

OBJETIVOS DE DESARROLLO SOSTENIBLE



BOLETÍN BIOCIRCULARIDAD: BIOENERGÍA Y BIOPRODUCTOS

Biochar en Europa: proyectos de I+D

En la edición anterior de este boletín se presentó el biochar, sus propiedades y su creciente relevancia tecnológica, junto con un análisis de patentes recientes. En esta nueva edición, el enfoque se centra en la investigación financiada a nivel europeo, a partir de proyectos identificados en la base de datos CORDIS.

La Unión Europea está impulsando activamente el desarrollo de soluciones basadas en biochar mediante programas como Horizonte 2020 y Horizonte Europa, con aplicaciones que abarcan desde materiales avanzados y construcción sostenible hasta agricultura, energía, valorización de residuos y captura de carbono. Este conjunto de proyectos refleja una evolución desde la investigación fundamental hacia enfoques más aplicados, orientados a la validación en entornos reales y a su futura explotación industrial.

La Tabla 1 recoge una selección de proyectos que finalizan a partir de julio de 2026, lo que permite identificar iniciativas en fases avanzadas de desarrollo, así como sus coordinadores y financiación. Los proyectos están clasificados según su ámbito de aplicación, proporcionando una visión estructurada de las principales líneas de I+D en Europa y del papel del biochar como material estratégico en la transición hacia modelos más sostenibles y circulares.

Usos del biochar



Tabla 1. Proyectos europeos

Materiales Avanzados	
Fossil-Free Graphite: Fossil-Free Graphite by Nordic Bio-Graphite: Advancing Sustainability and Resilience in Critical Raw Materials Supply Chains (2025-2027)	
Coordinador: Nordic Bio-Graphite AB (Suecia)	Contribución UE: 1 936 557,36 €
ZEROSTEEL: Decarbonized Steel Production with Novel Processes (2024-2028)	
Coordinador: Technische Universitaet Bergakademie Freiberg (Alemania)	Contribución UE: 4 998 951,25 €
BioPhenom: Multifunctional biophenols for safe and recyclable materials (2024-2028)	
Coordinador: Teknologian Tutkimuskeskus VTT Oy (Finlandia)	Contribución UE: 3 677 680,25 €
GreenHeatEAF: Gradual integration of REnewable non-fossil ENergy sources and modular HEATING technologies in EAF for progressive CO2 decrease (2023-2026)	
Coordinador: Scuola Superiore di Studi Universitari e di Perfezionamento S Anna (Italia)	Contribución UE: 3 564 245,25 €
Materiales de construcción	
EcoVerse: Carbon-Negative Modular Concrete Blocks for Enhanced Indoor Air Quality and Thermal Comfort - A Comprehensive Experimental and Modeling Approach (2026-2028)	
Coordinador: Technische Universität Darmstadt (Alemania)	Contribución UE: 217 965, 12 €
EMBEDDED: Exploiting Modular Biochar and board production plants to locally transform waste from traditional agrifood, feed and forestry industries into bio-materials with rEgional DEmand (2025-2028)	
Coordinador: Envirohemp SL (España)	Contribución UE: 4 998 945,89 €
FuturHist: An integrated typology-based approach to guide the future development of European historic buildings towards a clean energy transition (2024-2027)	
Coordinador: Accademia Europea di Bolzano (Italia)	Contribución UE: 3 896 051,25 €
Tecnologías avanzadas de almacenamiento de energía	
CharCool: Rethinking the future of clean cooling through a revolutionary class of thermally-driven chiller based on a novel bio-based thermochemical material (2024-2028)	
Coordinador: Università Degli Studi di Padova (Italia)	Contribución UE: 3 857 353,75 €

Aplicaciones en agricultura y revegetación	
Bio4UP: Sustainable biochar-enhanced upcycling solutions for Zero-Waste valorization of organic waste into circular economy products (2026-2029)	
Coordinador: Universidad Autónoma de Barcelona (España)	Contribución UE: 1 513 020, 00 €
SARGEX: Sargassum Bioeconomy: From Coastal Biomass to Advanced Sustainable Materials (2026-2029)	
Coordinador: Universidad Autónoma de Barcelona (España)	Contribución UE: 886 770, 00 €
TEAPOTS: agriculTurE wAste PyrOllysis and Thermocomposting for renewable energy in Sustainable agri-food sector (2024-2027)	
Coordinador: Smact Societa Consortile per Azioni (Italia)	Contribución UE: 7 027 319,13 €
BioBIVE: BIOdegradable delivery systems for plant pathogens control of horticultural crops through Bio-actiVE agents (2024-2028)	
Coordinador: Universidad de León (España)	Contribución UE: 6 851 903,00 €
PYRAGRAF: Decentralized pyrolytic conversion of agriculture and forestry wastes towards local circular value chains and sustainability (2023-2027)	
Coordinador: Instituto Politécnico de Portalegre (Portugal)	Contribución UE: 6 128 225,00 €
FENIX: New Life for Biowaste as a sustainable Soil Improver (2023-2027)	
Coordinador: Universidad de Granada (España)	Contribución UE: 2 894 511,46 €
Waste4Soil: Turning food waste into sustainable soil improvers for better soil health and improved food systems (2023-2027)	
Coordinador: Ethniko Kentro Erevnas Kai Technologikis Anaptyxis (Grecia)	Contribución UE: 6 999 461,25 €
REFFECT AFRICA: Renewable energies for Africa: effective valorization of agri-food wastes (2021-2026)	
Coordinador: Universidad de Jaén (España)	Contribución UE: 6 962 820,78 €
Secuestro de carbono	
OCCAM: Operationalizing Climate Change Adaptation and Mitigation for aquaculture (2025-2029)	
Coordinador: Nofima AS (Noruega)	Contribución UE: 4 500 000,00 €
NET-Fuels: Increasing biomass conversion efficiency to carbon-negative sustainable biofuels by combination of thermal and bio-electrochemical processes (2022-2026)	
Coordinador: Università di Bologna (Italia)	Contribución UE: 4 501 739,00 €

Uso en procesos energéticos / biotecnológicos

POST-PURPLE: Prevention, correction, and valorization of exhaust flows from urban photobiorefineries (2026-2029)

Coordinador: Universidad Rey Juan Carlos (España)

Contribución UE: 3 995 126,00 €

ENABLE: Ethanol-nexus two-stage anaerobic digestion integrated with biochar in leveraging eco-treatment of agricultural wastes (2025-2027)

Coordinador: University of Surrey (Reino Unido)

Contribución UE: 260 347,92 €

CRONUS: Capture and Reuse Of biogenic gases for Negative-emission - sustainable bioUeIS (2022-2026)

Coordinador: Ethnicon Metsoion Polytechnion (Grecia)

Contribución UE: 4 390 895,00 €

Adsorbentes y recuperación de nutrientes

MINICOR: MILD Combustion with Nitrogen and Carbon Dioxide Reforming (2025-2028)

Coordinador: Lunds Universitet (Suecia)

Contribución UE: 3 515 430,00 €

CLEANWATER: Multifunctional sustainable adsorbents for water treatment assisted with plasma technologies and for health protection from xenobiotics (2024-2027)

Coordinador: Universidad de Alicante (España)

Contribución UE: 979 800,00 €

WoodVALOR: Valorisation and Eco-Design of Post-Consumer Wood Waste into Sustainable Bio-Based Product (2023-2028)

Coordinador: inq Consulting And Management Ltd (Reino Unido)

Contribución UE: 3 697 437,50 €

PATENTES BIOENERGÍA

Biocombustibles sólidos (pellets, biochars, bio RDFs, bio SRFs, etc.)		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026017696A1	Florafuel GmbH (DE)	Method and system for producing fuel from compressed biomass. The invention relates to a method for producing fuel from compressed biomass, said method comprising the following: providing biomass; washing the biomass; comminuting, in particular finely comminuting, the biomass; mechanically dewatering the biomass; drying the biomass; and shaping the biomass; wherein at least some of the waste heat is fed back into the method, in particular into another method step. The invention also relates to a corresponding system (100) for producing fuel from compressed biomass, to a computer-readable medium, and to a program element.
WO2026017695A1	Florafuel GmbH (DE)	Method and system for producing fuel from compressed biomass. The present invention relates to a method for producing fuel from compressed biomass, wherein the method comprises the following: providing biomass; washing the biomass; comminuting, in particular finely comminuting, the biomass; mechanically dewatering the biomass; drying the biomass; and shaping the biomass, wherein the provided biomass has, at least in part, been stored under mechanical pressure for at least one day. The present invention also relates to a corresponding system (100) for producing fuel from compressed biomass, to the use of biomass stored under pressure, to a computer-readable medium, and to a program element.
WO2026019642A1	Franco Riki et al. (US)	Sawdust charcoal. A method to create a natural charcoal briquette is described herein. A wood material or other biomass is collected and impurities are removed from the wood material. The wood material/biomass is dried at a temperature in a range of approximately 150° C. to approximately 200° C. to reach a moisture level in a range of approximately 3.7% to approximately 5.0%. The dried wood material/biomass is compressed in a shaped mold at approximately 300° C. and under 40 tons of pressure to form a charcoal briquette. The charcoal briquette is carbonized at a temperature in a range of approximately 700° C. to approximately 800° C. in a range of approximately 14 days to approximately 17 days. The charcoal briquette is then cooled for approximately 2 days prior to use or packaging. The resulting briquette is all natural having no glues, chemicals, or binders.
WO2026052864A1	Grillo Chemicals GmbH (DE)	Use of sodium bisulfate as a pelletizing aid for renewable materials. The present invention relates to pellets which are based on organic, renewable raw materials and are obtained using sodium bisulfate as a pelletizing agent.
WO2026017698A1	HJXW Holding GmbH (DE)	Method and system for producing fuel from compressed biomass. The present invention relates to a method for producing fuel from compressed biomass, wherein the method comprises the following: providing biomass; supplying the biomass; washing the biomass; comminuting, in particular finely comminuting, the biomass; mechanically dewatering the biomass; drying the biomass; and shaping the biomass, wherein, prior to the mechanical dewatering, the method further comprises increasing the moisture content of the biomass, allowing a time interval between the increase in moisture content and the mechanical dewatering. The present invention also relates to a corresponding system (100) for producing fuel from compressed biomass, to a computer-readable medium, and to a program element.
WO2026017699A1	Maschf Reinartz GmbH & Co Kg (DE)	System and method for producing fuel from compressed biomass. The present invention relates to a system (100) for producing fuel from compressed biomass, wherein the system (100) comprises at least the following components: a washing unit (110); a comminuting device (120); a mechanical dewatering device (130); a thermal drying device (140); and a shaping device (150), wherein the system (100) and/or the components of the system is/are divided into modules (160), each module (160) being surrounded by an enclosing device (162), and wherein the washing unit (110) and the thermal drying device (140) are arranged in different modules (160), and the mechanical dewatering device (130) and the thermal drying device (140) are arranged in different modules (160). The present invention also relates to a method for producing fuel from compressed biomass by means of such a system, to a computer-readable medium, and to a program element.

Nº Publicación	Solicitante (País)	Contenido técnico
<u>US20260062637A1</u>	Profagus GmbH (DE)	Process for producing low-CO2 wood fuels with high energy density. The production of low-CO2 wood fuels (for example, wood pellets or wood briquettes) with high energy density by adding coal dust, such as wood, stone, or lignite dust, during the production process.
<u>WO2026009867A1</u>	Univ Tokio (JP)	Plant-derived fuel production method. The present invention provides a plant-derived fuel production method including: a step for cleaning a plant-derived biomass; and a step for subjecting the cleaned plant-derived biomass to steam explosion, said method not including a step for cleaning the plant-derived biomass that has been subjected to steam explosion.
<u>WO2026022450A1</u>	W2E Dev Ltd (GB)	A biomass burner and a method of burning biomass in the form of solid particulate fuel. Food and organic waste have long been costly and problematic to dispose of as a waste material, despite such waste material having a relatively high potential energy. All industrial treatment routes involve collection and transportation of the raw waste material. Domestic composting and subsequent local disposal as composted material might be carried out for some waste, but this is known to attract pests and vermin. Small-scale aerobic digesters have been developed to produce a stable substrate that can be used as a fuel for biomass burners; however, efficient combustion in such burners is difficult to achieve, and has been hitherto impossible without the co-burning of wood chips/pellets. The present invention provides a biomass burner that uses a primary oxygen feed (13) and gas distributor (15) to fluidize solid particulate fuel (17) within a primary combustion zone (11), whereby solid particulate fuel being conveyed to the primary combustion zone (11) is heated by such combustion, resulting in gasification prior to introduction into the primary combustion zone (11). A duct (27) conveys the combustible gas (25) from the gasification to a secondary combustion zone (29) where a secondary oxygen feed allows total combustion thereof.
<u>WO2026022152A1</u>	Zadravec Tomas (AT)	Ignition device, ignition device system and combustion system for solid biomass fuels, and method for igniting solid biomass fuels. One aspect of the invention relates to an ignition device (13) for solid biomass fuels in combustion and gasification systems. The ignition device (13) comprises at least two electrodes (25, 28) for generating an arc by means of which the biomass fuels can be ignited. In addition, the ignition device comprises a movement mechanism for moving the two electrodes (25, 28) into and out of a combustion chamber (8).

Syngas

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026030284A1	Cogent Energy Systems Inc (US)	System and method for producing clean syngas from biosolid materials having fluorocarbon materials therein. A system for processing dewatered biosolids and other municipal waste includes a biosolids dryer coupled to a plasma or ionic reactor (a gasifier). The biosolids dryer mixes dewatered biosolids with heated dried biosolids to produce dried granulated biosolids which are provided to the gasifier. The gasifier implements a high or an ultra-high temperature ionic gasification or reformation process to produce renewable syngas that can be used to provide heat, power, renewable fuels, renewable hydrogen, and/or renewable chemical production. The gasifier generates electrical arcs across the interior of a gasifier reaction chamber creating a localized, controlled temperature in excess of 3,000 C along with ionic gas or particles (plasma). This ultra-high temperature gasification zone and active ionic environment combine to break down molecules very effectively and efficiently into their constituent atoms, in a process called complete molecular dissociation. This ultra-high temperature ionic zone also rapidly decomposes impurities in the feed stock such as microplastics, PFAS (Per- and Polyfluorinated Substances), and other fluorocarbon materials.
WO2026062284A1	Fraunhofer Ges Forschung (DE)	Method for producing synthesis gas and device for carrying out said method. The invention relates to a method for producing synthesis gas from at least partially biogenic starting materials, comprising pyrolysis of the biogenic starting material at a temperature of 250°C to 700°C, and feeding of the pyrolyzed solids via an intermediate zone to a gasification zone, wherein combustion gases containing at least water and oxygen are passed through the gasification zone at a temperature of 600°C to 1200°C so that the pyrolyzed solids are gasified and gasification gases and ash are formed; feeding the pyrolysis gases and the gasification gases to a reforming zone, where the gas mixture is brought into contact with a catalyst bed at a temperature of 700°C to 1100°C, and synthesis gas is obtained. The invention also relates to a system for carrying out said method.
WO2026055973A1	Univ Tsinghua (CN)	Method for removing tar from synthesis gas obtained from gasification of organic solid waste, and use thereof. The present application relates to the technical field of the treatment of organic solid waste, and specifically discloses a method for removing tar from a synthesis gas obtained from the gasification of organic solid waste, and the use thereof. The method comprises: conveying a synthesis gas containing a tar component to a de-coking reactor, wherein the de-coking reactor is loaded with an oxygen carrier LaNixFe1-xO3-λ; and subjecting the tar component and lattice oxygen in the oxygen carrier to partial oxidization, so as to remove the tar component from the synthesis gas, wherein x ranges from 0.01-0.1, and λ satisfies 2≤3-λ≤3. The method of the present application can avoid the problems of bed clogging and catalyst deactivation caused by the generation of a large amount of carbon deposits. The nickel-modified lanthanum ferrite oxygen carrier used in the present application can realize the directed conversion of the tar component in the synthesis gas, improve the quality of the synthesis gas, and also prevent the problem of a complete oxidation reaction of a conventional oxygen carrier with the synthesis gas.

Biogás/Biomethane		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026041736A1	Basf SE (DE)	Formation of methane from side products of an alcohol conversion process. The present invention relates to a process for producing methane, preferably bio-methane, by formation of methane based on side products of an alcohol conversion process. The process includes fermentation of waste streams from the chemical process for alcohol conversion.
WO2026038077A1	Bert Bond Sro (CZ)	Modular fermenting tank for biogas production by wet fermentation. A modular fermenting tank for production of biogas by wet fermentation consisting of a shell comprising input and output chamber separated by a wall, input and output pipe of these chambers, and mounting input ports to each chamber, wherein the shell of the fermenting tank consists of an inner shell of the fermenting tank being in direct contact with an organic substrate, wherein the inner shell is flexibly fitted in an outer shell of the fermenting tank, wherein a thermally insulating material is placed between the inner shell and the outer shell. The outer lateral walls of the input chamber and of the output chamber are provided with circulating nozzles for agitating of the organic substrate and liquids, wherein the chambers are favourably provided with a watering manifold, heating tubes, and overflow collecting edge connected to a collecting drain. The chambers of the fermenting tank are provided by the ceiling with cameras and reflectors. The shell of the fermenting tank is provided with auxiliary inputs for dosing of auxiliary substances to both chambers of the fermenting tank.
WO2026010513A1	Dynamic Biogas Energy Spolka Z Ograniczona (PL)	Method for producing purified biogas and system for producing purified biogas. A method for producing purified biogas, wherein biogas obtained through anaerobic fermentation of organic waste raw material is conveyed from the space above the liquid fraction of the fermenter (1) to the inlet of a photocatalytic carbon dioxide reduction absorber (3), which is supplied with thermal energy, electrical energy, and water. Biomethane and methanol are discharged from the photocatalytic carbon dioxide reduction absorber (3) via outlets. In the photocatalytic carbon dioxide reduction absorber (3), the process of absorbing waste CO2 from the biogas stream delivered from the liquid fraction of the fermenter (1) is carried out. For the production of biomethanol, water purified from digestate and waste CO2 from biogas, originating from the liquid fraction of the fermenter (1), is supplied to the photocatalytic carbon dioxide reduction absorber (3) via a water line (6). The heat required to evaporate the methanol obtained in the photocatalytic carbon dioxide reduction absorber (3) is supplied via a heat system (4) from a cogeneration unit (7), which is powered by biogas conveyed via a first biogas line (8) from the liquid fraction of the fermenter (1). The photocatalytic carbon dioxide reduction absorber (3) has an oxygen outlet (9) connected via a pipe (9a) to the fermenter, where the oxygen is used to biologically reduce the concentration of H2S.
WO2026042079A1	Primove Engineering Private Ltd (IN)	Process and apparatus for producing biogas from lignocellulosic biomass. Disclosed is a process for producing biogas from Lignocellulosic biomass such as crop residue. The process comprises shredding the Lignocellulosic biomass, and adding the Lignocellulosic biomass into a digester having slurry. The process further comprises pumping out 10 to 50% of the slurry from the digester in a first tank and oxygenating the slurry of the first tank to enrich the slurry between 2 mg/lit to 20 mg/liter level of dissolved oxygen therein. Finally, the process includes recirculating the oxygenated slurry back into the digester, wherein the quantity of biogas produced in the digester is increased between 10% to 80%, due to the addition of dissolved oxygen in the slurry.
WO2026030826A1	Sixring Inc (CA)	Buffered cellulose component for use in biogas generation. A buffered biomass component wherein said buffered biomass component comprises: a cellulose component which is substantially free of lignin; a component capable of neutralizing and/or buffering the pH, wherein said component can be selected from the group consisting of: o an alkali reagent; o an acidic reagent; and o a buffering agent; water; wherein the concentration of said component capable of neutralizing and/or buffering the pH ranges from 0.1 to 10 M and wherein a solids content of said buffered biomass ranges from 10 to 50 %.
WO2026003198A1	Suez Int (FR)	Method for treating waste containing biodegradable organic matter. The invention relates to a method for treating waste containing biodegradable organic matter. Said method comprises a step a) of separating the solid impurities from said waste within a chamber followed by a step b) of anaerobic digestion of the purified waste separated in step a) during which biogas and a digestate containing dissolved CO2 are produced. The separation step a) comprises: a1) a flotation step during which part of the digestate from step b) is brought into contact with said waste within the chamber under pH conditions sufficient to generate CO2 bubbles, at least part of the solid impurities being transported by the CO2 bubbles toward the surface of said mixture and forming a floating phase, and a2) separation of a floating phase.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026047366A1	Totalenergies Onetech (FR)	Method for determining a biochemical methane potential of a substrate and a quantity of an at least one voc in a biogas produced from said substrate. The invention relates to a method (100) for determining a biochemical methane potential of a substrate together with a quantity of at least one volatile organic compound (VOC) in a biogas produced from said substrate, the biogas being generated during anaerobic digestion, said method (100) comprising: - a step of determining the biochemical methane potential (130) of the substrate, - a step of sampling (140) the generated biogas in a container dedicated to gas headspace analysis, said sampling occurring during the step of determining the biochemical methane potential (130); and - a step of determining the quantity of at least one volatile organic compound (VOC) (150) in the generated biogas, said step comprising injecting a sample from the container into an analytical system through a temperature-controlled injection setup.
EP4686759A1	WCHF Europe jsa (SK)	Biofuel production method using operationally interconnected germination and biogas plant subsystems, and the germination plant subsystem. The biofuel production method comprises a series of steps performed in the germination plant (2) subsystem and operationally interconnected biogas plant (3). The process starts with the provision of grains, followed by separation of impurities and soaking in water. The grains are then germinated with controlled irrigation and exposure to light. After germination, the grains are mixed and homogenised to form biofuel (1) for the biogas plant (3). This biofuel (1) is then used to produce biogas (6). The method includes embodiments such as using specific types of grain, mixing with broken parts of the grain or unused water, and using biogas plant (3) co-products such as fugate (4) as fertilizer, and residual energy (7) for temperature control. In addition, the method includes the production of biogas (6) and electric energy (8), wherein the electricity (8) is potentially used to illuminate the grain during the germination.

Bioalcoholes (bioetanol, biometanol, etc.)

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026010626A1	AB Mauri (US)	Yeast strain development for ethanol production. Disclosed herein are yeast strains and derivatives thereof, as well as compositions comprising the yeast strains for use in ethanol manufacture. The disclosure also relates to processes for producing ethanol from biomass using the yeast strains and compositions. In particular, one or more of the yeast strains produce higher ethanol, leave less residual fructose, and have a higher temperature tolerance and higher fermentation rate than strains and products currently used in ethanol production processes.
CN121450456A	Angel Yeast Co Ltd (CN)	Saccharomyces cerevisiae strain with low yield of glycerol and higher alcohol and application of saccharomyces cerevisiae strain. The invention relates to the field of microorganisms, in particular to a saccharomyces cerevisiae strain with low yield of glycerol and higher alcohols and application of the saccharomyces cerevisiae strain. The bacterial strain keeps the efficient ethanol fermentation capacity, meanwhile, the synthesis amount of glycerol and higher alcohols is remarkably reduced, and the bacterial strain has good application prospects in the industrial fields of bioethanol preparation, baijiu brewing and the like.
WO2026049933A1	Cargill Inc (US)	Genetically modified yeast and fermentation processes for the production of ethanol. Disclosed herein are genetically engineered yeast cells capable of producing ethanol. The genetically engineered yeast cells comprise an exogenous polynucleotide sequence encoding an alpha-amylase enzyme and an exogenous polynucleotide sequence encoding a pullulanase enzyme. Also disclosed herein are fermentation methods to produce ethanol using the genetically engineered cells described herein.
US20260062370A1	Edgewood Renewables LLC (US)	Methods and systems for producing biofuel. A method of producing methanol includes supplying biomass feedstock to a hydrotreating unit to produce a biofuel and a biogenic off gas. The biogenic off gas is delivered to a methane reforming unit to generate a syngas having higher hydrogen content than the biogenic off gas. The method also includes delivering a first portion of the syngas to a hydrogen purification unit to produce a hydrogen stream. The hydrogen stream is delivered to the hydrotreating unit. A second portion of the syngas is delivered to a methanol generation unit. Methanol is generated from the second portion of the syngas by the methanol generation unit.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026055443A1	Exxonmobil Technology & Engineering Company (US)	Systems and methods for gasification of feed stock. The biomethanol yield for a methanol synthesis process based on synthesis gas generated from gasification and/or POx can be enhanced via the addition of hydrogen. Blue, turquoise, green, or gray hydrogen may be added at different points in the overall biomethanol production process. Using blue, turquoise, and/or green hydrogen instead of grey hydrogen offers the benefit of reducing carbon intensity of the biomethanol production process.
US20260008735A1	Hyundai Motor Co Ltd et al. (KR)	Methanol synthesis system using biomass and method for controlling the same. A methanol synthesis system which includes a first producing device to produce methane and carbon dioxide by introducing biomass, a second producing device to produce hydrogen and carbon dioxide by allowing the methane, which is supplied from the first producing device, to react with steam, a first controller to control a mole flow rate of the carbon dioxide supplied from the first producing device, a second controller to control a mole flow rate of the hydrogen supplied from the second producing device, and a methanol synthesizing device to synthesize methanol by allowing the carbon dioxide supplied from the first controller, the hydrogen supplied from the second controller, and the carbon dioxide supplied from the second producing device to react with each other.
WO2026030726A1	Ohio State Innovation Foundation (US)	Synthesis of 1-butanol from carbon dioxide by engineered hydrogen bacteria. Bacterial strains can be engineered which are capable of producing 1-butanol using carbon dioxide (CO ₂) and hydrogen gas (H ₂), wherein the strain naturally utilizes Calvin-Benson-Bassham (CBB) cycle, and further wherein the strain has been engineered so that expression of products from the CBB pathway are increased compared to a non-engineered version of the strain. These strains can be used in methods to produce 1-butanol. CbbR mutants can also be tested for their ability to produce 1-butanol.
WO2026050535A1	Purdue Research Foundation (US)	Processes and systems for biological hydrogen and ethanol production from organic material using yeast. Processes and systems for biologically producing hydrogen gas and ethanol from organic material, including food waste. During an initial phase of the process, hydrogen is predominantly produced. By selectively altering process parameters, in particular, reducing temperature, increasing pH, and altering composition, the process can be switched to predominantly producing ethanol and possibly also butanol. Such a process includes biologically producing hydrogen gas and ethanol and optionally butanol from organic material by anaerobic fermentation of the organic material with at least one strain of yeast.
WO2026038552A1	Univ Shizuoka Nat Univ Corp et al. (JP)	Sugar production method and biofuel production method. Provided are: a sugar production method that is capable of producing sugar from a plant or a part thereof and that can be performed, for example, without alkali treatment and high-temperature and high-pressure treatment; and a biofuel production method using the sugar production method. A sugar production method according to the present disclosure comprises: a degradation step for degrading a cell wall of a plant or a part thereof with a cell wall-degrading enzyme in the coexistence of the plant or the part thereof and the cell wall-degrading enzyme; a first separation step for separating cells of the plant or the part thereof from the cell wall or enzymatic degradation products thereof in the plant or the part thereof; a second separation step for separating a solid fraction by subjecting a separated product of the cell wall or the degradation products thereof and the cells of the plant or the part thereof to solid-liquid separation; and a saccharification step for saccharifying the solid fraction in the coexistence of the solid fraction and a saccharifying enzyme.
WO2026042559A1	Univ Tohoku (JP)	Method for improving saccharification properties of non-edible part of crop, and crop having improved saccharification properties. There are developed: a crop in which a cytokinin synthase gene is placed under the control of a promoter for inducing the expression of the cytokinin gene in an aging period, and the cytokinin synthase gene is introduced into an edible crop, whereby the cytokinin is synthesized in a ripening period, and the saccharification properties of a non-edible part of the crop are improved; and a method for producing the crop. The edible part of the edible crop can be utilized directly for eating, and the non-edible part treated as an agricultural residue can be utilized as an efficient bioethanol raw material.

Biodiésel		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026003426A1	Arciplug Oy (FI)	Method and system for producing biodiesel. The present invention relates to a method and system for producing biodiesel at a supercritical condition and operating the transesterification reactor in a continuous operation mode.
KR20260031514A	Dong A Univ Research Foundation for Industry Academy Cooperation (KR)	Lipase immobilized in calcium carbonate and biodiesel production method using the same. The present invention relates to biodiesel, and more specifically, to lipase immobilized in calcium carbonate and a method for producing biodiesel using the same, which enables the production volume and efficiency of biodiesel to be maximized under solvent-free conditions by utilizing lipase encapsulated and stabilized within a calcium carbonate cube. To this end, a method for manufacturing a calcium carbonate composite particle with immobilized lipase comprises the steps of: preparing a solution of lipase immobilized in calcium carbonate; mixing a calcium salt solution into the lipase solution and stirring it once; mixing a carbonate solution into the mixture stirred once and stirring it twice; and centrifuging the mixture stirred twice.
CN121320470A	Hebei Longhai Biological Energy Co Ltd (CN)	Method for prolonging biological enzyme activity in biodiesel production process by biological enzyme method. The invention discloses a method for prolonging biological enzyme activity in a process of producing biodiesel by a biological enzyme method, and relates to the technical field of biomass fuel. The specific preparation method comprises the following steps: firstly, preparing a beta-cyclodextrin-glycidyl methacrylate grafted copolymer to form a molecular cage solution capable of reversibly including methanol; preparing a core-shell liposome; loading lipase to the inner water phase of the core-shell liposome to form an enzyme-loaded liposome; uniformly dispersing the enzyme-loaded liposome in a temperature-controlled swelling-shrinking gel microreactor bed; the method comprises the following steps: adding waste catering oil, methanol and a molecular cage solution into a reactor, putting into a gel microreactor bed, carrying out transesterification reaction, heating after the reaction is finished to shrink gel, and carrying out standing layering to realize in-situ separation of biodiesel and glycerol. According to the method, the activity of the biological enzyme is remarkably prolonged in the biodiesel preparation process.
EP4674972A1	INRAE (FR)	Method of producing a fatty ester from microalgae. The invention relates to a method of producing an ester of a fatty acid and a C1-C4 alcohol, comprising successive steps of: cultivating cells of a microalga strain on a growth medium, harvesting the cultivated cells and concentrating them to obtain a wet cell pellet, suspending said wet cell pellet in an hydroalcoholic solution comprising said C1-C4 alcohol, incubating the cell suspension thus formed so as to form said ester of a fatty acid and a C1-C4 alcohol by transesterification and/or esterification of lipids produced by the microalga cells catalyzed by endogenous enzymes of said cells, and recovering said ester of a fatty acid and a C1-C4 alcohol from said cell suspension. The growth medium can advantageously be a dark fermentation effluent.
US12577482B1	Najran Univ (SA)	Transesterification catalyst for biodiesel synthesis. A transesterification catalyst, a method of producing the transesterification catalyst, and a method of producing a biodiesel using the transesterification catalyst. The transesterification catalyst includes crystalline quartz particles, cristobalite particles, and silicon-substituted hydroxycalcioromerite particles by XRD. The transesterification catalyst is formed by a method involving high temperature calcination of camel dung.
KR20260041396A	Purum (KR)	Method for producing biodiesel using animal fat. A method for producing biodiesel using animal fat according to one embodiment comprises the steps of: mixing animal lipids, a solvent, and a catalyst in a reactor to perform an esterification reaction and producing crude biodiesel; removing the solvent from the crude biodiesel through primary vacuum distillation; removing glycerol from the crude biodiesel through phase separation; removing the catalyst from the crude biodiesel through washing; and removing sulfur components from the crude biodiesel from which the solvent, glycerol, and catalyst have been removed through secondary vacuum distillation and producing high-purity biodiesel.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121372440A	Shanghai Xiangwei New Energy Tech Co Ltd (CN)	Liquid catalyst, preparation method and method for producing second-generation biodiesel. The invention relates to the technical field of catalysts, and particularly discloses a liquid catalyst, a preparation method and a method for producing second-generation biodiesel, the liquid catalyst comprises a transition metal component, a functional element auxiliary agent and a compound surfactant; wherein transition metal in the transition metal component is at least two of iron, nickel, cobalt and molybdenum, and the concentration of the transition metal is 0.5-5 wt%; functional elements in the functional element additive comprise lanthanum and ruthenium, and the concentration of the functional elements is 0.1-5 wt%; the molar ratio of lanthanum to ruthenium is (1.5-2): 1; the concentration of the compound surfactant is 0.05 to 0.5 weight percent; the liquid catalyst is used for biodiesel production in a continuous suspended bed reactor. The catalytic activity and stability of the liquid catalyst in the second-generation biodiesel preparation can be improved, and the problem that the liquid catalyst is difficult to recover can be solved.
CN121362803A	Shanghai Zhongqi Environment Tech Co Ltd (CN)	Method for continuously preparing pure biodiesel from kitchen waste oil based on immobilized enzyme. The invention relates to the technical field of pure biodiesel preparation, and particularly discloses a method for continuously preparing pure biodiesel from kitchen waste oil based on immobilized enzyme. The invention discloses a method for continuously preparing pure biodiesel from kitchen waste oil based on immobilized enzyme. The method comprises the following steps: filtering, dehydrating and degumming the kitchen waste oil to obtain pretreated kitchen waste oil; mixing the pretreated kitchen waste oil with an acyl acceptor to obtain a reaction substrate; and feeding the reaction substrate into an enzyme reactor filled with the immobilized lipase catalyst, carrying out transesterification, collecting reaction effluent, and carrying out separation and purification to obtain pure biodiesel. According to the continuous production technology, separation of the catalyst and the reaction substrate is achieved, the catalyst can be recycled, the immobilized lipase catalyst prepared through the covalent binding method has high stability and activity, and the yield of pure biodiesel can still reach 84% or above after continuous operation exceeds 200 hours.
CN121446179A	Shanghai Zhongqi Environment Tech Co Ltd (CN)	Multi-stage separation system for pure biodiesel and use method of multi-stage separation system. The invention relates to the technical field of separation equipment, in particular to a multi-stage separation system for pure biodiesel and a using method thereof, and the multi-stage separation system comprises a rack, a fixed filtering structure, a collecting barrel body and a movable filtering mechanism; the fixed filtering structure comprises a filtering box body and a filtering net plate, and the filtering net plate is fixedly arranged in the filtering box body; a first penetrating through hole for the movable filter screen cloth to penetrate through is formed in the filter box body, the movable filter screen cloth is arranged on the filter screen plate, the unwinding assembly is used for unwinding the movable filter screen cloth, and the winding assembly synchronously winds the movable filter screen cloth after oil is filtered; the collecting barrel is arranged on the side, close to the rolling assembly, of the filtering barrel and used for receiving oil dripping from the movable filtering net cloth on the rolling assembly. According to the device, the risk that the separated solid impurities block the movable filter screen cloth can be reduced, so that oil plants can smoothly penetrate through the movable filter screen cloth and the filter screen plate, and the filtering and separating efficiency of pure biodiesel raw materials is improved.
CN121372385A	Univ Hubei Engineering (CN)	Calcium-based catalyst, preparation method thereof and method for preparing biodiesel. The invention relates to the technical field of catalyst preparation and biomass energy, and discloses a calcium-based catalyst, a preparation method thereof and a method for preparing biodiesel. The calcium-based catalyst is a K-CaO solid solution, and K is dissolved into CaO crystal lattices; wherein the mass percent of K in the K-CaO solid solution is 2.5 to 5.5 percent. The calcium-based catalyst provided by the invention is a solid solution in which K is dissolved into CaO crystal lattices, and the K destroys the agglomeration of CaO particles, so that the specific surface area can be increased, and the biodiesel conversion rate is further improved; in addition, the alkaline site density of the calcium-based catalyst is greatly improved, and the cyclic stability is relatively good..

SAF (Sustainable Aviation Fuels)		
Nº Publicación	Solicitante (País)	Contenido técnico
EP4707360A1	Air Liquide (FR)	Process and plant for production of sustainable aviation fuel from methanol. The invention relates to a process for producing sustainable aviation fuel, comprising a conversion step (i) for a heterogeneously catalyzed conversion of a feed stream containing methanol into a first intermediate process stream containing ethylene, propylene, C4+ olefins, and C8+ hydrocarbons, a separation step (ii) for separating different fractions of the first intermediate process stream into at least a C2 fraction, a C3 fraction, a C4+ fraction and a C8+ fraction and an oligomerization step (iii) for oligomerizing at least the C3 fraction and the C4+ fraction to form sustainable aviation fuel, characterized in that step (i) is conducted under isothermal conditions. The invention further relates to a plant for producing sustainable aviation fuel, comprising a fixed bed reactor.
US20260002081A1	Alliance Sustainable Energy et al. (US)	Consolidation of lignin solvolysis and hydrodeoxygenation. Described herein are systems and methods for the conversion of biomass, including lignin, into compounds useful as sustainable aviation fuel (SAF). Advantageously, the provided systems and methods remove the need for reductive catalytic fractionization and the use bioderived solvents rather than expensive exogenous solvents to increase energy efficiency and reduce processing costs. Instead, the described processes utilize flow through solvolysis and hydrodeoxygenation (HDO) as a single, flow-through process to convert biomass into useful fuels.
CN121294038A	Hualu Engineering & Technology Co Ltd (CN)	Preparation method and preparation device of sustainable aviation fuel. The invention provides a preparation method and a preparation device of sustainable aviation fuel, and the preparation method comprises the following steps: 1) carrying out gasification treatment on a material comprising a biomass raw material to obtain synthesis gas; (2) sequentially carrying out conversion treatment and purification treatment on the synthesis gas to obtain converted-purified synthesis gas; 3) performing Fischer-Tropsch synthesis on the converted-purified synthesis gas to obtain a first component comprising C7 and below and a component comprising C8 and above; 4) performing cracking isomerization separation treatment on the C8 and above components to obtain the sustainable aviation fuel and a second component comprising C7 and below; and 5) returning the material comprising the first component and the second component to participate in the gasification treatment. By adopting the preparation method, the value of C7 and less byproducts is fully exerted, the recycling of the byproducts is realized, and the overall yield of the sustainable aviation fuel and the economic value of production are effectively improved.
WO2026002683A1	IFP Energies Now (FR)	Method for producing renewable kerosene comprising two successive hydroconversion steps and using a specific catalyst for each of the steps. The present invention describes a method for treating a feedstock originating from a renewable source for the production of a kerosene cut or of a gas oil base, using a sequence of two specific bifunctional catalysts, comprising at least one metal from group VIII and/or from group VIB, taken alone or as a mixture and an acid support, and preferably silica-alumina, for the first catalyst and at least one metal from group VIII and/or from group VIB and a support comprising one or more specific zeolites chosen from zeolites of FER, EUO, *MRE, MTW and MOR framework type and zeolite IZM-2, alone or as a mixture, and preferably chosen from the zeolites of MTW framework code and IZM-2 for the second catalyst, in two successive hydroconversion steps without a final fractionation step making it possible to obtain a kerosene cut to the specifications of the ASTM D7566 standard with a maximized yield of said cut, said method also making it possible to alternatively obtain a gas oil base that can be incorporated into the gas oil pool, without loss of yield compared to a method that does not use the specific catalyst sequence according to the invention.
WO2026018996A1	Korea Inst Sci & Tech (KR)	Isophorone dimer prepared from biomass, method for preparing same, and alternative aviation fuel comprising same. The present invention relates to an isophorone dimer prepared from biomass, a method for preparing same, and an alternative aviation fuel comprising same. Specifically, the present invention relates to: an isophorone dimer prepared by forming isophorone using carboxylic acid obtained from biomass and subjecting the isophorone to dimerization, hydrogenation, and deoxygenation; a method for preparing same; and an alternative aviation fuel comprising same.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121294022A	Shandong Haike Chemical Ind Co Ltd (JP)	Process for preparing biological aviation kerosene from waste oil. The invention relates to the technical field of biological aviation kerosene, and discloses a process for preparing biological aviation kerosene from waste grease. The method comprises the following steps: introducing waste oil into a hydrofining reactor; introducing hydrogen, carrying out a hydrodeoxygenation reaction under the catalysis of a hydrogenation catalyst, carrying out a reaction on the obtained hydrodeoxygenated oil in an isomerization pour point depressing reactor, and finally carrying out isomerization hot high-pressure separation treatment, isomerization cold high-pressure separation treatment and rectification tower segmentation to obtain the biological aviation kerosene. The specific surface area of a carbon matrix of the hydrogenation catalyst is large, the void structure is rich, a large number of Ni-Mo-P active catalytic centers can be exposed, precious metals such as platinum and ruthenium do not need to be added, the hydrodeoxygenation reaction efficiency of waste oil and fat is remarkably improved, the mass fraction of branched paraffin and cycloparaffin in biological aviation fuel is high, and the combustion performance is better.
CN121551053A	Shandong Univ of Technology (CN)	Preparation method of sustainable aviation fuel. The invention discloses a sustainable aviation fuel preparation method, which comprises: filling a fixed bed reactor with a CoMn-coated ZSM-11 catalyst, filling nitrogen, removing air, and introducing H ₂ and COX to carry out a reaction to obtain the sustainable aviation fuel, the CoMn-coated ZSM-11 catalyst is used for catalyzing one-step hydrogenation of COX to directly synthesize the sustainable aviation fuel, the production path of the traditional biomass-based sustainable aviation fuel can be remarkably simplified, the cost is low, CO, CO ₂ and mixed gas of the CO and the CO ₂ can be treated, when raw material gas containing CO ₂ is treated, reverse water-gas reaction is not needed, cyclic utilization of carbon is achieved, and the method is suitable for industrial production. Large-scale development of green aviation energy is promoted; the method is simple in process, mild in reaction condition and short in period, and strong acid, organic acid and any precious metal component are not needed in the whole preparation process.
CN121555261A	Shanghai Zhongqi Environment Tech Co Ltd (CN)	Waste oil pretreatment method for hydrocracking preparation of biological aviation kerosene. The invention relates to the technical field of biomass energy and green chemical industry, in particular to a waste grease pretreatment method for preparing biological aviation kerosene through hydrocracking, which comprises the following steps: pre-settling kitchen waste grease to obtain pre-settled grease, adding liquid lipase, methanol and demineralized water into the pre-settled grease, and carrying out hydrocracking to obtain pre-settled grease; performing two-stage enzymatic reaction: performing first-stage enzymatic reaction, namely continuously reacting until the acid value is reduced to 3 mg KOH/g or below; secondary enzymatic reaction: supplementing methanol, and reacting until the total content of diglyceride and monoglyceride is 5-15wt%; settling the reaction liquid to obtain a light-phase oil layer, adding crude methyl ester and hot demineralized water into the light-phase oil layer, carrying out coupled extraction washing and water phase removal to obtain an upper-layer clarified oil phase, and drying to obtain the biological aviation kerosene raw material oil; the method has the advantages of effectively controlling the distribution of glyceride in the waste grease, deeply removing metal ions, improving the aviation kerosene yield in the subsequent hydrocracking process and prolonging the service life of the catalyst.
WO2026027184A1	Siemens Energy Global GmbH & Co KG (DE)	Yield-optimised gasifier-based fischer-tropsch process, and plant for producing renewable kerosene. The present invention relates to a process for synthesising renewable kerosene (22), the process comprising: carrying out (S10) gasification of carbonaceous reactants in order to produce a synthesis gas stream (12); carrying out (S20) a Fischer-Tropsch reaction using the synthesis gas stream (12) in order to produce a hydrocarbon stream (14); cooling and separating (S30) the hydrocarbon stream (14) by means of a separator (30) in order to produce a synthetic crude stream (16), wherein the synthetic crude stream (16) contains in particular medium-length and long-chain hydrocarbons; hydrocracking (S40) the synthetic crude stream (16) by means of a hydrocracker (40) in order to produce a paraffin stream (18); fractionating (S50) the paraffin stream (18) in order to produce a kerosene stream (22) and to discharge the kerosene stream as a target product stream (22), and in order to produce a byproduct stream (24); returning (S70) the byproduct stream (24) to the gasification. The invention also relates to a plant (1).

Nº Publicación	Solicitante (País)	Contenido técnico
CN121343622A	Univ Beihang (CN)	Tandem reaction device and method for biomass catalytic pyrolysis-atmospheric hydrogenation. The invention relates to the technical field of biomass energy conversion, and particularly provides a cascade reaction device and method for biomass catalytic pyrolysis-atmospheric pressure hydrogenation. The device comprises a first-stage reactor, a tapered connector and a second-stage reactor, the inlet end of the tapered connector is connected with the first-stage reactor, the outlet end of the tapered connector is connected with the second-stage reactor, and a hydrogen inlet is located at the joint of the tail end of the tapered connector and the second-stage reactor. Nitrogen is introduced into an inlet of the first-stage reactor to create an oxygen-free environment, volatile components are pushed to move towards the rear end after the reaction, and flow fields of first-stage reaction products, nitrogen and hydrogen are reasonably distributed, so that the conversion efficiency of biomass to alkane and aromatic hydrocarbon is remarkably improved, and meanwhile, the energy consumption of hydrodeoxygenation reaction is reduced; the technical support is provided for the large-scale production of the biomass aviation fuel.

Biohidrógeno		
Nº Publicación	Solicitante (País)	Contenido técnico
CN121341941A	Beijing Institute Tech (CN)	Method for producing hydrogen in dark place through photo-initiation. The invention relates to a method for producing hydrogen in a dark place through photo-initiation, and belongs to the technical field of hydrogen production through photochemical reaction. The method comprises the following steps: adding a photocatalyst, a carbon-containing biomass derivative, alkali and water into a transparent reactor; the method comprises the following steps: irradiating a reactor by using a light source of a photocatalyst corresponding to an absorption wave band, carrying out illumination excitation in a room temperature air environment for several minutes to several hours, and then placing a reaction system in a dark condition to continuously separate out hydrogen from a solution. According to the method disclosed by the invention, the biomass derivative is applied to the dark hydrogen evolution reaction, so that the photocatalytic hydrogen evolution reaction can be continuously carried out in the dark, light excitation and the dark hydrogen evolution reaction are decoupled, and direct conversion from light energy to hydrogen energy is realized under the dark condition.
CN121380209A	China Tobacco Henan Ind Co Ltd (CN)	Method for producing hydrogen by converting tobacco waste fermentation hydrogen production wastewater through microbial electrolysis cell. The invention discloses a method for producing hydrogen by converting tobacco waste fermentation hydrogen production wastewater through a microbial electrolysis cell, which comprises the following steps: (1) pretreating tobacco waste, naturally airing and crushing broken tobacco leaves and the like, and sieving; (2) preparing a clostridium perfringens seed culture medium and culturing a seed solution; (3) inoculating the seed solution into a dark fermentation culture medium according to an inoculum size of 10-20%, and fermenting at 35 +/-1 DEG C and 120 r/min to obtain wastewater containing acetic acid and the like, the dark fermentation culture medium containing the pretreated tobacco waste and the like and having a pH value of 6.47; (4) preparing a microbial electrolysis cell inoculation bacterium source, wherein the microbial electrolysis cell inoculation bacterium source is prepared by performing dilution, microwave pretreatment and the like on cow dung or sheep manure compost; (5) enriching the anode by taking the diluted fermentation wastewater as a substrate in the single-chamber air cathode microbial fuel cell; and (6) transferring the anode to a microbial electrolysis cell reactor, blowing by using the diluted wastewater as a substrate, and producing hydrogen at 36 +/-1 DEG C and 0.4-0.9 V. The method can utilize the tobacco waste and the fermentation wastewater to relieve pollution, realize stepped hydrogen production and improve the hydrogen yield.
WO2026058280A1	Council Scient Ind Res (IN)	Electrocatalytic conversion of disaccharide into value-added chemicals and concurrent green hydrogen production. The present invention relates to a palladium-metal (Pd-M) alloy-based electrocatalyst system for the concurrent electrochemical oxidation of biomass-derived components and green hydrogen generation. More specifically, the invention enables the selective oxidation of disaccharides such as lactose, maltose, sucrose, and other C12 molecules into oxygenated organic compounds, with formate being the predominant product under optimized conditions. The electrocatalyst operates efficiently in alkaline media at low applied potentials and moderate current densities (10-40 mA/cm ²), facilitating high conversion rates and selectivity. The process is compatible with both batch and continuous flow electrolyzer setups and demonstrates long-term operational stability, making it suitable for scalable and sustainable energy and biomass valorization applications.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121380213A	Jiangxi Brother Pharmaceutical Co Ltd (CN)	Biological hydrogen production method. The invention discloses a biological hydrogen production method, which relates to the technical field of biological energy, and comprises the following steps: S1, under the condition of no illumination, anaerobic bacteria and an organic reaction solution are subjected to a reaction to prepare hydrogen and dark fermentation tail liquid; S2, the dark fermentation tail liquid enters a photoreactor, photosynthetic bacteria are added, and hydrogen is prepared; wherein the photosynthetic bacteria are loaded on the composite carrier, and the specific loading method comprises the following steps: pretreating vermiculite, then soaking the vermiculite in a bacteria solution containing the photosynthetic bacteria for continuous culture, and taking out the vermiculite after the culture is finished. The photosynthetic bacteria are loaded on the composite carrier through a dark-light combined biological hydrogen production process, so that on one hand, strains can be concentrated to realize immobilization and the treatment efficiency of the strains can be improved, and on the other hand, the light absorption rate of the photosynthetic bacteria can be further improved by adding the light guide particles on the composite carrier, so that the photosynthetic bacteria can be effectively degraded. The strain treatment efficiency is further improved.
CN121343635A	Jiangxi Carbon Zhonghe Res Center et al. (CN)	Biomass supercritical water gasification hydrogen production system and method based on heat energy self-circulation and heat stirring enhancement. The invention discloses a biomass supercritical water gasification hydrogen production system and method based on heat energy self-circulation and heat stirring intensification, and belongs to the technical field of hydrogen production energy. The system comprises a supercritical water gasification reaction device, the top of the supercritical water gasification reaction device is connected with a storage tank, the bottom of the supercritical water gasification reaction device is connected with a water tank and a slag collecting device, and a stirring device and a palladium membrane are arranged in the supercritical water gasification reaction device; a solar heater is arranged outside; a heat conversion device is arranged on the supercritical water gasification reaction device; a gas outlet of the supercritical water gasification reaction device is connected with a decompression separator, and a gas outlet of the decompression separator is connected with a carbon monoxide combustion device. The supercritical water gasification system is used for solving the technical problems that a traditional supercritical water gasification system is low in internal heat transfer efficiency and insufficient in material mixing.
CN121537998A	Shandong Electric Power Engineering Consulting Inst Corp Ltd (CN)	Biomass and plastic mulching film waste co-gasification hydrogen production system and analysis method. The invention belongs to the technical field of hydrogen energy. According to the biomass and plastic mulching film waste co-gasification hydrogen production system and the analysis method, the dual technical problems that traditional biomass single gasification hydrogen production efficiency is low, tar byproducts are many, and a plastic mulching film is difficult to degrade, so that white pollution is caused are effectively solved; cooperative treatment of cotton stalk residues and plastic mulching films is achieved through sequential interactive connection of multiple units, the raw material pretreatment unit optimizes raw material characteristics to adapt to follow-up reactions, the pyrolysis and mixed gasification unit reduces side reactions by means of complementarity of the two units, and the purification reforming unit increases the proportion of H ₂ in synthesis gas. The heating and conveying unit realizes waste heat recovery and reduces energy waste, and the stepped cooling and separating unit accurately purifies H ₂ ; the whole process is closely linked, resource utilization of agricultural waste and plastic waste is promoted, the defects that a traditional process is poor in energy integration and low in resource utilization rate are overcome, and environment friendliness and hydrogen production performance are both considered.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121250411A	Univ Central South Forestry & Technology (CN)	Method for electrocatalytic hydrogen production by using continuous heterogeneous curvature lignin carbon sphere supported monatomic Ru catalyst. The invention discloses a method for electrocatalytic hydrogen production by using a continuous heterogeneous curvature lignin carbon sphere supported monatomic Ru catalyst, which is characterized in that the continuous heterogeneous curvature lignin carbon sphere supported monatomic Ru catalyst is used as an electrocatalyst for electrocatalytic treatment of water, and the adopted catalyst comprises a continuous heterogeneous curvature lignin carbon sphere and a continuous heterogeneous curvature lignin carbon sphere supported monatomic Ru catalyst, ruthenium single atoms are loaded in the continuous heterogeneous curvature lignin carbon spheres. According to the catalyst disclosed by the invention, the continuous heterogeneous curvature lignin carbon spheres are used as a carrier, and ruthenium single atoms are loaded on the continuous heterogeneous curvature lignin carbon spheres, so that the number of catalytic active sites on the surface of the catalyst can be increased, and the catalyst has more excellent catalytic activity; in addition, ruthenium single atoms can be stably fixed in the continuous heterogeneous curvature lignin carbon spheres, so that the catalyst has more excellent stability, shows very excellent electro-catalytic hydrogen evolution performance when being used as an electro-catalyst for electro-catalytic water treatment, and is suitable for large-scale industrial application.
CN121472019A	Univ Henan Agricultural (CN)	Sealed photosynthetic biological hydrogen production device. The invention discloses a sealed photosynthetic biological hydrogen production device, and relates to the technical field of photosynthetic biological hydrogen production, the sealed photosynthetic biological hydrogen production device is provided with a constant temperature water tank, a feeding tank, a main reaction tank, an acid tank, an alkali tank, a three-layer purification tank and a gas storage tank, the device adopts a modular combination design, and the outer side of the main reaction tank is wrapped by the constant temperature water tank; the feeding tank, the acid tank and the alkali tank are respectively connected through pipelines, and a mud valve is arranged at the bottom; the main reaction tank is sequentially connected with the three layers of purification tanks and the gas storage tank through gas guide pipelines, a stirring system is arranged in the main reaction tank, and an observation window and a sampling opening are formed in the side wall of the main reaction tank. The problems that an existing device is fixed in structure, low in parameter regulation and control precision, insufficient in gas production purity, poor in safety and the like are solved, the stability of the photosynthetic organism culture environment is guaranteed, and the hydrogen production efficiency and the hydrogen purity are improved.
CN121372235A	Univ Southeast (CN)	System and method for producing hydrogen by biomass three-stage adsorption enhanced reforming in double heat supply modes. The invention provides a double-heat-supply-mode biomass three-stage adsorption enhanced reforming hydrogen production system and a double-heat-supply-mode biomass three-stage adsorption enhanced reforming hydrogen production method. The system is formed by sequentially connecting a biomass feeding system, a pyrolysis system, a continuous adsorption enhanced fluidized bed, a continuous catalytic reforming fluidized bed and a synthesis gas separation and purification and double-source coupling heat supply system, CO ₂ is removed online through the adsorption enhanced fluidized bed to break reaction equilibrium, and the catalytic reforming fluidized bed is coupled to realize directional cracking and deep reforming of tar. Therefore, the hydrogen yield and purity are synergistically improved. According to the method, a renewable energy source and slag combustion double-source complementary heat supply mode is adopted, all-time stable energy supply is achieved, and energy consumption and cost are greatly reduced. The system is also integrated with an adsorbent and catalyst in-situ regeneration circulation loop, so that continuous and long-acting operation of the system is guaranteed. According to the invention, the bottlenecks of low yield, high energy consumption, discontinuous operation and the like in the traditional biomass hydrogen production technology are effectively solved, and efficient, economical and environment-friendly conversion from biomass to high-purity hydrogen is realized.

Nº Publicación	Solicitante (País)	Contenido técnico
CN121376909A	Yingkou Institute Tech (CN)	Method for preparing high-purity hydrogen through catalytic gasification of biomass containing alkali metal additive. The invention relates to the field of hydrogen preparation, and discloses a preparation method of biomass catalytic gasification high-purity hydrogen containing an alkali metal additive. Comprising the following steps: mixing alkali metal-containing salt with cerium oxide or cerium oxide-zirconium oxide composite powder, and carrying out ion exchange, drying and roasting to obtain an alkali metal-containing oxygen vacancy composite additive; the auxiliary agent is mixed with sodium carbonate and potassium carbonate eutectic carbonate, a continuous molten phase is formed at the use temperature, and the continuous molten phase and oxygen vacancies act synergistically to prepare the catalyst. The method comprises the following steps: drying and crushing a biomass raw material, feeding into a double-temperature-zone reactor, and carrying out thermal cracking and reforming reaction in a mixed atmosphere of air and water vapor to generate mixed gas; when the activity of the catalyst is reduced, carbon dioxide-containing gas is introduced for medium-temperature regeneration, and produced gas is subjected to condensation, pressure swing adsorption or membrane separation purification to obtain high-purity hydrogen. The method is high in gasification efficiency, the catalyst can be recycled, the hydrogen purity is high, and the system stability is excellent.

Otros biocombustibles (renewable diesel, drop-in biofuels, bio-gasolina y mezclas de combustibles)

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026035980A1	Chevron USA Inc (US)	Biofuel feed pretreatment method. The present invention relates to biofuels, and more particularly, to biomass-based diesel fuels. Specifically, the present invention relates to an improved pre-treatment process for the removal of contaminants from low-value and waste fats and oils for the purpose of hydrodeoxygenation into diesel boiling range hydrocarbons. The present invention is useful in sequestering carbon which would otherwise be released into the atmosphere while producing a lower carbon fuel product.
US12590258B1	Chevron USA Inc (US)	Converting a lipid feedstock to fuel. In some examples, a method of generating a fuel blend includes flowing a lipid feedstock into a reaction vessel comprising a metal oxide catalyst on an oxide support. The metal oxide catalyst in the reaction vessel is used to catalytically convert the lipid feedstock into a mixture comprising an intermediate composition having at least 70% of its oxygen within ketone groups. Distillation is used to obtain a distillation cut of the mixture. Without any further catalytic processing of the distillation cut, the distillation cut is blended with a fuel to create a fuel blend.
WO2026006320A2	Lanzajet Inc (US)	Coprocessing of bio-olefins. The present disclosure relates to coprocessing of bio-olefins using blended renewable feedstocks comprising a first renewable feedstock comprising a precursor of hydroprocessed esters and fatty acids (HEFA) and a second renewable feedstock comprising a bio-olefin. Blended renewable feedstocks for obtaining paraffinic jet and diesel fuels, and renewable paraffinic jet and diesel products obtained therefrom are also provided.
WO2026042077A1	Naki Venture Ltd (IL)	Methods of processing waste streams. The invention relates to a method for extracting fat, oil or grease (FOG) from a waste stream. The extraction is based on a liquid-liquid extraction and is considered to be cost-efficient through the use of 10% to 55% of said immiscible water solvent, resulting in reduced solvent costs and lower operational burdens relative to higher immiscible water solvent concentrations. The purified composition is for use in is for use in animal feed, manufacturing biodiesel, hydrotreated vegetable oil (HVO), or sustainable aviation fuel (SAF) including any combination thereof.
WO2026015954A1	PETROBRAS (BR)	Catalytic cracking process in a fluidized bed of glycerides for producing high-stability gasoline using a catalyst formulation based on faujasitic zeolite modified by ion exchange with rare earths, and high stability gasoline. The present invention relates to a catalytic cracking process in a fluidized bed of glycerides for producing high-stability gasoline, in which a feed stream of vegetable oils and/or animal fat containing glycerides is brought into contact with a catalyst based on faujasitic zeolite modified by ion exchange with rare earth oxides (RE203) in high concentrations. The present invention further relates to the gasoline obtained by the aforementioned process, which is 100% renewable.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026041495A1	Shell Int Research (NL) et al.	Renewable fuel component. A renewable paraffinic diesel fuel component comprising: - an n-paraffins content of at most 4 wt%, - an iso-paraffins content of at least 92.5 wt%, - a mono-branched iso-paraffins content of at most 30.5 wt%, - a content of iso-paraffins with more than two branches of at least 15 wt%, and wherein at least two of the following conditions are met: - a total C16 paraffinic content from 10 wt% to 20 wt%, - a total C17 paraffinic content from 30 wt% to 45 wt%, - a total C18 paraffinic content from 30 wt% to 45 wt%. The renewable paraffinic diesel fuel component has improved cold flow properties at the same time as having an optimal density.
WO2026033035A1	Topsoe AS (DK)	Hydrocarbon Composition Of Biological Origin Containing Aromatics. New fuels produced from biological sources such as cashew nut shell liquid are disclosed, together with methods for producing such fuel by the conversion of phenol-lipids in ways avoiding oligomerization.
CN121490779A	Univ China Petroleum East China (CN)	Non-supported multifunctional catalyst for hydroisomerization and moderate cracking of biological oil and fat and preparation method of non-supported multifunctional catalyst. The invention discloses a non-supported multifunctional catalyst for hydroisomerization and moderate cracking of biological oil and fat and a preparation method of the non-supported multifunctional catalyst, and belongs to the technical field of biomass energy catalysis. The catalyst is non-supported Ni ₁ MoxMy, x is more than or equal to 1 and less than or equal to 2, y is more than 0 and less than or equal to 0.5, and metal M is one of Mn, Zn and Fe. The preparation method comprises the following steps: (1) uniformly mixing solid compounds containing nickel and molybdenum, adding the mixture into deionized water, heating and stirring, and adjusting the pH value to 10-11 by using ammonia water to form a blue transparent nickel-molybdenum ammonia complex solution; (2) adding a solid compound containing metal M such as iron and manganese, and continuously stirring until slurry is formed; and (3) filtering, washing, drying and roasting the slurry, extruding and molding, and roasting to obtain the non-supported multifunctional catalyst for hydroisomerization and moderate cracking. The method disclosed by the invention is simple in preparation process and low in raw material price, can realize production of biodiesel or biological aviation kerosene by hydroisomerization and moderate cracking of the biological oil and fat, avoids the problems of excessive cracking and the like in conventional reaction, and has industrial application potential.
WO2026060277A1	Virent Inc (US)	Renewable Diesel Production With Reduced Hydrogen Consumption And Glycerol Release. The present disclosure provides a method for producing hydrocarbon fuel from triglyceride feedstock. The method can include production of fatty acid methyl esters, from which the hydrocarbon fuel can be produced in the presence of hydrogen. In this process, glycerol can be fed into an aqueous-phase reforming (APR) process to generate hydrogen, which can be recycled to the fuel production reactions, thereby reducing overall hydrogen consumption.

PATENTES BIOPRODUCTOS

Biomateriales (de construcción, medicina, embalaje, etc.)		
Biocomposites y biofibras		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026027386A1	Autoneum Man AG (CH)	Automotive trim part comprising a fibrous layer. An Automotive trim component for a passenger vehicle or a light or heavy duty truck comprising a porous fibrous layer, characterized in that the porous fibrous layer comprises at least one area such that the Fibers Orientation Scattering at any location comprised in that area is greater than 15 degrees, more preferably greater than 25 degrees.
WO2026042036A1	Boidessence Officina Ingredients (FR)	Composite material comprising padauk wood particles. The invention relates to a biodegradable composite material comprising a biodegradable polymer matrix and Padauk wood particles dispersed in said polymer matrix.
WO2026018049A1	Bpacks Lab d o o Beograd (RS)	Biodegradable moisture absorbing composite and methods for producing same. The present application discloses biocomposites containing a polymeric matrix comprising at least one biopolymer having an amino (-NH ₂) or hydroxyl (-OH) side group, and from 30 to 85% (w/w) of a bark flour with a particle size from 500 to 1500 mesh. Products comprising the biocomposites and methods for producing thereof are also disclosed.
WO2026018052A1	Desca Prosta Spolka Akcyjna (PL)	Wood-based board, in particular particle board, and method of manufacturing the wood-based board, in particular particle board. The invention relates to a wood-based board (1) and a method of its manufacturing using wood-based board waste, in particular from particle boards. The wood-based board (1) is a prism and comprises interconnected layers, including a core (2), the core (2) comprising at least two interconnected layers of half-planks (4) made of a wood-based material. A single half-plank (4) is cut from wood-based board waste, and it has at least one surface (4B) comprising the wood-based material. The half-planks (4) forming the core are glued together by surfaces (4B) comprising the wood-based material, and the core (2) comprises a plurality of interconnected half-planks glued together by surfaces (4B) comprising the wood-based material and edge-joined together, whereby the glued half-planks (4) in the core (2) are arranged at an angle ranging from 0 to 90 degrees with respect to a selected pair of parallel sides of the board. In the manufacturing method, wood-based board waste is cut into planks in the shape of a prism, and subsequently the planks produced in this manner are cut along the plane of symmetry to produce half-planks (4). The half-planks (4) made of wood-based board waste having the same width are glued together by the surfaces (4B) comprising the wood-based material to produce a construction plank (6), and the construction planks (6) are face-glued together to form a lath (7). The lath is cut into segments which are glued together by side walls, forming a wood-based board (1) core (2) in the shape of a rectangular cuboid.
WO2026041572A1	Europeenne de Bio- masse et al. (FR)	Composite material suitable for additive manufacturing and especially fused deposition modeling. The invention relates to a material, suitable for additive manufacturing and in particular for fused deposition modeling, wherein said composite material is obtained by fusion of at least two components:- at least one polymer matrix chosen among polyhydroxyalkanoates (PHA), and- at least one auxiliary filler chosen among biobased fillers consisting of biobased particles comprising lignin, cellulose and hemicellulose ,wherein said biobased particles have a lignin/hemicellulose mass ratio from 1 to 6.The invention also relates to an additive manufacturing process and a product obtained by an additive manufacturing process.
WO2026037406A1	Japan Aozu Group Asia Ltd (CN)	Antibacterial, antiviral, and negative-oxygen-ion-releasing home decoration board and manufacturing method therefor. The present application relates to the technical field of composite materials, and in particular to antibacterial, antiviral, and negative-oxygen-ion-releasing furniture, a home decoration board and a manufacturing method therefor. The home decoration board in the present application is manufactured by using a polyolefin resin and wood fibers as main raw materials, and various properties of the home decoration board are achieved by adding a nano-silicon sheet, a lubricant, an antioxidant, a flame retardant, a coupling agent, and an inorganic reinforcing filler. The addition of the nano-silicon sheet can effectively improve the antiviral and antibacterial properties of the home decoration board and allow for the release of a large number of negative oxygen ions; the addition of the flame retardant can effectively improve the flame retardant properties of the home decoration board; the addition of the inorganic reinforcing filler can effectively improve the mechanical properties of the home decoration board; and the addition of the coupling agent can effectively improve the compatibility and dispersion uniformity of the components.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026046489A2	Knauf Gips KG (DE)	Acoustic building panel for installation as sound-absorbing ceiling panel and/or sound-absorbing wall panel and method for providing the base layer of an acoustic building panel. Acoustic building panel (0) for installation as sound-absorbing ceiling panel and/or sound-absorbing wall panel comprising a base layer (1), wherein said base layer (1) contains the following constituents: wood wool as support material; and a solidified binding agent provided by a solidified suspension comprising a biopolymer and a liquid, preferably a polar liquid, more preferably water; in total to at least 95%, preferably to at least 99%, more preferably to at least 99.7%, most preferably to 100%.
WO2026009017A1	Steelcase Inc (US)	Method for producing a laminate, laminate for a piece of furniture, and use of a polyhydroxyalkanoate in the production of a laminate. The invention relates to a method for producing a laminate for a piece of furniture, said method comprising the following steps: First, a decorative material is placed on a carrier panel. A composition is applied to the decorative material and/or the carrier panel, wherein the composition comprises a polyhydroxyalkanoate. The composition, the decorative material and the carrier panel are then pressed together to obtain the laminate at a pressing temperature at which the polyhydroxyalkanoate melts at least partially. The invention further relates to a laminate and to the use of a polyhydroxyalkanoate.
WO2026034428A1	Toray Industries (JP)	Epoxy resin composition, prepreg, fiber-reinforced composite material, and method for recycling fiber-reinforced composite material. The present invention addresses the problem of providing an epoxy resin composition that overcomes the trade-off in the prior art between depolymerizability and heat resistance, and that yields a cured product provided with sufficient heat resistance while having excellent recyclability. Furthermore, the purpose of the present invention is to provide a prepreg and a fiber-reinforced composite material having excellent recyclability, by using the epoxy resin composition as a matrix resin. The epoxy resin composition includes components [A], [B], and [C], and the component [B] is contained in an amount of 30-70 parts by mass per 100 parts by mass of the total epoxy resin. Component [A]: a bifunctional naphthalene-type epoxy resin or a biomass-derived bisphenol-type epoxy resin. Component [B]: a urethane-modified epoxy resin. Component [C]: a curing agent.
WO2026062451A1	Unilin BV (BE)	Sheet material for a decorative panel. A sheet comprises a polymer matrix, a first filler material and a second filler material. The first filler material is selected from wood material, plant-based material, mineral fillers, or combinations thereof. The second filler material is provided by low density particles, wherein the low density particles have a density less than 0.30 g/cm ³ . The first filler material as well as the second filler material are embedded in the polymer matrix. The polymer matrix is selected from a thermoplastic matrix, a thermoset matrix or combinations thereof.

Bioplásticos

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026012927A1	Bostik SA (FR)	Process implementing a polyhydroxyalkanoate. The invention relates to a process comprising melting a mixture (M1) at a temperature of at least 110°C to provide a mixture (M2), wherein the mixture (M1) comprises:- a polyhydroxyalkanoate comprising repeating units derived from 3-hydroxypropionic acid, 3-hydroxybutyric acid, 3-hydroxyvaleric acid, 4-hydroxybutyric acid, 5-hydroxyvaleric acid and/or 3-hydroxyhexanoic acid, and- an amine. The invention also relates to a composition obtainable by the process according to the invention. The invention further relates to the use of the composition according to the invention as a thermoplastic resin, a hot-melt adhesive or a polymer blend. Finally, the invention relates to an article comprising the composition according to the invention.
WO2026055410A2	Danimer Ipco LLC (US)	Recycling or repurposing of polyhydroxyalkanoates. A method for depolymerizing a poly(hydroxyalkanoate) by reaction with a depolymerase enzyme to produce a mixture of poly(hydroxyalkanoate) degradation products. The present disclosure also provides methods for recycling or repurposing the poly(hydroxyalkanoate) to provide a new poly(hydroxyalkanoate) or to produce a biogas feedstock.
WO2026013516A1	Eggplant SRL (IT)	Method for producing a polyhydroxyalkanoates. The present invention relates to a method for producing polyhydroxyalkanoates (PHAs) in a bacterial strain containing the phaCAB operon and in the presence of low-protein, low-lactose dairy wastewater. The method of the present invention can be used in a medium- to large-scale industrial process for the production of PHAs, preferably PHB.

Nº Publicación	Solicitante (País)	Contenido técnico
W02026049669A1	Ecovia Pte Ltd (SG)	A method and apparatus for processing a bioplastic derived from cellulosic fabric scraps. There is provided a method and apparatus for processing a bioplastic that can be used in multiple industries such as, for example, food/non-food applications, apparel industry applications, retail store packaging and so forth. It is preferable that the present invention is able to enable replacement/reduction of use of conventional non- biodegradable plastic originating from petrochemicals.
W02026008344A1	Futerra SA (BE)	Improved method for producing polylactic acid with a low yellow index. The present invention relates to a continuous method for producing polylactic acid with a low yellow index, comprising a step of purifying a crude lactide stream, the crude lactide stream being formed upstream by the cyclization of lactic acid oligomers, the oligomers being obtained by oligomerization of a lactic acid stream, and the purification of the crude lactides stream comprising a step of crystallization without prior distillation.
W02026014323A1	Kaneka Corp (JP)	Method for producing polyhydroxyalkanoate. The problem addressed is to provide a method for producing PHA that can sufficiently remove impurities while reducing the amount of wastewater in a purification process and can realize a practical filtration rate. The problem is solved by a method for producing PHA, the method comprising: a centrifugal separation step in which a PHA aqueous suspension (1) is centrifuged to obtain a PHA aqueous suspension (2) having a predetermined protein content; and a filtration step in which the PHA aqueous suspension (2), which has been adjusted to a pH of from more than 5.5 to 11.0, is subjected to dead end filtration.
W02026024613A1	Nantbiorenewables LLC (US)	Polylactic acid bioplastics. Compositions and uses of polylactic acid biobased polymer plastic compositions are presented having increased strength and flexibility as well as improved heat tolerance relative to other biodegradable plastics. Methods of making these improved plastics are also disclosed.
W02026014613A1	Park Jun Woo (KR)	Bioplastic using coffee grounds and manufacturing method therefor. The present invention provides a method for manufacturing bioplastic using coffee grounds and bioplastic manufactured thereby, the method comprising the steps of: mixing coffee grounds with an inorganic additive and drying same to produce dried coffee ground powder; mixing the dried coffee ground powder with a resin composition to produce a plastic mixed composition; and extruding or injection molding the plastic mixed composition.
W02026038597A1	Regeron Inc (KR)	Synthesis of multifunctional biopolymer from coconut husk and/or coir pith powder and its application. The present invention relates to the synthesis and production of biopolymer from natural waste - the husk of coconut and/or coir pith powder. More specifically it pertains to a novel multi-functional biopolymer obtained from the husk of coconut and/or coir pith powder, the fruit of <i>Cocos nucifera</i> with combinations of copolymer, crosslinker, and plasticizers for use in pharmaceutical, nutraceutical, cosmeceutical and leather industry. Lignin component from coconut husk was extracted, purified, studied for their physicochemical properties and processed into various biopolymers to be used as burn wounds dressings and leather substitutes.
W02026003139A1	Totalenergies Corbion BV (NL)	Poly lactide-based composition and uses thereof. The present invention relates to a composition comprising polymeso-lactide (PML) and poly-L-lactide (PLA) each with defined properties, and at least one chain extending agent. The invention further relates to substrates coated with a composition of the invention, and to articles comprising or made from such compositions or from such coated substrates. The invention also relates to the use of a composition comprising polymeso-lactide (PML) and poly-L-lactide (PLA) and at least one chain extending agent for various applications, in particular for melt-processing applications such as film production, and extrusion or extrusion coating applications.

Biochar		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026055774A1	Beyond Sustainable Corp (CA)	Biochar-based composite materials for carbon sequestration and use thereof for packaging and horticultural applications. Disclosed are biochar-infused composite materials designed for applications in construction, packaging, and/or horticulture. The materials, integrating biochar into matrices of starch, paper, cardboard, molded pulp, peat moss, cellulose, chitosan, polylactic acid (PLA), gelatin, PLA (Polylactic Acid), pectin, agar, or other natural polymers, taken alone or in combinations, enhance key mechanical properties like rigidity, moisture resistance, and impact protection. These composites offer environmental benefits, such as carbon sequestration and pollutant absorption, contributing to long-term sustainability. Customizable biochar concentrations and particle sizes allow for application-specific optimization, making the materials versatile across industries. Packaging solutions not only protect products but also act as vehicles for distributing biochar globally, at no extra cost. Once the packaging has served its purpose, it can be composted to improve soil health and sequester carbon, thus supporting climate action goals. The use of starch further enhances biodegradability, aligning with the vision of promoting a circular economy.
WO2026040598A1	Cheng Yau Sang Stephen (CN)	NOVRL biochar-based compositions as useful functional polymer fillers. A polymer composition includes chemically-modified biochar and a carbon-based polymer. The modification and use of biochar result in its usefulness as a filler material in polymer compounds and formulations.
US20260014541A1	GE Infrastructure Technology LLC (US)	System and method of gas treatment with biochar sorbent system in power plant. A system includes a biochar sorbent system having a biochar sorbent chamber configured to support a biochar, and an exhaust path configured to flow an exhaust gas through the biochar sorbent chamber, wherein the biochar sorbent system is configured to adsorb an undesirable gas from the exhaust gas into the biochar to generate an enriched biochar and a treated gas.
WO2026017890A1	Ecolocked GmbH (DE)	Lightweight concrete mixture. Lightweight concrete mixture comprising a biocarbon fine lightweight aggregate, the biocarbon fine lightweight aggregate having particle sizes in the range of 0 to 4 mm, preferably 0 to 2 mm, a particle size distribution with D50 5 in the range of 0.010 to 1.00 mm, preferably 0.012 to 0.60 mm, further preferred 0.015 to 0.08 mm, a particle density in the range of 0.20-1.80 g/cm ³ , preferably 0.40-0.60 g/cm ³ and a random reflectance of at least 1.3 %, preferably at least 1.5 %, further preferred at least 1.8%, most preferred at least 2 %.
WO2026042323A1	JFE Steel Corp (JP)	Coke production method. A coke production method comprising mixing carbonized biomass obtained through heat treatment of biomass, to a portion of blended coal for coke production and performing dry distillation thereon, wherein the volatile matter of the carbonized biomass on dry ash-free basis is 7.0-35 mass%.
WO2026005709A1	Olam International Ltd (SG)	Biomass conversion to activated carbon. Methods of producing activated carbon are disclosed, which proceed through the formation of a biochar intermediate having threshold quality characteristics that render it suitable for (i) direct use, such as a soil amendment, as well as (ii) subsequent activation to make the higher-value activated carbon. These characteristics, including a favorably high fixed carbon content, may be achieved in an efficient manner and often with the avoidance of certain processing steps that add complexity and expense. Representative methods comprise (a) a carbonization step to obtain the biochar, and (b) an activation step of contacting the biochar with steam or other oxidant to obtain the activated carbon having an increased surface area (e.g., at least about 750 m ² /g) relative to that of the biochar. Particularly advantageous results, in terms of process performance and product quality characteristics, are achieved with biomass comprising almond residues (e.g., almond shells and hulls) as a starting material.
WO2026036241A1	Sika Tech AG (CH) et al.	Adhesive composition comprising biochar. The present invention relates to a cementitious adhesive composition, in particular a cementitious tile adhesive composition, comprising biochar. The present invention also relates to the preparation method of a cementitious adhesive composition, preferably a cementitious tile adhesive composition, with a reduced carbon footprint or, especially, a carbon-negative adhesive composition.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026060383A1	Solid Carbon Inc (US)	Formulations and methods for concrete with biochar supplementary cementitious material. Systems and method are provided for a biochar concrete. The biochar concrete includes a low carbon fraction biochar, non-biochar cementitious material, coarse aggregate, fine aggregate, and water. A mass of the low carbon fraction biochar, mass of the non-biochar cementitious material, mass of the coarse aggregate, mass of the fine aggregate, and mass of water depend on a binder fraction of the low carbon fraction biochar which is less than 70% carbon by mass.
US20260001796A1	Texas State Univ (US)	Biologically active pervious structure (BAPS): a sustainable technology for runoff water quality improvement. The present disclosure pertains to a composition that includes a porous structure associated with one or more biochars and one or more micro-organisms. The present disclosure also pertains to methods of capturing contaminants from an environment by associating the environment with a composition of the present disclosure. The present disclosure also pertains to methods of making the compositions of the present disclosure by associating one or more biochars and one or more micro-organisms with a porous structure.
WO2026051133A1	Univ Beijing Normal (CN)	Biochar-seed gel for vegetation rehabilitation in saline-alkali soil, preparation method thereof, and application thereof. A biochar-seed gel for vegetation rehabilitation in saline-alkali soil, a preparation method thereof, and an application thereof are provided. The biochar-seed gel includes a water-retaining hydrogel, effective nutrient components, and a structural maintenance agent, where the water-retaining hydrogel is polyacrylamide; the effective nutrient components include <i>Bacillus subtilis</i> inoculant, brassinolide, chitosan oligosaccharide, polyaspartic acid, and compound fertilizer; and the structural maintenance agent includes biochar, clay, chitosan, and <i>Gleditsia sinensis</i> powder. The biochar-seed gel forms a microenvironment on the soil surface, mitigating stress caused by high-salinity soil conditions. The gel exhibits strong water-retention capacity, effectively maintaining moisture to support seed and seedling growth while alleviating water deficiency resulting from soil compaction.

Bioproductos químicos (biofertilizantes, biocosméticos, biofarmacéuticos...)

Biofertilizantes, bioadhesivos, etc.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026006430A1	Biobond Adhesives Inc (US)	One-part starch-based adhesive. The present invention provides to a one-part adhesive composition that exhibits superior bonding strength, durability, and versatility. The adhesive is formulated to be easily applied and cured at ambient temperatures, without the need for mixing or specialized equipment. The unique combination of ingredients provides a strong and lasting bond on a variety of substrates, including metals, plastics, wood, and composites.
WO2026005388A1	Dongsung Chemical Co Ltd (KR)	Hot-melt adhesive composition comprising bio-base material. The present invention relates to a hot-melt adhesive composition comprising a biodegradable plastic, a thermoplastic polymer, a tackifier and a plasticizer, wherein the biodegradable plastic includes polyhydroxyalkanoate (PHA). The hot-melt adhesive composition according to the present invention has lower viscosity and higher adhesiveness compared to a petroleum-based hot-melt composition, and can be used as an eco-friendly hot-melt adhesive composition having physical properties corresponding to an excellent recycling criteria grade under recyclability assessment criteria.
WO2026036247A1	Henkel Ag & Co Kgaa (DE) et al.	A compostable water-based adhesive composition. Described herein is an easy-to-compost water based adhesive composition and the preparing method thereof. The compostable water-based adhesive composition, comprising (a) at least one vinyl acetate-ethylene copolymer, (b) at least one phosphoric acid-modified starch, (c) at least one vegetable oil, and (d) water, wherein the composition has a solid content of larger than 20%.
WO2026060004A1	Hexion Inc (US) et al.	Lignin wood adhesive. Disclosed is a wood adhesive of an uncondensed lignin and an aqueous solvent. Uncondensed lignin is extracted lignin which retains a significant portion, 50% or more of the aliphatic hydroxyl functionality of the natural lignin. Also disclosed is a process for manufacturing a composite article. A process of the invention applies a wood adhesive to a substrate to form a coated substrate and presses the substrate at an elevated temperature and for a time sufficient to cure the wood adhesive and form the composite article. Exemplary composite articles include, but are not limited to, plywood, a laminated veneer layer (LVL) product, laminated glulam beam, mass timber, oriented strand board (OSB), cross-laminated timber (CLT), particle board, medium density fiberboard (MDF) and the like.

Nº Publicación	Solicitante (País)	Contenido técnico
EP4706436A1	Hu Zhibing et al. (CN)	Self-adhesive false eyelashes and preparation method thereof. The present application provides self-adhesive false eyelashes with self-adhesive natural glue. A gelatin-carrageenan-Pullulan composite formula is utilized to create a self-adhesive natural glue that exhibits optimal viscosity. Therefore, this formulation imparts a strong self-adhesive effect to false eyelashes while maintaining low allergenicity. Consequently, the resulting false eyelashes are particularly well-suited for individuals with sensitive skin. The self-adhesive natural glue, which is formulated using a gelatin-carrageenan-Pullulan system, possesses notable superiorities in terms of adhesive performance, compatibility, reusability, safety, rebound resilience, skin adhesion, and other aspects for the self-adhesive false eyelashes within the scope of the present application. This innovation offers users a more convenient, comfortable, safe, and environmentally friendly makeup experience.
WO2026061904A1	Kemira Oyj (FI)	Heat-sealable adhesive composition and uses thereof. A heat-sealable adhesive composition comprises a polyhydroxyalkanoate and a booster. The polyhydroxyalkanoate is present in an amount of at least 40 %. The booster is selected from: an acrylate-based polymer in an amount of 0.5 to 60 %; a starch or modified starch in an amount of 0.1 to 30 %; a PVOH or EVOH in an amount of 0.1 to 30 %; a cellulose derivative in an amount of 0.1 to 10 %; silica in an amount of 0.1 to 10 %; and combinations thereof. The stated percentages are by weight of the composition on a dry matter basis. The booster improves one or more properties of the polyhydroxyalkanoate, such as the rate at which hot tack ramps up and/or the seal strength of the adhesive. Also provided is packaging including the adhesive composition, as well as methods of using the adhesive composition and the use of a booster in an adhesive composition.
WO2026011214A1	Liquim Ltd (AU)	Natural-origin bioadhesive, biodegradable, protective microfilm barrier composition and method of use. The disclosure relates to a bio-adhesive composition that in use forms a barrier on a substrate to prevent antagonists contacting the substrate. The composition may comprise at least 1.0 wt.% of a cellulose derivative, at least 0.1 wt.% of a gum-based compound, and an aqueous-based solvent. The composition may have a viscosity at a point-of-use of at least 10,000 cP.
WO2026030045A1	Silvis Mat Inc (US)	Cellulose dissolution, emulsions thereof, compositions therefrom, and process of making cellulose-based binders and adhesive therefrom. Disclosed herein is a novel method for making bio-based emulsion or dispersion, utilizing unaltered natural cellulose as the primary raw material. The method employs environmentally friendly and non-toxic dissolution systems, such as custom-designed ionic liquids (ILs) and deep eutectic solvents (DESs), for dissolution of cellulose. Subsequently, this dissolved cellulose composition is combined with emulsifying agents to yield a stable emulsion. A solvent removal process is further employed to separate the cellulose-based emulsion from the dissolution system, enabling recovery and reuse of the solvent. Finally, mixing with bio-based additives and crosslinking agents, the resulting product is an aqueous cellulosic-derived colloidal emulsion and/or dispersion, that is useful as bio-based binders and adhesives, which is also biodegradable and compostable, offering a sustainable alternative to petroleum-based adhesives/binders across a range of applications.
WO2026009110A1	Stora Enso Oyj (FI)	Binder comprising semi-washed lignin. The present invention is directed to a process for preparing a binder, wherein semi-washed lignin is mixed with a cross-linker and heated. The invention is also directed a binder obtained according to the process and to the use thereof.
WO2026008913A1	UPM Kymmene Corp (FI)	An adhesive. Disclosed is an adhesive, wherein the adhesive comprises a lignin-based binder composition, wherein: - the lignin-based binder composition is prepared from crosslinking agent polymerized with polymerizable substance in the presence of triacetin, - at least 30 weight-% of the polymerizable substance originates from lignin, and - triacetin is used in an amount of 0.1 - 5 weight-% based on the total wet weight of the lignin-based binder composition. Further is disclosed the use of the adhesive and of triacetin. Further is disclosed an insulating wool product.

Biocosméticos, Biofarmacéuticos

Nº Publicación	Solicitante (País)	Contenido técnico
EP4700131A1	Biorealis SRO (SK)	Process of preparing cosmetic ingredients containing cosmetically or dermatologically active components from plant or algae. A combined process for a preparation of a cosmetic ingredient containing a cosmetically and/or dermatologically active component of plant or algae origin in an increased yield and at the same time postbiotics from beneficial microorganisms and a high content of oligosaccharide prebiotics with a negligible amount of monosaccharides is presented. It is based on a treatment of plant or algae biomass with an extrusion preferably combined with an ultrasonication and followed by enzymatic cleaving their structural polysaccharides by enzymes selected from cellulases, hemicellulases, xylanases and pectinases, in a combination with a fermentation with beneficial microorganisms, selected from bacteria and yeasts. The active component of plant or algae origin is preferably selected from the group consisting of phenolic compounds, vitamins, antioxidants, essential oils, hydrocolloids, proteins, peptides, terpenoids, amino acids, organic acids, and polyols. The fermented biomass obtained after the described treatment can be further processed by physical methods, such as heating, freezing, homogenization, filtration, centrifugation, concentration, drying or lyophilization.
WO2026030734A1	Dr Squatch LLC (US)	Cleansers and hand soaps. Disclosed are cleanser formulations in a gel form including a fatty acid salt as the primary cleansing agent. The cleanser formulations have a pH ranging from 6-11. The cleanser gels can contain at least 90 weight percent of natural or naturally derived ingredients.
WO2026050524A1	Elc Man LLC (US)	Topical compositions for regulating sebum production. Compositions comprising <i>Serenoa serrulata</i> (saw palmetto) fruit extract, <i>Laminaria saccharina</i> (brown algae) extract, and <i>Glycyrrhiza inflata</i> root extract are effective inhibit the activity of 5-alpha Reductase; lower neutral lipid content; and reduce expression of SREBP1, FASN and ACACA, in human sebocytes. By regulating excess sebum production, compositions of the invention are useful to improve the health and appearance of skin.
WO2026027653A1	Givaudan SA (CH)	Pigment. A blue pigment for cosmetic applications is provided, which exhibits excellent color and stability characteristics, while being fully plant-based, edible and of natural origin.
EP4707321A1	Grow Innovations Sdn Bhd (MY)	Biobased hydrogel coated elastomeric article and methods of making the same. The present invention relates to a bio-based hydrogel coating composition for elastomeric articles provided to overcome the issues of sweat accumulation, skin dryness, irritation, and difficulty in donning wet gloves, while offering an alternative to powdered elastomeric articles. The bio-based hydrogel coating is designed to enhance the wearability, comfort, and hygiene of said elastomeric article. This innovative formulation eliminates the need for powder-based coatings while providing a multipronged solution to overcome the issues of sweat accumulation, skin dryness, irritation, and difficulty in donning wet gloves.
WO2026050599A1	Kokora Inc (US)	Dual stage herbal nutraceuticals. A process for providing a dual stage herbal nutraceutical is disclosed. The steps may include extracting a herbal material with a water/alcohol solution to provide an extract separate from the herbal material. The alcohol concentration of the herbal material extract may be reduced to provide a low alcohol extract. The low alcohol extract is then mixed with a crude herbal powder of the same herb from which the extract was made and blended into the low alcohol extract. The mixture or blend of herbal material solids and low alcohol extract may then be freeze-dried. The freeze-dried herbal blend may be blended with an anti-caking agent and may then be encapsulated in a capsule such as in a plant-based capsule. The dual stage nutraceutical may be used to administration to treat a wide variety of health issues in which the dual action of the extract portion having a first release profile and the crude herbal powder having a second release profile provide a rapid release and a slow release.

Nº Publicación	Solicitante (País)	Contenido técnico
EP4681549A1	Mattei Alissa (IT)	Method for recovering oil and nutraceutical and organoleptic compounds from olive milling wastes. A method for recovering oil and nutraceutical and organoleptic compounds from olive milling waste comprises the following steps: adding a food grade vegetable oil to waste coming from a first extraction of a virgin olive oil, in which the waste contains vegetation waters and olive-pomace containing residual olive oil; mixing the food grade vegetable oil and the waste, so as to obtain a multiphase mixture comprising an oil phase, an aqueous phase and a solid phase, in which the oil phase comprises the residual olive oil and the food grade vegetable oil, the aqueous phase comprises the vegetation waters and the solid phase comprises the olive-pomace; subjecting the multiphase mixture to mechanical separation, so as to separately obtain the olive-pomace, the vegetation waters and an enriched must-blend that is enriched with nutraceutical and organoleptic compounds, comprising the residual olive oil contained in the waste and the food grade vegetable oil; discarding the olive-pomace and subjecting the vegetation waters to cryoconcentration, so as to obtain concentrated vegetation waters and frozen vegetation waters; discarding the frozen vegetation waters and mixing the concentrated vegetation waters with the enriched must-blend; subjecting to mechanical separation the mixture consisting of the concentrated vegetation waters and of the enriched must-blend, so as to obtain separately vegetation waters, to be discarded, and an oil blend that is enriched with nutraceutical and organoleptic compounds.
WO2026013164A1	Microphyt (FR)	New cosmetic uses of an extract of the tetrademus obliquus microalga. The present invention relates in particular to the cosmetic or nutraceutical use of an extract of the Tetrademus obliquus microalga or of an oily ingredient comprising same, for increasing the pigmentation of the skin and/or the hair and nails, advantageously the hair, and/or for maintaining the uniformity of the complexion and/or for preparing the skin for tanning and/or for promoting relaxation and well-being.
WO2026030564A1	Pacific Marine Biotech LLC (US)	Compositions for treatment of glioma and uses thereof. The present disclosure provides for compositions comprising a combination of marine biomass extracts for use in the treatment of brain cancer. In some instances, the brain cancer is glioma. In some instances, the glioma is glioblastoma. Further provided herein are biomass compositions having extracts from Holothuria scabra, Holothuria nobilis, Heliocidaris erythrogramma, Styela clava, and Sargassum Pallidum. Moreover, in such compositions the majority components may be extracts from sea cucumber.
EP4710912A1	SkyLab AG (CH)	Plant-based composition containing shikimic acid with enhanced stability in biopharmaceutical forms for selective management of hormonal skin stress. The invention relates to a composition comprising shikimic acid and an extract of Prunus Mume, and its non-medical and medical use, in particular for use in the treatment of acne.

Bioaditivos alimentarios y nutracéuticos

Nº Publicación	Solicitante (País)	Contenido técnico
EP4684647A1	Active Italia Srl (IT)	Method for preparing oily and/or lipid matrices enriched in polyphenols. The present invention describes a method for enriching any oil and/or lipid matrix in polyphenols, from vegetation waters produced during the treatment of olives for the production of extra virgin olive oil, as well as an oil and/or lipid matrix enriched in polyphenols obtainable by the method, and a nutraceutical product, food supplement or functional food comprising an oil and/or lipid matrix enriched in polyphenols. The present invention further describes a method for producing a polyphenol extract using an oil and/or lipid matrix enriched in polyphenols obtainable by the enrichment method of the present invention.
WO2026028882A1	Amano Enzyme Inc (JP)	Oleogelling agent production method. The purpose of the present invention is to provide a new oleogelling agent. A dehydration product of a hydrogel prepared using a multicopper oxidase and a polysaccharide having a phenolic hydroxyl group is useful as an oleogelling agent.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026015335A1	Cargill Inc (US)	Spray dried oleosomes extract. The current invention relates to a process for preparing a powder comprising oleosomes and saccharides; and the process is comprising a) adding polysaccharides and oligosaccharides to an oleosome extract of isolated vegetable oleosomes to obtain an oleosome-saccharide composition; spray-drying of the oleosome-saccharide composition of step a) and obtaining a powder comprising oleosomes and saccharides; and wherein polysaccharides are added in an amount of 0.25 to 10 wt.% based upon dry matter of oleosome extract; and wherein oligosaccharides are added in an amount of 10 to 75 wt.% based upon dry matter of oleosome extract; and wherein the oleosome extract is having a dry matter of from 8 to 20 wt.%, the obtained powder and its use in food product.
WO2026050839A1	Chinova Bioworks Inc (CA)	Chitosan-based compositions with antimicrobial properties. The present application is directed to antimicrobial compositions, comprising chitosan having an average molecular weight (Mw) of about 2 to about 100 kDa, an organic acid; and an additive selected from gum arabic, maltodextrin, gellan gum, guar gum, xanthan gum, psyllium, polyglutamate, carrageenan, pectin, alginate, hyaluronic acid, dextran, chondroitin, polyphosphate, and combinations thereof. The present application also includes a method of stabilizing and/or preserving a food or beverage product and a method of inhibiting growth of one or more microorganisms in the food or beverage product comprising adding an effective amount of one or more compositions of the application to the product.
WO2026062262A1	DSM IP Assets BV (IL)	Liquid colouring compositions. The invention relates to a liquid colouring composition comprising carotenoids, a method of production for such compositions, food products and a manufacturing process to obtain the food products.
WO2026009961A1	Ibiden Co Ltd (JP)	Composition, method for producing composition, raw material, use of extracellular vesicles (EVS) derived from seaweed, agent for improving stability, method for improving stability, agent for increasing cyclic adenosine monophosphate, method for producing agent for increasing cyclic adenosine monophosphate, permeable composition, and permeation enhancer. Provided is a composition that includes an extract from seaweed and has excellent action and efficacy. This composition is characterized by including extracellular vesicles (EVs) and carotenoids.
WO2026023007A1	Nissui Corp (JP)	Tablet-form gel food. The purpose of the present invention is to provide a stable tablet-form gel food which is provided with an excellent flavor as a result of suppressing odors originating from the gel supply source, such as the fishy smell typical of fish, that occur in heating during production and in storage after production, and in which the leakage of an oil component is suppressed. Provided is a tablet-form gel food that contains an oil component and a gelling agent, wherein the oil component is a polyunsaturated fatty acid (PUFA), a salt thereof, or an ester thereof, and the oil component content is 0.1 wt% or more of the total amount.
WO2026010232A1	Phytoeco Inc (KR)	Method of preparing orostachys japonicus extract. The present invention relates to a method of preparing an Orostachys japonicus extract and, more specifically, to method of preparing an Orostachys japonicus extract, the method being for increasing the extraction efficiency of natural products having excellent antioxidant effects. The method of preparing an Orostachys japonicus extract, according to the present invention, comprises the steps of: hot air drying Orostachys japonicus; steaming the dried Orostachys japonicus; preparing an Orostachys japonicus extract by extracting the steamed dried Orostachys japonicus with alcohol; and preparing an Orostachys japonicus extract concentrate by vacuum-concentrating the extract.
WO2026040720A1	Shandong Benzhen Cosmetics Co Ltd (CN)	Foamable oral care composition. A foamable oral care composition, comprising a protein foaming agent and a foam synergist. The protein foaming agent is one of, or a combination of more than one of, isolated soy protein, hydrolyzed wheat protein, potato protein, casein phosphopeptide (CPP), oat protein, and vital wheat gluten. The foam synergist is one of, or a combination of more than one of, karaya gum, Abelmoschus manihot gum, fenugreek gum, guar gum, locust bean gum, sterculia gum, cassia seed gum, tara gum, linseed gum, sodium alginate, tragacanth gum, welan gum, Artemisia desertorum gum, Gleditsia sinensis Lam. gum, xanthan gum, and sesbania gum. The oral care composition can increase the foaming amount of toothpaste, can achieve the foaming amount of toothpaste using chemical surfactants on the market, and can fully meet consumers' needs for toothpaste foam.
WO2026049019A1	Univ Nat Corp Kochi Univ (JP)	Method for producing polysaccharide. The present invention addresses the problem of providing: a method for producing a polysaccharide having excellent gelling performance and functionality; and a polysaccharide obtained by the method. The problem is solved by a method for producing a polysaccharide, the method including extracting and recovering a polysaccharide from seaweed cultured in a low nutrient medium in a container.

Bioproductos alimenticios para animales		
Nº Publicación	Solicitante (País)	Contenido técnico
WO2026009949A1	Ajinomoto KK (JP)	Method for producing feed additive composition for ruminants. The purpose of the present invention is to provide: a method for producing a feed additive composition for ruminants which has excellent storage stability; and others. The present invention relates to: a method for producing a feed additive composition for ruminants, the method including a step for immersing a solidified product in an aqueous solution (hereinafter, referred to as "a second immersion solution") having a temperature higher than that of an aqueous solution (hereinafter, referred to as "a first immersion solution"), wherein the solidified product is produced by immersing and solidifying a molten mixture comprising (A) a hydrogenated oil having a melting point of 50-90°C exclusive, (B) lecithin, and (C) a basic amino acid or a salt thereof in the first immersion solution, and (i) the temperature of the second immersion solution is 20-45°C and the time for the immersion of the solidified product in the second immersion solution is 20-65 minutes or (ii) the temperature of the second immersion solution is 13°C or higher and lower than 20°C and the time for the immersion of the solidified product in the second immersion solution is 40-65 minutes; and others.
EP4678731A1	AlterBiotech Sp Zoo (PL)	Method of fermentation with yeast strains. The object of the invention is a method of fermentation with the yeast strains <i>Saccharomyces cerevisiae</i> and/or <i>Rhodotorula bentina</i> , characterised by the fact that the fermentation takes place on a solid medium and that bakery and/or confectionery waste and the digest and extract from the digest obtained by supercritical carbon dioxide extraction (CO ₂) are used as raw materials.
WO2026035987A1	Bio Up Mimetic Tech Inc (US)	Hydrated feed matrix compositions. A composition comprises a hydrated homogeneous mixture comprising lecithin, one or more triglycerides, and optionally one or more lipid soluble active ingredients. The phosphatides comprise more than 33% by weight of the hydrated homogeneous mixture, and the water content is more than 3/8 by weight of the phosphatides. The composition further includes one or more initially dry constituents of a feed matrix onto and into which the hydrated homogeneous mixture is absorbed or adsorbed to provide a food composition suitable for animal consumption. The weight ratio of the hydrated homogeneous mixture to the one or more dry constituents of the feed matrix is up to 0.5:1.
WO2026002353A1	Decameal Aps (DK)	Process for producing protein from crustaceans. The disclosure relates to a method for producing protein from crustaceans. The disclosure also relates to a protein concentrate, a protein powder and processed crustacean shells.
WO2026042697A1	Josho Gakuen Educational Found et al. (JP)	Livestock feed. The purpose of the present invention is to provide a livestock feed having a nutritional value comparable to that of a conventional feed. The livestock feed according to the present invention contains: at least one of roughage and concentrated feed; and parenchyma of waste wood.

Nº Publicación	Solicitante (País)	Contenido técnico
WO2026027815A2	Neova Oy (FI)	Methods for producing a mycobacteria-free biomass pellet or granulate suitable for animal feed and for detecting mycobacteria in said pellet or granulate. The present invention concerns a method for producing a Mycobacteria-free biomass pellet suitable for animal feed, the method comprising the steps of: providing biomass with variable particle size and/or length, wherein the moisture content of said biomass is more than 30 % w/w, preferably 40-60 % w/w, and subjecting said biomass to sieving and drying steps in any order, wherein in said sieving step the biomass or the heat-treated biomass is sieved in order to obtain even material preferably having a median particle length of less than 40 mm; and wherein in said drying step the biomass or the sieved biomass is heat-treated preferably at the temperature of 80-110°C, more preferably at 90-105°C, to reach a moisture content below 20 % w/w, preferably 10-15 % w/w, for the material; milling the heat-treated material in order to reduce the particle size below 1 mm; subjecting the heat-treated and milled material to a pelletizing process, preferably in a pellet press, wherein the temperature of the subjected material reaches at least 90 °C, preferably at least 100 °C, during said pelletizing process; and cooling the pellets obtained to ambient temperature, preferably with a counter flow cooler. The present invention is also directed to a method for detection of the presence of live Mycobacterium species in a sample comprising peat and/or moss, the method comprising the steps of: providing a sample comprising peat and/or moss including a sample of a processed product comprising peat and/or moss, or a sample of a processed product made of peat and/or moss; contacting said sample with liquid broth in a sterilized container, wherein said liquid broth is suitable for growing Mycobacterium species and comprises one or more antibiotics effective against other bacteria than Mycobacterium; incubating said container at a temperature range of 30 - 37 °C for at least 1 - 21 days; taking the incubated liquid broth or an aliquot thereof from said container and performing a nucleic acid amplification reaction comprising nucleic acids isolated from said incubated liquid broth or said aliquot and an oligonucleotide primer pair specific to at least one pathogenic Mycobacterium species; wherein the presence of pathogenic Mycobacterium nucleic acid or increased presence of pathogenic Mycobacterium nucleic acid in the incubated liquid broth or said aliquot confirms the presence of pathogenic Mycobacterium in said sample.
WO2026047004A1	Reploid Group AG (AT)	Method for reducing methane emissions in ruminant animals. The present disclosure provides a non-therapeutic method for reducing the total gas production and/or methane production in a ruminant animal, comprising the step of administering an effective amount of insect frass to said ruminant animal. Another object of the present disclosure relates to food for ruminants, comprising an effective amount of insect frass, preferably derived from black soldier flies.
WO2026030797A1	Seastock Pty Ltd (AU)	Dual extraction method. A dual extraction method is provided for isolating halogenated carbon compounds and pigments from biomass containing both. The method involves forming a slurry of the biomass in an aqueous solvent, incubating under conditions that disrupt cells and extract target compounds, and purging volatile halogenated carbon compounds using gas. The volatile extract is contacted with an organic solvent or oil to yield a halogenated carbon compound-rich extract and a depleted volatile phase. Pigments remain in the aqueous phase, which may be re-extracted. The method accommodates various biomass sources, including Asparagopsis species. Devices for performing the method are also disclosed.
WO2026019502A1	Smart Sprouts Int LLC (US)	Systems and methods for enteric carbon dioxide and methane mitigation in ruminants. The present disclosure relates in general to the imbibition of grains for the ruminant meat production and dairy production industries. More specifically, the present disclosure relates to systems and methods for maximizing the value of sprouted grains as a feedstuff for ruminant livestock using the combined applications of low volts of direct current and negative pressure during grain imbibition. The application of less than or equal to approximately 36.0 volts of direct current to grains in aqueous solutions for at least approximately 120 minutes, in addition to the application of negative pressure of approximately 10.0 inches of mercury (Hg) for at least approximately 60 minutes, have been found to mitigate harmful enteric carbon dioxide (CO2) and methane (CH4) emissions to offer opportunities for offset or inset carbon credit generation.
EP4699451A1	The Full Life Company LLC (US)	Multi-layer pet chew. A pet chew having an innermost core composed of one or both of edible meat and plant-based material, a middle member surrounding the innermost core and composed of a hardened non-consumable composite material, and an outermost layer surrounding the middle member and composed of one or both of edible meat and plant-based material.

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VT **BIOCIRCULARIDAD**

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