based biochar. Also disclosed are (i) methods of synthesis of the modified biochar material, (ii) methods of synthesis of compositions that include the modified biochar material, (iii) products, including filter devices, that use such compositions, and (iv) methods employing those products for removing pollutants from a water stream.
WO2026074241A1	Agro Innovation Int (France)	Composition comprising a biochar and an aqueous grain legume extract. The present invention relates to a composition comprising a biochar and an aqueous grain legume extract, a process for preparing said composition, and the use of the composition for promoting seed germination, improving nutrient use efficiency in seeds, promoting seedling development, and improving abiotic stress tolerance in seedlings.
WO2026072524A1	Carbon Tech Holdings LLC (USA)	Processes and systems for making biographite utilizing a molten metal carbide reactor. The invention provides a process for producing biographite from a biocarbon feedstock, comprising: providing a metal-containing species that is a metal carbide or is capable of forming a metal carbide; feeding a biocarbon feedstock and the metal-containing species into a molten metal carbide reactor having a first reaction zone and a second reaction zone, wherein the first reaction zone is operated at a first-zone temperature selected to achieve a molten state comprising the metal carbide, and wherein the second-zone temperature is lower than the first-zone temperature; operating the molten metal carbide reactor to dissolve carbon (from the biocarbon feedstock) in the molten state, thereby generating dissolved carbon, and to produce biographite from the dissolved carbon; recovering biographite product; and recycling a portion of the biographite to the molten metal carbide reactor. The recycled biographite functions as a graphitization template to enhance formation of biographite from the dissolved carbon.

Nº Publicación	Solicitante (País)	Contenido técnico
CA3254231A1	Faridbensebaa (Canada)	Method, process and tools to produce, optimize and use of biochar and biocarbon. A method, process and tools to produce and optimize intermediary and final products using biomass feedstock are disclosed. These intermediary and final products are optimized using a data-driven computing application to satisfy technical, regulation, economic, environmental and social performance indicators. Partners, with direct and indirect stakes in making the intermediary and final products viable in the market, will use the same computing application to develop multi-level data, information and knowledge (DIK) hierarchical structure. Furthermore, operators and/or agents dynamically adapt field parameters to satisfy technical, regulation, economic, environmental and social indicators of the intermediary and final products. More specifically, the optimal aspect ratio, moisture content, and density of the intermediary product in one site is combined with the thermos-chemical apparatus and method in a distant site but close to the final use enabling the best performance of the final product. Compacted wood chips in high-density polyethylene packaging are shipped for long distances to produce biocarbon with the right attributes for use in steelmaking. A data-sharing platform method is disclosed for use by operators and decision-makers on both sites. This allows dynamic adjustment and optimization of critical parameters to reduce the cost and carbon footprint of the intermediary and final products.
WO2026122957A1	Foop Organic Biosciences Inc (USA)	Inoculated biochar compositions and systems and methods for producing and using same. Described herein are biochar compositions with live microorganisms that are inoculated using aquaculture waste filtrate. Also disclosed are methods and systems for making the biochar compositions, and methods for using the biochar compositions. This method involves providing an aquaculture system comprising fish, water with carbon and nitrogen, and live microorganisms, where the aquaculture system produces aquaculture waste. The method further involves filtering the aquaculture waste to produce an aquaculture waste filtrate comprising live microorganisms and contacting a biochar with the aquaculture waste filtrate under conditions effective to infuse the biochar with components of the aquaculture waste filtrate to produce a biochar composition.
WO2026119425A1	Jacobi Carbons AB (Sweden)	Method for large-scale preparation of magnetic activated carbons (MAC). The present invention relates to large-scale preparation method of Magnetic Activated Carbon (MAC) suiting the process of micropollutants (1) removal from a liquid by the steps of 1) pyrolysis of biomass at a temperature of 400 to 1000°C, in an inert atmosphere, 2) pulverizing the obtained charcoal and mixing with an iron oxide or iron salt in a proportion of 0.5 to 5 g iron per cm ³ of charcoal, 3) mixing the obtained mixture with a binder and optionally other extrusion aids, at elevated temperature of 50 to 500°C, followed by kneading and homogenizing, 4) extruding the mixture obtained at a pressure of 7 to 35 MPa in pelletized form having a diameter of 0.1 to 15 mm, 5) curing the obtained pellets from step 4), and 6) activating the pellets at a temperature of 700 to 900°C in an inert atmosphere with the addition of an activation agent.
WO2026127040A1	Tanigurogumi corp (Japan)	Biochar derived from chicken manure, method for producing same, and apparatus for producing same. Biochar as a sustainable alternative fertilizer that serves as a plant nutrient capable of being utilized in a recyclable manner in agriculture; a method for producing the biochar; and an apparatus for producing the biochar. [Solution] Provided is an apparatus for producing biochar using chicken manure as a raw material, the apparatus being characterized by comprising: a drying chamber for drying the chicken manure; a pulverization unit for pulverizing the dried chicken manure; a sieve unit for adjusting the grain size to a predetermined grain size; a carbonization furnace for heating the chicken manure after adjustment of the grain size to 250°C or higher but lower than 320°C under an oxygen-restricted atmosphere; an atmosphere control unit for controlling the atmosphere in the carbonization furnace; and a cooling unit for cooling the biochar after carbonization. The biochar obtained by the production apparatus is obtained by thermally decomposing a chicken manure fertilizer at a low temperature. Since nitrogen can be recovered from nutrient-rich biomass and carbon can be retained and isolated, the biochar is effective as a nutrient source to be applied to soil, can make recycling of biological resources and waste management efficient, and is superior to those obtained by conventional composting and hydrothermal carbonization.
US20260103384A1	Univ Jeonju Ind Univ Coop (South Korea)	Catalytic graphitization of bamboo charcoal for secondary battery applications and its preparation process. Provided are a method for economically preparing graphitized white charcoal having properties suitable for application to separators and electrodes of various batteries at a relatively low temperature, and to graphitized white charcoal prepared by the same.

Nº Publicación	Solicitante (País)	Contenido técnico
NL4000865A	Univ Shandong Agricultural (China)	A biochar-based structural conditioner specially for saline-alkali land and its preparation method and application. The present invention discloses a biochar-based structural soil conditioner specifically for saline-alkali land, as well as its preparation method and application, and belongs to the technical field of soil improvement. The invention provides the conditioner obtained by scientifically compounding phosphate- or citric-acid-modified biochar, a calcium-based conditioning agent, an organic-acid complexing agent, and salt-alkali-resistant functional microbial inoculants. The conditioner can remarkably reduce soil salt content and sodium adsorption ratio (SAR), effectively eliminate soil compaction, and greatly increase capillary porosity, thereby rapidly improving the physical structure, chemical environment, and microbial activity of saline-alkali soils. In addition, the present invention uses agricultural waste as the main raw material, making it environmentally friendly and low-cost. While achieving rapid reclamation of saline-alkali land, it can significantly increase the yields of crops such as wheat and corn, providing notable ecological and economic benefits and being suitable for large-scale popularization and application.
WO2026055802A1	Univ Xichang (China)	Method for preparing nitrogen-sulfur doped biochar material from canna flower and use of biochar material in dye wastewater adsorption. Preparation of nitrogen-sulfur co-doped canna flower-based biochar and a use thereof in the removal of malachite green in wastewater. The method comprises: washing, drying, and pulverizing a collected canna flower, mixing same with a certain amount of phosphoric acid in a beaker, adding an appropriate amount of deionized water, stirring same, loading a feed liquid into a hydrothermal kettle, and then placing same in an oven for hydrothermal treatment to obtain a canna flower-based hydrothermal carbon; uniformly mixing hydrothermal carbon powder with a certain mass ratio of thiourea and molten salt, placing the mixture in a muffle furnace for firing in air, cooling same with the furnace after firing is completed, finally taking out a sample, separating the molten salt, performing acid washing on the biochar, washing same with alcohol, washing same with water, and then drying same to obtain the nitrogen-sulfur co-doped canna flower-based biochar; and using the nitrogen-sulfur co-doped canna flower-based biochar to remove malachite green in wastewater. Compared with conventional carbon materials, the nitrogen-sulfur co-doped carbon material prepared by the method has greatly improved removal efficiency for malachite green in a water body. In addition, the preparation method provides a way to treat a biomass waste, saves costs, and realizes resource utilization of biomass wastes.

APLICACIONES BIOMÉDICAS

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026132388A1	Aesculap AG (Germany)	Implant for treating a defect of the dura mater, in particular for replacement and/or closure of the dura mater. The invention relates to an implant (1) for treating a defect, in particular for replacement and/or closure, of the dura mater. The implant (1) comprises a layer (2) with recombinant collagen and a fiber layer (3).
WO2026078060A1	Basf SE (Germany)	Tocopherol alkoxylates for biopolymer stabilization. The present invention relates to a buffered protein containing formulation comprising as stabilizing ingredient an amphiphilic surfactant. Said surfactant is formed by polyalkoxylating an α -tocopherol compound. The polyalkoxy residue is either a block copolymer or a statistical or random copolymer composed of a majority of ethylene oxide moieties and a smaller amount of propylene oxide and/or butylene oxide moieties. Said surfactant significantly improves stability, in particular aggregation stability of the protein formulation, while showing low hemolytic activity and good water solubility. Said surfactant is particularly suitable for preparing stabilized formulations of enzymes and immunoglobulin molecules as well as adducts and conjugates comprising such biomolecules. Said formulations may be provided in liquid or dry form and are suitable for the preparation of pharmaceutical compositions. According to another aspect of the invention the use of such formulations in medicine, in particular for diagnostic and/or therapeutic applications is provided. The present invention also relates to a method of preparing such formulations as well as a method for preparing such specific amphiphilic surfactants. According to a further aspect a method for preventing or suppressing protein aggregation of a liquid protein containing formulation in vitro by using an amphiphilic surfactant of the present invention as a stabilizer is provided. A prefilled syringe, comprising a reservoir prefilled with an amount of a formulation of the invention constitutes another aspect of the invention.

Nº Publicación	Solicitante (País)	Contenido técnico
EP4763232A1	Centre Nat Rech Scient (France)	System for preparing a pharmaceutical radioactive hydrogel and pharmaceutical composition for treatment of solid cancer. The present invention relates to a system for preparing a pharmaceutical radioactive hydrogel comprising (i) at least one hydrophilic polymer, particularly at least one polysaccharide derived from chitosan or hyaluronic acid, bearing at least one chelating group and (ii) at least one therapeutical radionuclide chelatable with said chelating group. It further relates to pharmaceutical compositions comprising said hydrophilic polymer and said therapeutical radionuclide chelated with the chelating group Rc of said hydrophilic polymer, their use for treatment of solid cancer, preferably by brachytherapy.
WO2026102020A1	Clearsight Therapeutics (USA)	Ophthalmic solution containing quaternary chitosan derivatives for treating ocular diseases. A pharmaceutical composition to be applied to an ocular surface is disclosed that includes a quaternized chitosan derivative to provide antimicrobial activity against gram-negative bacteria, gram-positive bacteria, fungi, and viruses as an active ingredient. This is combined with a cellulose compound acting as a viscosity agent and demulcent to protect and lubricate mucous membrane surfaces. This is further combined with a humectant and tonicity agent to retain moisture on the ocular surface and maintain a comfortable osmolarity for the eye. This is further combined with a buffer/pH adjuster system configured to support a physiologically tolerable pH of about 6.0 to 8.0. Finally, this is combined with purified water as a diluent.
WO2026125561A1	Glaxosmithkline Biologicals SA (Belgium)	Biopolymers for encapsulation. The present invention is inter alia directed to amphiphilic pH-sensitive polymers, wherein the polymer is soluble in an aqueous environment at a trigger physiological pH. Such polymers are suitable for encapsulation of a cargo, such as a biologically active constituent, to protect the cargo from undesirable interactions with co-formulated substances, such as in a parenteral formulation. The present invention is also directed to self-assembled particles, compositions, immunogenic compositions, and vaccines comprising such. Self-assembled particles, compositions, immunogenic compositions, and vaccines provided herein are suitable for use in medicine, in particular for the treatment or prevention of an infection, caused directly or indirectly by a pathogen.
WO2026085940A1	Shanghai Qisheng Biological Preparation Co Ltd (China)	Natural polymer polyelectrolyte microsphere, preparation method therefor, and use thereof. A natural polymer polyelectrolyte microsphere, a preparation method therefor and the use thereof. The microsphere has a covalent and non-covalent double cross-linked network structure formed by cross-linking a natural polymer and a polyelectrolyte, the degree of modification of the crosslinked natural polymer is 1.0-50.0%, the natural polymer being a compound that contains two or more carboxyl groups or amino groups or a combination thereof, and the polyelectrolyte being a compound that contains two or more carboxyl groups or amino groups or a combination thereof. The preparation method comprises: S1, dissolving a natural polymer and a polyelectrolyte in an aqueous phase to generate an electrostatic complex; S2, adding an enzyme to the electrostatic complex to perform incubation to form microspheres; and S3, adding a condensing agent and/or a cross-linking agent, removing the unreacted condensing agent and/or cross-linking agent, and performing sterilization to prepare the natural polymer polyelectrolyte microsphere. Also provided is the use of the microsphere as an embolic agent in interventional technology, or as an isolation and purification medium for proteins, antibodies and drugs, or as a cell and a drug carrier system, or as an orthopedic, surgical, ophthalmic and cosmetic medicine implant material.
WO2026068379A1	Skylab AG (Switzerland)	Chitosan hydrochloride dental formulation for enhanced enamel reinforcement, targeted oral pathogen biofilm disruption, and durable acid-resistant enamel protection. The invention relates to the use of chitosan hydrochloride as a tooth enamel remineralizing agent and dental or oral care products comprising chitosan hydrochloride for medical and aesthetic use.
WO2026047615A1	Tristarquality SNC (Italy)	Injectable device. The present invention regards a composition comprising hyaluronic acid and at least one collagen component. Preferably, the invention relates to a crosslinked hyaluronic acid hydrogel with at least one collagen component or derivative. The invention further regards a process for preparing the composition, and the medical uses and non-therapeutic uses of the composition.
WO2026102221A1	Univ California (USA)	Composite material for bone regeneration. Disclosed herein are scaffolds for osteogenesis comprising a first component and a second component, wherein the first component comprises mineralized collagen glycosaminoglycan (MC-GAG), and the second component comprises poly(D,L-lactide) (PDLLA). Also disclosed herein are methods of promoting osteogenesis and treating bone defects in a subject in need thereof.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026119975A1	Univ Zuerich et al. (Switzerland)	Polymer composition for implant manufacture. The present invention is directed to a method for manufacturing a bioresorbable polymeric medical implant and a polymeric composition for use in such a method. The inventive polymer blend comprises a PCL/PLA mixture in solution, and further comprises a compatibilizer. The inventive method comprises producing the inventive polymeric composition, and using said polymeric composition to form the selected implant, followed by heat treatment.

PRODUCTOS QUÍMICOS BIOBASADOS

FERTILIZANTES, DETERGENTES, SURFACTANTES, ADHESIVOS, ETC.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026128280A1	Arrmaz Products Inc (USA)	Green urease inhibitor coating. A fertilizer coating which includes a urease inhibitor, such as N-(n-butyl) thiophosphoric triamide ("NBPT"), a bio-renewable solvent, preferably the bio-renewable solvent comprises at least one from the group of glycerin, corn syrup, dextrin, sorbitol, and combinations thereof, a polar compound derived from a renewable feed stock, optionally green, preferably an aprotic compound, more preferably at least one of dimethyl isosorbide ("DMI"), valerolactone, cyrene, levoglucosan or combinations thereof, further preferably the dimethyl isosorbide, and preferably further comprising a water soluble dye is included herein. Also included is a coated fertilizer with the aforementioned fertilizer coating as well as methods of making the coating and the coated fertilizer.
WO2026112176A1	Biobond Adhesives Inc (USA)	Two-part epoxy floor coating with enhanced corrosion resistance and bio-based content. A novel two-part epoxy formulation that is bio-based, exhibits surprising durability comparable to or exceeding conventional petroleum-based epoxies, as well as improved corrosion resistance. The coating composition contains: (A) a bio-based epoxy resin; (B) a bio-based hardener; and (C) a corrosion inhibitor.
WO2026129013A1	Centro Nac de Pesquisa em Energia e Materiais (Brazil)	Composition, production process and starch-based adhesive. The present invention relates to a starch-based adhesive composition that allows the bonding of various materials, including paper, glass, aluminum, and polyethylene. This composition is free of volatile solvents (e.g., ammonia), is food-compatible, and exhibits adjustable adhesion based on starch concentration. In addition, the invention includes a process for producing the adhesive by extrusion, which is scalable for industrial production. The resulting adhesive is biodegradable, non-toxic, low-cost and produced without the use of water or organic solvents, using thermoplastic processes in its manufacture.
WO2026093368A1	Dosbio GmbH (Germany)	Procedures for producing solid biofertilizer from liquid bio digestion waste and said solid biofertilizer. Procedures for producing solid biofertilizer from liquid bio digestion waste by using equipment with a static or dynamic reactor, such that with a static reactor, granulation nuclei are coated with biol in combustion equipment, and with a dynamic reactor, granulation nuclei are coated with biol in atmospheric plasma equipment with electrical discharges. A procedure is also provided for producing solid biofertilizer from liquid bio digestion waste by combining a rotating dynamic reactor with electrical discharges with a static reactor with the entry of a flow of combustion gases from a burner that allows the gases to be injected into the rotating reactor as the electrical discharges occur inside the reactor. Solid biofertilizers comprising particles consisting of granulation cores coated with biol obtained by the procedures described.
WO2026090449A1	Gtack LLC (USA)	Adhesive or coating with anti-microbial and natural pesticides. An adhesive, and/or a biopolymer that contains Cinnamon and/or cinnamic acid, Tee Tree Oil, Rosemary or other natural essential oil or essence. In at least one embodiment the wt% of Cinnamon is 0.4%. In at least one embodiment the wt% of cinnamic acid is at least 5%. In at least one embodiment the wt% of cinnamic acid is 7%. In at least one embodiment the wt% of cinnamic acid is at least 10%. In addition, there is a process for applying a natural biocide. The adhesive can be combined with paper products, corrugated cardboard or building materials such as wood panels.
US20260152681A1	Hyundai Transys Inc (South Korea)	Biomass-derived adhesive composition for automotive interior materials and manufacturing method of automotive interior materials using the same. An adhesive composition for automotive interior materials and a manufacturing method of the automotive interior materials using the adhesive composition include: a first resin composition including biomass-derived carboxylic acid monomers and ethylenediamine monomers, a second resin composition including biomass-derived carboxylic acid monomers and hexamethylenediamine monomers, and a heat-resistant additive.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026123134A1	Investig Forestales Bioforest SA (Chile)	Process for manufacturing a natural adhesive using tannins. The invention relates to a process for manufacturing a natural formaldehyde-free adhesive for MDF wood boards, wherein the adhesive comprises a formulation containing at least three components, which come from renewable sources. These components are selected from tannins, sucrose, starch and citric acid. The process comprises oxidising the sucrose (partially or completely), providing condensed tannins, hydrolysing and oxidising the starch, if present, and mixing the components.
WO2026136541A1	Purdue Research Foundation (USA)	System and method for lignin ink composition. This disclosure relates to compositions of lignin that are useful in the chemical arts, such as in the manufacture of products, such as inks, films, and devices. In particular, the present disclosure pertains to tribonegative compositions and films including lignin, a binder such as gelatin, and a plasticizer such as urea.
ES3064611A1	Univ Granada (Spain)	Biofertilizer and production method. Biofertilizer and method of production. Biofertilizer composition comprising filamentous fungi of the species <i>Aspergillus niger</i> in the form of mycelia and/or spores grown in liquid fermentation submerged in a culture medium suitable for the growth of said microorganisms, supplemented with glycerol and an insoluble phosphate source. The biofertilizer may be presented in liquid form or immobilized in a calcium alginate gel.
WO2026126001A1	Univ San Francisco De Quito (Ecuador)	Natural resin adhesive composition for water-resistant wood products. The present development describes a natural resin adhesive composition for producing wood products, a method for obtaining the composition and a method for producing wood products using the adhesive composition. The development employs a plant extract characterised by the presence of metabolites with aldehyde or hydroxyl functional groups to replace formaldehyde or glyoxal in conventional resins. The wood products obtained using the natural resin adhesive composition of the present development have mechanical and antimicrobial properties comparable to commercial products, which makes them suitable for replacing conventional resins, providing a sustainable and biodegradable alternative.

PRODUCTOS COSMÉTICOS Y FARMACÉUTICOS

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026107401A2	Durairaj Kalpna Kay (USA)	Compositions and methods for targeted delivery of polylactic acid for hair growth. A composition for treating hair loss and stimulating hair growth, the composition comprising polylactic acid (PLA) particles or derivatives thereof, in a pharmaceutically acceptable carrier; wherein the composition further comprises bacteriostatic or deionized water and at least one excipient; wherein the PLA particles or derivatives thereof are suspended in the carrier. Further disclosed is a composition comprising poly-L-lactic acid (PLLA) particles for use in a method of stimulating hair growth on a scalp of a subject, wherein the PLLA particles are suspended in a pharmaceutically acceptable carrier, wherein the composition comprises bacteriostatic or deionized water and at least one excipient, wherein the PLLA particles function as a pro-drug that degrades in situ to provide a sustained release of lactic acid to follicular cells.
WO2026128424A1	Immunophotonics Inc (USA)	Compositions of chitosan and modified chitosans. The present disclosure relates to pharmaceutical formulations comprising chitosan or modified chitosan. The present disclosure also relates to glycosylated chitosans and to methods of enhancing immune system response to an antigen comprising administration of glycosylated chitosans and/or their pharmaceutical formulations.
WO2026125844A1	Laboratoires de Biologie Vegetale Yves Rocher (France)	Composition having improved foaming properties. The invention relates to the field of cosmetics, in particular emulsions, and the uses thereof in the cosmetic cleansing and care of keratin materials, preferably the hair, and of the skin, preferably the scalp, more particularly to the field of compositions such as cosmetic compositions in the form of a shampoo, conditioner, mask, hair serum, scalp protection serum, or hair and/or scalp scrub composition. The present invention relates to a cosmetic composition, in the form of an oil-in-water emulsion, comprising: from 5% to 25% of oily phase by mass relative to the total mass of the composition, from 75% to 95% of aqueous phase by mass relative to the total mass of the composition, characterized in that the aqueous phase comprises dehydroxanthan gum, and the oily phase comprises cetyl alcohol and glyceryl stearate citrate.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026068757A1	Laboratoires Gilbert (France)	Grateloupia turuturu extract and cosmetic use thereof. The present invention relates to a Grateloupia turuturu red algae extract and a cosmetic composition comprising thereof. The present invention also relates to a process for preparing a Grateloupia turuturu red algae extract by aqueous hot extraction. The present invention also relates to the use of said Grateloupia turuturu red algae extract as a cosmetic active ingredient, in particular as a slow-ageing agent.
WO2026120119A1	Microphyt (France)	Novel cosmetic uses of an oily extract of the microalga porphyridium cruentum. The present invention relates to the cosmetic use of a crude oily extract of the microalga Porphyridium cruentum or of an oily ingredient comprising same, for preventing the appearance and/or reducing the visibility of wrinkles and/or fine lines, in particular expression lines, and/or for smoothing the skin, and/or for improving sleep quality and/or reducing stress. The invention also relates to a cosmetic composition comprising the oily ingredient, and to a cosmetic care method comprising the topical application of the oily ingredient or the cosmetic composition comprising same.
WO2026100751A1	Oreal (France) et al.	Oil dispersion composition comprising biopolymer and ascorbic acid. The present invention relates to a dispersion composition comprising a continuous oily phase and a plurality of biopolymer complexes dispersed in the oily phase, wherein the biopolymer complex comprises: (a) at least one biopolymer; and (b) at least one ascorbic acid or a salt thereof. The composition according to the present invention is very suitable for a cosmetic composition in particular a topical cosmetic composition for caring for and/or conditioning a keratin material, such as skin.
WO2026093569A1	Skylab AG (Switzerland)	Biodegradable vegan chitosan hydrochloride for thermal hair protection, hair density, and anti-static effect. The invention relates to a hair care composition comprising chitosan hydrochloride in an amount of 0.10% -0.75% by weight of said composition and said composition has a pH in the range of 5-6. Said composition protects hair from heat, increases hair thickness and/or hair density, reduces or prevents the hair from buildup of static electricity and/or electrostatic discharge, and promotes hair cuticle repair.
WO2026062241A1	Unilever IP Holdings BV (Netherlands) et al.	Use of starch or its microbial metabolite for delivering personal care benefits. The present invention relates to delivering benefits related to maintaining a resilient microbiome on skin through a personal care composition, especially through wash off compositions like soap, body wash or shampoo. This is achieved by using starch or its microbial metabolite preferably in such compositions. It works by upregulating expression levels of Aquaporin-3, Claudin 1, Keratin- 4, Filaggrin- 1 or Desmoglein 1 on skin.
WO2026104743A1	Univ Vigo (Spain)	Method for obtaining a gramicidin s extract from microbial biomass and its use as an antimicrobial or antibiotic. The invention relates to a method for obtaining a gramicidin S extract from spore-forming Bacillus belonging to the genus Aneurinibacillus, characterised by comprising a solid-liquid extraction step using a solvent selected from the group comprising lactic acid, acetic acid, a biosurfactant extract obtained from corn steep liquors, or combinations thereof, at a temperature equal to or less than 40 °C. The invention also relates to the use of the gramicidin S extract obtained as an antimicrobial agent in the cosmetic and agrochemical industries, and as an antibiotic in the pharmaceutical industry.
WO2026104886A1	Unk Korea Co Ltd (South Korea)	Method for extracting low-molecular weight collagen using pollack skin, low-molecular weight collagen, and cosmetic composition comprising same with skin regeneration efficacy. The present invention relates to a method for extracting low-molecular weight collagen using pollack skin, low-molecular weight collagen, and a cosmetic composition comprising same with skin regeneration efficacy.

APLICACIONES EN ALIMENTOS Y PIENSOS

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026105082A1	Cereal Docks SpA (Italy)	A protein ingredient from sunflower seeds with neutral flavour and a method for obtaining it. The object of the present invention is a light-coloured protein ingredient from sunflower seeds with a taste and flavour suited for use in food preparations, for example of the dry and fresh pasta type, also gluten-free, cream, preferably spreadable cream, even more preferably sweet spreadable cream, or a preparation in powder form for beverages, preferably a preparation in powder form for a hot beverage. The protein ingredient of the invention is characterised by quantities having no influence on the flavour and taste of the chemical compounds naturally present in sunflower seeds that normally give an unpleasant flavour to food preparations based on sunflower seed meal. The object of the present invention is also the use of this protein ingredient in food preparations, preferably for human consumption, for example of the dry and fresh pasta type, also gluten-free, cream, preferably spreadable cream, even more preferably sweet spreadable cream, or a preparation in powder form for beverages, preferably a preparation in powder form for a hot beverage. Furthermore, an object of the invention is also a method for producing the protein ingredient in question, said method being characterised by mechanical dehulling and defatting (cold-pressing) associated with stripping by means of steam treatment of the chemical compounds that negatively affect the taste and flavour in said food preparations.
MX2026001324A	Colegio de Postgraduados (Mexico)	Microcapsules with oecopetalum mexicanum seed oil as a functional additive. The present invention belongs to the technical field of phytochemistry for health nutrition. The proposal of this invention relates to the formulation and process for the development of Oecopetalum mexicanum seed oil microcapsules, characterized by containing polyunsaturated fatty acids, phenolic and nutritional compounds (elements), known for their health benefits. The microencapsulation process implemented ensures the protection and stability of the bioactive components, resulting in microcapsules with a significant profile of unsaturated fatty acids. This profile includes a high concentration of essential fatty acids such as oleic acid, linoleic acid and alpha-linolenic acid, which are fundamental for the maintenance of cardiovascular health and cognitive function. One of the advantageous aspects of this invention is the ability of the microcapsules to inhibit oxidative reactants, which translates into greater oxidative stability of the encapsulated oil. In addition, the microcapsules present a nutritional composition relevant to the human organism, benefiting the consumer as a source rich in important minerals such as nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, copper, nickel, manganese, molybdenum and zinc. On the other hand, they have a low humidity and water activity, crucial features for extending the useful life of the product during storage. The cohesiveness of the microcapsules is another significant attribute, as it provides a robust and stable structure that facilitates its handling and transportation without compromising the integrity of the content. Also, these properties render the microcapsules ideal for incorporation into a variety of food products, providing not only nutritional but also functional benefits, by improving the stability and quality of the final product.
US20260076390A1	Crossno Tammy (USA)	Reusable Flavor-Dispensing Lollipop Device. The present invention relates to a reusable lollipop device that enables controlled dispensing of flavored gel. The device includes a hollow, elongated straw with a cavity for holding a flavored gel. A sucking head made of a durable and porous material is removably attached to the straw's top end and features miniature apertures for controlled gel release. The sucking head includes a straw-compatible hole to secure the top end of the straw, permitting the flavored gel to flow into the head when suction or pressure is applied. A method of using the device involves inserting a flavored gel-filled straw into the sucking head, sucking on the head to create a vacuum for gel release, and applying pressure to control the flow rate.
WO2026062159A1	Cultivated Biosciences SA (Switzerland)	Emulsified compositions comprising yeast oleosomes. The present invention relates to emulsified compositions comprising yeast oleosomes, water and exogenous lipids, wherein the total lipids in the emulsified composition to non-lipid solids in the oleosomes ratio is of (at least 0.8):1. It further relates to food products comprising such emulsified compositions. It also relates to the use of yeast oleosomes to emulsify exogenous lipids with water, wherein the yeast oleosomes are used in an amount such that the total lipids in the emulsified composition to non-lipid solids in the oleosomes ratio is of (at least 0.8):1. It finally relates to a process for the preparation of an emulsified composition comprising yeast oleosomes, water and exogenous lipids comprising admixing yeast oleosomes with the exogenous lipids, such as to obtain a total lipids in the emulsified composition to non-lipid solids in the oleosomes ratio of (at least 0.8):1 and emulsifying the mixture.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026106563A1	Deveci Danismanlik Gida Tekstil ve dis Ticaret Ltd Sirketi (Türkiye)	Liposomal formulation for the stabilization of edible gold particles in olive oil. The present invention relates to a novel liposomal system for incorporating nano-sized edible gold particles into olive oil. This system utilizes liposomes composed of phospholipids and, optionally, cholesterol to encapsulate gold particles within the olive oil, ensuring uniform dispersion and preventing clumping or sedimentation. The liposomal formulation enhances the aesthetic appeal of the oil by maintaining a shimmering effect, and it can be further stabilized with antioxidants to prevent oxidation and prolong shelf life. The invention provides a stable, visually appealing product suitable for use in premium food items, cosmetics, and luxury gift products. Methods for preparing the liposomal system include thin-film hydration, reverse-phase evaporation, and emulsification, each ensuring effective encapsulation of the gold particles. The system is biodegradable and free from synthetic surfactants, aligning with growing demands for natural and sustainable products in the food and cosmetic industries.
WO2026054086A1	Fuji Oil Co Ltd (Japan)	Cheese flavor material. The present invention addresses the problem of providing: a flavor material that imparts, enhances, or improves a natural and authentic cheese flavor; and a food or beverage product that uses said flavor material. (1) A cheese flavor material having 4 mass% or less of free arginine in terms of total free amino acids and having a mass ratio of free caproic acid/free glutamic acid of 0.002 to 0.4. (2) The cheese flavor material described in (1), said cheese flavor material being a fermented product of lactic acid bacteria. (3) The cheese flavor material described in (1), said cheese flavor material containing 5 to 40 mass% of total free amino acids in terms of solid content. (4) The cheese flavor material described in (2), said cheese flavor material containing 5 to 40 mass% of total free amino acids in terms of solid content. (5) The cheese flavor material described in (1), said cheese flavor material containing 0.005 to 0.5 mass% of free caproic acid in terms of solid content. (6) The cheese flavor material described in (2), said cheese flavor material containing 0.005 to 0.5 mass% of free caproic acid in terms of solid content. (7) A food or beverage product containing the cheese flavor material described in (1) or (2).
R0139499A2	Institutul Nat de Cercetare Dezvoltare Pentru Chimie si Petrochimie Icechim (Romania)	Taste and flavor enhancer and process for preparing the same. The invention relates to a taste and flavor enhancer composition from spent yeast as a beer manufacturing by-product and to a process for preparing the same. According to the invention, the composition has the following content expressed as weight percentage: 3% glutamic acid, at least 5% total 5'-ribonucleotides, 5'-inosinic acid (5'-IMP) and 5'-guanylic acid (5'-GMP), at least 7% Maillard reaction products and at least 3% glutation, with a humidity of 5% at the most and an antioxidant activity, expressed as IC50, i.e. the concentration providing the reduction of 50% of the radical DPPH, of less than 2 mg/ml and it do not produce genotoxicity in human gingival fibroblast-1 cells HGF-1 during the comet assay. The claimed preparation process has the following steps: lysis of the spent yeast cells from beer manufacturing by enzymatic pre-treatment with endo- and exo- (1,3)-beta-D-glucanase and endo-chitinase, followed by breaking of cell walls by ultrasonication at an energy of 30 KJ.L-1.s-1, covalent binding of polyphenols from the hop extract to the polysaccharides from the yeast cell walls by treatment with lactose, hydrolysis of proteins from the yeast extract with microbial endo- and exo-proteases, to favour the formation of Maillard reaction products, followed by drying the final mixture in a double-roll drier to finish the formation of Maillard reaction products.
WO2026075198A1	Mitsubishi Corporation Life Sciences Ltd (Japan)	Flavor improving agent. To provide a method for producing a flavor improving agent that is capable of imparting sweet flavor, savory taste, and lingering savory taste to baked grain flour foods including bread. [Solution] The present inventors have found that a composition, which is obtained by adding common salt to non-salt-resistant yeast cells containing no culturing component and having a reduced water content of 60-75% to liquefy the yeast cells, subsequently adding rice malt to the liquefied product, subsequently aging the resultant mixture for a predetermined period of time, and subsequently retaining the aged product for an additional predetermined period of time under heating, imparts sweet flavor, savory taste, and lingering savory taste to a baked grain flour food when being added to the baked grain flour food.

Nº Publicación	Solicitante (País)	Contenido técnico
ES3065486A1	Univ Cádiz (Spain)	Stabilized mixture based on natural sweeteners and grape pomace for the manufacture of ice cream with antioxidant properties suitable for consumption by people with diabetes, manufacturing process and uses. Stabilized mixture based on natural sweeteners and grape pomace for the manufacture of ice cream with antioxidant properties suitable for consumption by people with diabetes, manufacturing process and uses. It consists of a stabilized sweetener substitute, incorporating a quantity of grape pomace calculated to meet the technical parameters necessary for the manufacture of quality ice cream with antioxidant properties, suitable for consumption by people with diabetes, and which can be used by any user, with or without experience in ice cream production. The mixture of the invention, which includes tagatose as the main sweetener, and grape pomace, meets all the technical and organoleptic requirements, both due to its chemical characteristics and its negligible effect on blood glucose levels, making it an ideal candidate for the production of ice cream suitable for people with diabetes and with high antioxidant capacity.
WO2026110118A1	Univ Nova de Lisboa (Portugal)	Preservative composition, methods, and uses thereof. The present disclosure relates to a preservative composition comprising a natural deep eutectic system (NADES), a method for producing said composition and the use of the said composition as a food preservative, offering an effective solution to extend shelf life while maintaining the quality and safety of consumable food products.

INGREDIENTES BIOACTIVOS

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026106648A1	Aetherion Global LLC (USA)	Biphasic chrono-adaptive nutraceutical system for enhanced circadian bioavailability. A biphasic nutraceutical system designed to deliver GRAS-certified bioactive compound families across two circadian-aligned phases: a daytime formulation supporting metabolic activation and cognitive readiness, and a nighttime formulation facilitating nutritional regeneration and immune balance. Active compounds are encapsulated respectively within phospholipid-stabilized micellar vesicles for sublingual delivery and pH-sensitive polysaccharide hydrogel matrices for delayed absorption. This dual-phase structure enables non-invasive, phase-specific release and enhances nutrient bioavailability without invoking pharmacological mechanisms. The system integrates principles of nutritional chronobiology and adaptive timing to synchronize absorption with physiological receptivity windows. Exclusively composed of GRAS-aligned functional ingredients, it supports general biological function under non-clinical conditions, remaining fully within the regulatory scope of dietary supplements under 21 CFR §170.30.
WO2026102769A1	BGI Precision Nutrition Shenzhen Tech Co Ltd (China)	Probiotic composition and postbiotic thereof, preparation method thereof, and use thereof. The present invention provides a probiotic composition and a postbiotic thereof, a preparation method thereof, and use thereof. The probiotic composition is obtained by inoculating <i>Lactobacillus rhamnosus</i> OF44-15Ph10T, <i>Lactobacillus reuteri</i> BGI-AM60, and <i>Lactiplantibacillus plantarum</i> BGI-N6 in a certain ratio and then culturing same.
EP4721750A1	Biofarma Srl et al. (Italy)	Nutraceutical formulation for use in cancer immunotherapy. Nutraceutical formulations, compositions, products and methods for use in cancer immunotherapy are described. Such formulations may comprise probiotics and may be used in cancer immunotherapy treatment method of a subject, possibly in combination with antibiotics and cancer drugs.
WO2026133072A1	Euro Pharma Srl (Italy)	Dietary supplement for the treatment of constipation. The present invention describes a dietary supplement consisting of a first plurality of daily doses of a laxative composition (A) comprising Psyllium, MgO, and fennel dry extract.; and a second plurality of daily doses of a probiotic and prebiotic composition (B) comprising <i>B. lactis</i> , <i>B. longum</i> , and FOS. Subject-matter of the present invention is therefore also a food supplement as described above for use in the treatment of constipation, linked to the intake of drugs, constipation-predominant IBS, chronic constipation, or acute constipation, characterized in that the plurality of doses of composition (B) are taken sequentially to a number of doses of composition (A).

Nº Publicación	Solicitante (País)	Contenido técnico
US20260061021A1	Kokora Inc (USA)	Dual stage herbal nutraceuticals. Pharmaceutical, nutritional, and nutraceutical formulation, and manufacturing process for the treatment and nutrition of individuals with diabetes. This patent relates to a pharmaceutical and nutritional invention for a pharmaceutical, nutraceutical, and nutritional formulation for the treatment and dietary supplementation of individuals with diabetes, as well as the preparation method for both. The pharmaceutical formulation is composed of seed extracts from the species jambolão (<i>Syzygium cumini</i> L), of the Myrtaceae family, and quixaba (<i>Sideroxylon obtusifolium</i>), of the Sapotaceae family. The nutritional formulation is composed of jambolão seed powder and quixaba seed powder. the present invention is in the fields of pharmacy and nutrition, notably where they can be produced for human use in the following pharmaceutical, nutraceutical and food forms: capsules, tablets and solutions, microgranules, nanocapsules, pellets, syrups, suspensions, emulsions, and can also be incorporated into various foods such as cereal bars, biscuits, flours, shakes, among others, not being limited to these food forms presented, but becoming in itself a food fortification agent.
US20260166101A1	Nano and Advanced Materials Inst Limited (Hong Kong)	Synbiotic system of encapsulated probiotics and prebiotics with targeted delivery function for colonization and nutrients bioconversion and the method of making the same. A synbiotic system of encapsulated probiotics and prebiotics for targeted delivery for colonization functions, comprising a probiotics core enclosed with an inner layer of protein-poly/oligosaccharide complex binder as an adhesion promoter that facilitate the attachment onto intestinal epithelial cells, and as a prebiotic promoting the growth of the enclosed probiotics upon release from the outer coating; and an outer layer of natural emulsion system coating on the synbiotic complex to minimize the involvement of water to effectively encapsulate and protect the probiotics. This system is feasible for upscale manufacturing using freeze-drying technology, and can be produced in powder form, suitable for consumption as dietary supplements as well as addition into any food in dry form. The system possesses nutrients bioconversion capability of soy isoflavones to their bioactive aglycone counterparts, as well as releases the bound bioactive phenolic acids from grains that are bioavailable for health promoting effects.
US20260123649A1	Noon World Inc (USA)	Compositions and methods for nutraceutical gummy. A nutraceutical gummy includes a dual-layer configuration that has an inner core and, distinct from the inner core, a casing shell fully encasing the inner core. The inner core has a core composition including, by weight percentage, 55-85% of a syrup, 10-20% of water, 1-7% of stevia leaf extract, and 1-5% of pectin. The casing shell has a shell composition including, by weight percentage, 55-85% of a syrup, 10-20% of water, 1-7% of stevia leaf extract, and 1-5% of pectin.
EP4736857A1	Nutra Futura Srl (Italy)	Mixtures and nutraceutical compositions comprising artemisia extract, eruca extract, boswellia extract and vitamin d, and their use in the prevention and treatment of osteoporosis. The present invention relates to a mixture, food, nutraceutical and/or pharmaceutical compositions comprising it and their use in prevention and/or slowdown and/or treatment of osteoporosis.
WO2026052948A1	Univ Birmingham (Great Britain)	Prebiotic composite scaffold. The invention provides a prebiotic composite scaffold comprising at least one prebiotic compound and at least one gastrointestinal-resistant biopolymer wherein the gastrointestinal-resistant biopolymer comprises at least one gellan gum or a derivative thereof.
WO2026122725A1	Univ Emory (USA)	Probiotics, therapeutic applications in combination with vip antagonists, and compositions related thereto. Disclosed herein are methods of treating cancer comprising administering an effective amount of a probiotic bacteria to a human patient with cancer optionally in combination with a VIP antagonist. In certain embodiments, the cancer is a hematological cancer such as leukemia. In certain embodiments, the subject is diagnosed with acute myeloid leukemia. In certain embodiments, the probiotic bacteria increase long chain fatty acids in the lumen of the intestine. In certain embodiments, this disclosure relates to probiotic compositions for uses in treating or preventing cancer as reported herein.

PRODUCTOS PARA NUTRICIÓN ANIMAL

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026094046A1	Advance IP Ltd (Israel)	Compositions made of agricultural waste for the production of microbial biomass for use in animal feeding. A method of producing a carbon source useful for culturing microorganisms is provided as well as sterile compositions comprising a reducing sugar extract of agricultural waste. In addition, there is provided a method of producing a biomass of a microorganism of interest using the sterile composition. The microbial preparation may be comprised in an animal feed to be used in a method of increasing body weight of an animal, especially when the animal is of an aquatic species.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026075902A1	Cargill Inc (USA)	Composition for reducing oil seepage. Present invention relates to an oil binding composition for use in an animal feed composition to reduce oil seepage. The present inventors have demonstrated that the oil binding composition comprising lecithin and/or hydrolyzed lecithin, and fumed silica, when included in an animal feed product, reduces and/or prevents seepage of the liquid oil from the animal feed product.
WO2026133120A1	Clerici Graziano (Italy) et al.	Innovative phase-wise process for the production of animal feed rich in aglycone isoflavones. The process for the preparation of animal feed rich in aglycone isoflavones comprises: - at least one phase of supply (I) of a legume-cereal mixture comprising soybean products in a percentage by weight of between 1% and 80% of the total weight of the legume-cereal mixture; - at least one phase of milling (II) of the legume-cereal mixture to obtain a flour; - at least one phase of mixing/incubation (III) of the flour in acidic aqueous solution at a temperature of between 20°C and 70°C for a time comprised between 1h and 16h to obtain a mix containing aglycone isoflavones; at least one phase of rapid extraction (IV) of the aqueous matrix from the mix to obtain a semisolid matrix; - at least one phase of baking/drying (V) of the semisolid matrix at a temperature of between 110°C and 250°C for a time comprised between 10 min and 45 min; - at least one phase of cooling and stabilization (VI) of the resulting product to obtain an animal feed rich in aglycone isoflavones.
WO2026125437A1	Firmenich & Cie (Switzerland)	Glycosylated flavanone compounds and their use as flavor modifiers. The present disclosure generally relates to certain glycosylated flavanone compounds and the use of such compounds to modify the flavor or taste of an ingestible composition. These glycosylated flavanone compounds include glycosylated derivatives of hesperetin. In some embodiments, the use of these glycosylated flavanone compounds includes their use to enhance a sweet taste, their use to reduce an off taste of a high-intensity sweetener, their use to reduce a bitter taste or an astringent taste, their use to enhance a salty taste, their use to enhance an umami or kokumi taste, or any combination thereof. In certain embodiments, such compounds are used in combination with other natural taste modifiers, such as flavonoids or dihydrochalcones. In certain aspects, the disclosure provides ingestible compositions that include such glycosylated flavanone compounds. In some related aspects, the ingestible compositions are, or are included within, various flavored products, such as food products, beverage products, pharmaceutical products, oral care products, or animal feed products.
WO2026090696A1	Inova Agrovotech Ltda (Brazil)	Zootechnical additive based on resin acids and plant extracts for use in animal feed. The present invention relates to a natural zootechnical additive for improving performance, composed of resin acids extracted from Pinus resin, with a minimum of 10% resin acids. This additive can be used in feed or water given to animals, or added to zootechnical facilities, with the aim of promoting improvements in zootechnical and economic performance by maintaining the integrity of the intestinal wall, improving intestinal eubiosis and, consequently, increasing the digestibility and absorption of nutrients in the diet, as well as improving the environment and animal welfare.
RO139565A2	Institutul Nat de Cercetare Dezvoltare Pentru Biologie si Nutritie Animala Balotesti (Romania)	Fodder composition rich in antioxidants for thermal stress alleviation in egg-laying hens. The invention relates to a fodder composition to be used for alleviating thermal stress in egg-laying hens. According to the invention, the composition comprises fodder raw materials of the basic compound food used to feed egg-laying hens grown in thermal stress conditions, while including 6% apple marc as a natural source of polyphenols and antioxidants, the claimed fodder composition having the effect of reducing thermal stress in poultry by improving their thermal balance and supporting their immune system.
WO2026111613A1	Joint Stock Co Aston Foods and Food Ingredients Jsc Aston (Russia)	Protein-sugar hydrolysate from sunflower meal. The group of inventions relates to the field of processing oily raw material, and more particularly to a novel product in the form of a protein-sugar hydrolysate (PSH) obtained from sunflower meal, a method for producing same by enzymatic hydrolysis, and PSH-based food and feed products. The PSH contains 40-70% protein, 20-40% sugar, and at least 0.02% caffeic acid in free form or in bound form as part of chlorogenic acid isomer molecules. In addition, the PSH has a total branched-chain amino acid content of at least 30 g/kg of the final product (PSH), and an arginine content of at least 20 g/kg PSH. The resulting PSH does not contain antinutrients and serves as an excellent substitute for animal protein in food products and in diets for aquatic organisms, livestock and domestic pets. The claimed novel method is safe, environmentally-friendly, waste-free and allows flexibility in terms of the operations and ingredients used in the production process.

Nº Publicación	Solicitante (País)	Contenido técnico
<u>WO2026112095A1</u>	Lubrizol Advanced Mat Inc (USA)	Methods comprising iron compositions. The present technology relates to the field of iron compositions, feed additives an animal nutrition and growth. In particular, the present technology relates to non-therapeutic method for enhancing the growth performance of an animal, said method comprising the step of administering an iron composition comprising a) from 25 to 80 wt.% of ferric pyrophosphate; b) from 40 to 80 wt.% of starch; and c) from 0.05 to 5 wt.% of lecithin. Animal feed and methods for preparing animal feed comprising the iron composition disclosed in the present invention are contemplated in the context of the present technology.
<u>US20260124272A1</u>	Nestle SA (Switzerland)	Methods for increasing type i, iii, and v collagen in an animal. The present disclosure provides compositions and methods for increasing type I, III, and V collagen in an animal can comprise administering a food composition to the animal, wherein the food composition comprises from about 30% to about 65% protein, from about 0.1% to about 30% starch, and from about 10% to about 40% fat. Additionally, the food composition can have a protein to starch ratio of at least 2:1.
<u>WO2026100158A1</u>	Unicharm Corp (Japan)	Pet food and pet food package group. A pet food according to the present invention has a moisture content of 12 mass% or less and has two or more different doughs each containing a starch and an oil/fat, said doughs being arranged in a layered shape having two or more layers. In at least one among the two or more layers of doughs, two or more kinds of doughs having different mixing ratios of palatability improver are visually mixed. Furthermore, the pet food is characterized in that a molded article obtained by molding the two or more layers of doughs is coated with an oil/fat and an external additive.

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PATENTES

Boletín elaborado con la colaboración de:



Agencia Estatal de Investigación

C/ Torrelaguna, 58
28071 Madrid



Bioplat

C/ Cedaceros, 11, 2º C
28014 Madrid
Tel.: 91 074 54 28
E-mail: secretaria@bioplat.org
www.bioplat.org



CIEMAT

Avda. Complutense, 40
28040 Madrid
Tel: 91 346 08 99
E-mail: uip@ciemat.es
www.ciemat.es



OEPM

Paseo de la Castellana, 75
28071 Madrid
Tel: 91 349 53 00
E-mail: carmen.toledo@oepm.es
www.oepm.es



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