

Noticias

El 8 de marzo apareció publicado en el BOE el Real Decreto 184/2022, de 8 de marzo, por el que se regula la actividad de [prestación de servicios de recarga energética de vehículos eléctricos](#).

El Decreto define las dos figuras jurídicas que pueden participar en la actividad de recarga: el Operador del Punto de Recarga, titular de los derechos de explotación de las estaciones de recarga y responsable de su operación física, y la Empresa Proveedora de Servicios para la Movilidad Eléctrica, un intermediario entre los operadores y los usuarios de vehículos eléctricos, que puede prestar servicios de valor añadido a dichos usuarios.

La normativa únicamente afecta a los puntos de recarga de acceso público y establece los derechos y las obligaciones de los operadores y de los proveedores de servicios para facilitar las recargas y reforzar la protección de los usuarios.

Por ejemplo, ambos actores deben informar sobre el origen de la energía eléctrica suministrada; deben disponer de un servicio de atención al cliente para recoger quejas, reclamaciones o incidencias del servicio, y deben preservar el carácter confidencial de la información de la que tengan conocimiento en el desempeño de su actividad. Los operadores, en tanto que responsables de la operación física de los puntos de recarga, garantizarán el cumplimiento de la normativa de calidad, seguridad industrial y metrología que resulte de aplicación.

Asimismo, el Real Decreto refuerza la obligatoriedad de la recarga puntual en estaciones de acceso público, sin que puedan establecerse barreras de naturaleza técnica o contractual, garantizando el acceso de todos los usuarios de vehículos eléctricos a la recarga y reduciendo la denominada “ansiedad de autonomía”.

Los operadores y los proveedores deberán remitir al MITECO, a las comunidades autónomas y a Ceuta y Melilla, la información necesaria para publicar un mapa oficial de puntos de recarga que indique su localización, características y precio de la recarga, entre otros datos, y que estará disponible a través del Geoportal de Gasolineras de MITECO:

<https://geoportalgasolineras.es/#/Inicio>

El 18 de marzo salió publicada en el BOE la convocatoria (Orden ICT/209/2022, de 17 de marzo que modifica la Orden ICT/1466/2021, de 23 de diciembre) por la que se regirá la concesión de las ayudas por un valor de 2.975 millones de euros correspondientes a la parte industrial del Proyecto Estratégico para la Recuperación y Transformación Económica del Vehículo Eléctrico y Conectado ([PERTE VEC](#)).

Algunos cambios respecto a la anterior Orden son:

- Los costes de instrumental y material inventariable no superarán el 60 % del presupuesto financiable del proyecto primario.
- La convocatoria flexibiliza la condición de que el 30% de las ayudas de cada iniciativa ligadas al PERTE del Vehículo Eléctrico y Conectado, tiene que recaer en las PYMES. Según la nueva redacción, se podrá computar también la ayuda equivalente al presupuesto contratado y subcontratado por las grandes empresas con dichas PYMES.
- Se modifica la puntuación del criterio F de la evaluación del proyecto tractor que aparece en el apartado 4 del artículo 25.

El Consejo de Ministros aprobó el pasado 29 de marzo un convenio marco que autoriza el [suministro de vehículos turismos para las administraciones públicas](#), sustituyendo al anterior de 2017, con un valor máximo estimado de unos 619,68 millones de euros.

Este acuerdo, cuya duración es de dos años y prorrogable por un máximo de otros dos años, está dividido en siete lotes atendiendo a las características de los vehículos. En los lotes 6 y 7 se establece un grupo para vehículos de

combustión y un segundo grupo para vehículos híbridos enchufables y eléctricos.

La adjudicación se realizará mediante procedimiento abierto, de acuerdo con lo establecido en la Ley de Contratos del Sector Público, admitiéndose a todos los licitadores que cumplan los criterios de aptitud exigidos cuyas ofertas se ajusten a las condiciones técnicas y económicas requeridas.

[BOLETINES OEPM](#)

NIPO: 116-19-009-9

CONTENIDO:

- **TECNOLOGÍAS VEHICULARES**
 - [Baterías](#)
 - [Supercondensadores](#)
 - [Sistemas de recuperación de energía, p.ej. frenos regenerativos](#)
 - [Máquinas eléctricas](#)
 - [Convertidores, inversores](#)

- **INFRAESTRUCTURAS DE CARGA**
 - [Recarga de baterías](#)
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Solicitudes de Patente Publicadas

Los datos que aparecen en la tabla corresponden a una selección de las solicitudes de patentes publicadas durante el trimestre. Se puede acceder al documento completo haciendo doble clic sobre el mismo.

BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022059145 A1	HONDA MOTOR CO LTD	Abnormality detection system
WO 2022069537 A1	MIBA EMOBILITY GMBH	Cooling device for a rechargeable battery
WO 2022069528 A1	MIBA EMOBILITY GMBH	Cooling device for a rechargeable battery
WO 2022069524 A1	MIBA EMOBILITY GMBH	Cooling device for a rechargeable battery
WO 2022060034 A1	KOREA INST IND TECH	Positive electrode composite material for all-solid-state lithium secondary battery and method for manufacturing same
WO 2022054440 A1	MURATA MANUFACTURING CO	Secondary battery and method for producing same
WO 2022061300 A1	TESLA INC	Energy storage cell
WO 2022059917 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack comprising same
WO 2022058214 A1	VALEO SYSTEMES THERMIQUES	Set of cooling modules with tangential turbomachines, for the front face of an electric or hybrid motor vehicle
WO 2022054642 A1	MURATA MANUFACTURING CO	Secondary battery, electronic apparatus, and electric tool
WO 2022064438 A1	HYBA LTD	Supply device and modular supply system so obtained
WO 2022052994 A1	BTR NEW MAT GROUP CO LTD	Graphite negative electrode material, negative electrode, lithium-ion battery and preparation method therefor
WO 2022056715 A1	GEELY HOLDING GROUP CO LTD	Battery pack for new energy vehicle, and new energy vehicle
WO 2022065088 A1	PANASONIC IP MAN CO LTD	Secondary battery charging method and charging system
WO 2022064847 A1	PANASONIC IP MAN CO LTD	Vehicle and battery pack
WO 2022065841 A1	LG ENERGY SOLUTION LTD	Battery module, battery pack comprising same, and vehicle
WO 2022045302 A1	MITSUI MINING & SMELTING CO LTD	Active material, method for producing same, electrode mixture and battery
WO 2022065700 A1	LG ENERGY SOLUTION LTD	Battery pack having battery cell with enhanced lifespan, and device including same
WO 2022066236 A1	BEECHAM JAMES	Efficiently producing finished batteries from battery parts by adapting derivable systems, mechanisms and steps of industrial automated bottling
WO 2022055086 A1	SAMSUNG SDI CO LTD	All-solid-state battery
WO 2022058713 A1	MEXICHEM FLUOR SA DE CV	Composition
WO 2022065558 A1	GRINERGY CO LTD	Secondary battery using ripple current having improved battery life, and method for improving battery life
WO 2022046574 A1	SOUTHWEST RES INST	Control of lithium plating of lithium-ion battery during charging
WO 2022059898 A1	LG ENERGY SOLUTION LTD	Method for inspecting lithium secondary battery
WO 2022054705 A1	MITSUI MINING & SMELTING CO LTD	Active material and method for producing same, electrode mixture, and battery
WO 2022055307 A1	LG ENERGY SOLUTION LTD	Precursor composition for polymer electrolyte, and gel polymer electrolyte formed therefrom
WO 2022058352 A1	ANALOG DEVICES INT UNLIMITED COMPANY	Autonomous battery monitoring system
WO 2022008741 A1	UNIV AIX MARSEILLE	Hybrid crosslinked electrolytes with grafted ions
WO 2022008745 A1	SABIC GLOBAL TECHNOLOGIES BV	Breakable separator for battery
WO 2022051308 A1	SION POWER CORP	Multiplexed battery management system
WO 2022055258 A1	LG ENERGY SOLUTION LTD	Non-aqueous electrolyte for lithium secondary battery and lithium secondary battery comprising same
WO 2022043249 A1	JAGUAR LAND ROVER LTD	Battery module
WO 2022055142 A1	LG ENERGY SOLUTION LTD	Electrode assembly comprising separator having conductive layer formed thereon, and battery cell comprising same

WO 2022059565 A1	DOWA ECO SYSTEM CO LTD	Method for recovering valuable materials from lithium ion secondary battery
WO 2022059567 A1	FUJIFILM CORP	Inorganic solid electrolyte-containing composition, sheet for all-solid-state secondary batteries, all-solid-state secondary battery, method for producing sheet for all-solid-state secondary batteries, and method for producing all-solid-state secondary battery
WO 2022008196 A1	VALEO SYSTEMES THERMIQUES	Thermal management device for the batteries of an electric or hybrid motor vehicle
WO 2022013028 A1	BAYERISCHE MOTOREN WERKE AG	Battery cell having an electrical fuse
WO 2022042987 A1	DIEHL ADVANCED MOBILITY GMBH	Electronic component for a cell-contacting system
WO 2022055309 A1	LG ENERGY SOLUTION LTD	Negative electrode active material, negative electrode comprising negative electrode active material, and secondary battery comprising negative electrode
WO 2022054140 A1	HIRATA SPINNING	Evaluation holder, evaluation unit, and evaluating equipment
WO 2022060003 A1	LG ENERGY SOLUTION LTD	Battery module, battery pack, and vehicle including same
WO 2022065024 A1	TOYO SYSTEM CO LTD	Battery lease system
WO 2022046327 A1	PURE LITHIUM CORP	Lithium metal anode and battery
WO 2022055310 A1	LG ENERGY SOLUTION LTD	Battery monitoring device, battery monitoring method, battery pack, and electric vehicle
WO 2022055130 A1	LG ENERGY SOLUTION LTD	Battery pack with structure for prevention of heat diffusion between battery modules
WO 2022054415 A1	MURATA MANUFACTURING CO	Lithium-ion secondary battery
WO 2022063783 A1	DUKOSI LTD	Improved pouch cell battery assembly
WO 2022013741 A1	PELLENC ENERGY	Method and apparatus for manufacturing a battery cell
WO 2022055217 A1	LG ENERGY SOLUTION LTD	Capsule for lithium-sulfur secondary battery, and lithium-sulfur secondary battery comprising same
WO 2022049430 A1	3M INNOVATIVE PROPERTIES CO	Composite thermal management article and thermal management assembly
WO 2022054139 A1	HIRATA SPINNING	Evaluation unit and evaluating equipment
WO 2022065709 A1	LG ENERGY SOLUTION LTD	Laminator having improved adhesiveness for producing unit structures
WO 2022051297 A1	ANALOG DEVICES INC	Self-characterizing smart cells for battery lifecycle management
WO 2022059557 A1	MURATA MANUFACTURING CO	Secondary battery
WO 2022012449 A1	ZEPHYR INTELLIGENT SYSTEM SHANGHAI CO LTD	Passive fire extinguishing device and battery pack
WO 2022011513 A1	VIRIDI E MOBILITY TECH NINGBO CO LTD	Battery module and vehicle
WO 2022050284 A1	CENTRAL GLASS CO LTD	Nonaqueous electrolyte, and nonaqueous electrolyte battery
WO 2022031579 A1	SION POWER CORP	Electrochemical cell clamps and related methods
WO 2022029422 A1	NEXEON LTD	Electroactive materials for metal-ion batteries
WO 2022038337 A1	JOHNSON MATTHEY PLC	Method of recycling nickel from waste battery material
WO 2022045852 A1	LG ENERGY SOLUTION LTD	Negative electrode and secondary battery comprising same
WO 2022023872 A1	CUMMINS INC	Remanufacturing of a battery cell
WO 2022022958 A1	BAYERISCHE MOTOREN WERKE AG	Cathode active material, and lithium ion battery comprising said cathode active material
WO 2022045597 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack comprising same
WO 2022012465 A1	ZEPHYR INTELLIGENT SYSTEM SHANGHAI CO LTD	Battery pack having intelligent fixed-point fire extinguishing function
WO 2022022759 A1	NOVACEK TOMAS	Heat exchanger assembly
WO 2022034759 A1	SHINETSU POLYMER CO	Heat dissipation member, heat dissipation structure, and battery
WO 2022043492 A1	JAGUAR LAND ROVER LTD	Battery module
WO 2022050069 A1	YAMAHA MOTOR CO LTD	Battery management system
WO 2022047791 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery cell, battery, and power consuming device
WO 2022001428 A1	ZHUHAI COSMX BATTERY CO LTD	Negative pole piece and secondary battery comprising negative pole piece

WO 2022000273 A1	NINGDE AMPEREX TECHNOLOGY LTD	Electrochemical device and electronic device comprising same
WO 2022034428 A1	SEMICONDUCTOR ENERGY LAB	Control system for secondary battery
WO 2022038237 A1	BAYERISCHE MOTOREN WERKE AG	Method for diagnosing lithium plating in lithium ion batteries by using electrochemical impedance spectroscopy
WO 2022047737 A1	SHENZHEN INST ADV TECH	Lithium metal negative electrode composite current collector, preparation method therefor and lithium ion battery
WO 2022044046 A1	SEDEMAC MECHATRONICS PVT LTD	A method for estimating state of charge and state of health of a battery and a system thereof
WO 2022044428 A1	MURATA MANUFACTURING CO	Polymer solid electrolyte, method for producing same, and electrochemical device
WO 2022041259 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Secondary battery and preparation method therefor, and battery module, battery pack and device comprising secondary battery
WO 2022002478 A1	MAHLE INT GMBH	Battery module, in particular for an electric or hybrid vehicle
WO 2022000307 A1	NINGDE AMPEREX TECHNOLOGY LTD	Electrochemical apparatus and electronic apparatus including electrochemical apparatus
WO 2022022956 A1	BAYERISCHE MOTOREN WERKE AG	Cathode active material, and lithium ion battery comprising said cathode active material
WO 2022023672 A1	UNIV CLAUDE BERNARD LYON	Separator for battery comprising a porous membrane functionalised by a copolymer comprising a cross-linked unit and a unit comprising an alkaline or alkaline earth cation and corresponding battery
WO 2022044815 A1	ZEON CORP	Method for manufacturing binder composition for all-solid-state secondary cell, method for manufacturing slurry composition for all-solid-state secondary cell, method for manufacturing solid-electrolyte-containing layer, and method for manufacturing all-solid-state secondary cell
WO 2022045127 A1	PANASONIC IP MAN CO LTD	Lithium secondary battery
WO 2022010225 A1	LG ENERGY SOLUTION LTD	Anode, and secondary battery comprising anode
WO 2022006901 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery case, battery cell, battery, and method and apparatus for manufacturing battery case
WO 2022035293 A1	LG ENERGY SOLUTION LTD	Battery management system, battery management method, battery pack, and electric vehicle
WO 2022041254 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Positive electrode current collector, and positive electrode plate, battery, battery module, battery pack and apparatus comprising same
WO 2022049877 A1	SANKEI GIKEN KOGYO CO LTD	Battery heat exchange structure
WO 2022046328 A1	PURE LITHIUM CORP	Vertically integrated pure lithium metal production and lithium battery production
WO 2022012991 A1	EVONIK OPERATIONS GMBH	Nano-composite polymer separator with enhanced safety performance and preparation method thereof
WO 2022050664 A1	LG ENERGY SOLUTION LTD	Positive electrode active material, positive electrode comprising positive electrode active material, and secondary battery comprising positive electrode
WO 2022045594 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack comprising same
WO 2022045842 A1	LG ENERGY SOLUTION LTD	Integrated battery management platform service system and method
WO 2022000309 A1	NINGDE AMPEREX TECHNOLOGY LTD	Current collector, electrochemical device comprising same, and electronic device
WO 2022013658 A1	IBM	Metal halide cathode with enriched conductive additive
WO 2022018739 A1	TVS MOTOR CO LTD	Battery thermal management
WO 2022035661 A1	APPLIED MATERIALS INC	Inline contact pre-lithiation
WO 2022046841 A1	UNIV SOUTH FLORIDA	Smart thermal management system to prevent thermal runaway in rechargeable batteries
WO 2022059563 A1	DOWA ECO SYSTEM CO LTD	Method for recovering valuable substance
WO 2022003159 A1	OERLIKON SURFACE SOLUTIONS AG PFAEFFIKON	Method for manufacturing a solid-state battery
WO 2022033065 A1	BYD CO LTD	Negative electrode plate and secondary battery
WO 2022035606 A1	CABOT CORP	Compositions containing carbon black, graphite and carbon nanotubes, related electrodes and related batteries

WO 2022038047 A1	BOSCH GMBH ROBERT	Method for producing an electrode of a battery cell, battery cell and use of the same
WO 2022042266 A1	BTR NEW MAT GROUP CO LTD	Silicon-oxygen composite negative electrode material, preparation method therefor, and lithium ion battery
WO 2022015803 A1	NANOGRAF CORP	Electrode material including silicon oxide and single-walled carbon nanotubes
WO 2022041831 A1	BTR NEW MAT GROUP CO LTD	Silicon oxide composite material, negative electrode material, negative electrode and lithium ion battery, and preparation method therefor
WO 2022050555 A1	LG ENERGY SOLUTION LTD	Battery module with improved battery cell stacking method, and battery pack comprising same
WO 2022055466 A1	IZMIR YUEKSEK TEKNOLOJİ ENSTITUESUE REKTOERLUEGUE	A manifold providing homogeneous coolant distribution between battery cells
WO 2022000312 A1	NINGDE AMPEREX TECHNOLOGY LTD	Separator, electrochemical device comprising same, and electronic device
WO 2022009025 A1	SEMICONDUCTOR ENERGY LAB	Nonaqueous solvent, secondary battery, and vehicle equipped with secondary battery
WO 2022018939 A1	PANASONIC IP MAN CO LTD	Information processing device, insurance fee determination method, and system
WO 2022024076 A1	3M INNOVATIVE PROPERTIES CO	Battery cell thermal runaway barrier
WO 2022031829 A1	SOLID POWER INC	Method for production of laminated solid electrolyte-based components and electrochemical cells using same
WO 2022033375 A1	BYD CO LTD	Composite positive electrode material, positive electrode sheet, manufacturing method therefor, and battery
WO 2022045037 A1	PANASONIC IP MAN CO LTD	Nonaqueous electrolyte secondary battery
WO 2022054332 A1	JAPAN STEEL WORKS LTD	Negative active material for lithium-ion battery, negative electrode for lithium-ion battery, lithium-ion battery, method for manufacturing negative electrode active material for lithium-ion battery, method for manufacturing negative electrode for lithium-ion battery, and method for manufacturing lithium-ion battery
WO 2022015025 A1	LG ENERGY SOLUTION LTD	Battery valve and battery including same
WO 2022001968 A1	XIAMEN HITHIUM NEW ENERGY TECHNOLOGY CO LTD	Current collector and preparation process therefor, pole piece and preparation process therefor, and lithium battery
WO 2022012450 A1	ZEPHYR INTELLIGENT SYSTEM SHANGHAI CO LTD	Fire preventing and extinguishing battery pack, and vehicle
WO 2022041247 A1	NINGDE AMPEREX TECHNOLOGY LTD	Electrochemical device and electronic device including same
WO 2022045586 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack including same
WO 2022014086 A1	TOSHIBA KK	Management method, management device, management system and management program
WO 2022014718 A1	DAINIPPON PRINTING CO LTD	Adhesive film for metal terminals of all-solid-state batteries, metal terminal with adhesive film for metal terminals, all-solid-state battery using said adhesive film for metal terminals, and method for producing all-solid-state battery
WO 2022016871 A1	GUANGZHOU AUTOMOBILE GROUP CO	Battery heating system, battery device and electric vehicle
WO 2022038448 A1	SEMICONDUCTOR ENERGY LAB	Electrode manufacturing method, secondary battery, electronic device, and vehicle
WO 2022005234 A1	LG ENERGY SOLUTION LTD	Battery module, battery pack including same, and manufacturing method thereof
WO 2022004845 A1	MAXELL LTD	Solid-state secondary battery
WO 2022036531 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery cell, battery, and method and apparatus for preparing battery cell
WO 2022004723 A1	SHOWA DENKO MAT CO LTD	Cell separator, storage cell, battery, and electric car
WO 2022009742 A1	SUMITOMO METAL MINING CO	Method for recovering valuable metal
WO 2022029451 A1	BREATHE BATTERY TECH LIMITED	Intelligent battery management system and method
WO 2022044446 A1	HITACHI LTD	Secondary battery system

WO 2022000275 A1	JAN JENG SHIUNG	Cross-linking agent for electrolyte, electrolyte compositions comprising same, and lithium-ion battery
WO 2022030355 A1	GS YUASA INT LTD	Electric storage device, electric storage system, internal resistance estimation method, and computer program
WO 2022035151 A1	LG ENERGY SOLUTION LTD	Battery abnormality diagnosis device and method
WO 2022039039 A1	SUMITOMO METAL MINING CO	Method for treating sulfide
WO 2022045557 A1	LG ENERGY SOLUTION LTD	Active material reuse method using cathode scraps
WO 2022009734 A1	GS YUASA INT LTD	Nonaqueous electrolyte power storage element
WO 2022014151 A1	PANASONIC IP MAN CO LTD	Information processing method and information processing device
WO 2022030333 A1	UNIV OSAKA PUBLIC CORP	Negative electrode composite body and secondary battery
WO 2022035061 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack including same
WO 2022035043 A1	SAMSUNG SDI CO LTD	Secondary battery
WO 2022035131 A1	LG ENERGY SOLUTION LTD	Battery management system, battery management method, battery pack and electric vehicle
WO 2022045712 A1	LG ENERGY SOLUTION LTD	Cathode material including irreversible additive, secondary battery including cathode material, and method for manufacturing same
WO 2022014311 A1	PANASONIC IP MAN CO LTD	Information processing method and information processing system
WO 2022018573 A1	SEMICONDUCTOR ENERGY LAB	Method for producing secondary battery
WO 2022030633 A1	APB CORP	Battery cell
WO 2022034901 A1	DENKA COMPANY LTD	Composition, resin composition, composition for positive electrode, slurry for positive electrode, positive electrode, and secondary battery
WO 2022009657 A1	SUMITOMO METAL MINING CO	Method for recovering valuable metal
WO 2022010121 A1	LG ENERGY SOLUTION LTD	Anode having improved rapid-charge property, and lithium secondary battery
WO 2022014155 A1	3DOM INC	Moving charging system achieved by transporting secondary battery
WO 2022009677 A1	PANASONIC IP MAN CO LTD	Charging control device, and information processing method
WO 2022009696 A1	PANASONIC IP MAN CO LTD	Arithmetic system, battery inspection method, and battery inspection program
WO 2022009716 A1	PANASONIC IP MAN CO LTD	Information processing method and information processing system
WO 2022007501 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Self-heating control method and apparatus for power battery
WO 2022013634 A1	IBM	Rechargeable metal halide battery with intercalation anode
WO 2022036721 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Electrode assembly, battery cell, battery, and method and apparatus for manufacturing electrode assembly
WO 2022044667 A1	JAPAN METALS & CHEMICALS CO LTD	Treatment method for positive electrode of non-aqueous electrolyte secondary battery
WO 2022009811 A1	NIPPON ELECTRIC GLASS CO	Sintered body electrode, battery member, sintered body electrode and battery member manufacturing methods, solid electrolyte precursor solution, solid electrolyte precursor, and solid electrolyte
WO 2022009983 A1	AUTONETWORKS TECHNOLOGIES LTD	Power control device
WO 2022010109 A1	LG ENERGY SOLUTION LTD	Battery management device and method
WO 2022009603 A1	SANKEI GIKEN KOGYO CO LTD	Battery heat exchange structure
WO 2022035120 A1	LG ENERGY SOLUTION LTD	Cathode active material for lithium-sulfur battery, preparation method therefor, and lithium-sulfur battery comprising same
WO 2022006896 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery and related apparatus thereof, preparation method therefor, and preparation device therefor

WO 2022014736 A1	LG ENERGY SOLUTION LTD	All-solid-state battery comprising oxide-based solid electrolyte for low-temperature sintering process, and method for manufacturing same
WO 2022035174 A1	LG ENERGY SOLUTION LTD	Positive electrode binder for lithium secondary battery, and lithium secondary battery positive electrode and lithium secondary battery comprising same
WO 2022045559 A1	LG ENERGY SOLUTION LTD	Apparatus for recovering active material and method for reusing active material by using same
WO 2022050033 A1	DENSO CORP	Battery management system
WO 2022009531 A1	PANASONIC IP MAN CO LTD	Information processing method, control device, and information processing system
WO 2022030357 A1	MURATA MANUFACTURING CO	Battery pack, electric tool, and electric vehicle
WO 2022035172 A1	LG ENERGY SOLUTION LTD	Anode coating for lithium secondary battery, manufacturing method therefor, and anode and lithium secondary battery, each including same coating
WO 2022000329 A1	NINGDE AMPEREX TECHNOLOGY LTD	Electrochemical apparatus and electronic apparatus
WO 2022035296 A1	LG ENERGY SOLUTION LTD	Battery pack, and automotive vehicle comprising same
WO 2022009851 A1	IBIDEN CO LTD	Heat transfer suppression sheet and battery pack
WO 2022024785 A1	SHOWA DENKO MAT CO LTD	Cell constituent element, storage cell, assembled cell, and electric vehicle
WO 2022023902 A1	3M INNOVATIVE PROPERTIES CO	Construction with thermal insulation properties
WO 2022024235 A1	HITACHI HIGH TECH CORP	Battery management device, battery management method
WO 2022024220 A1	MITSUBISHI ELECTRIC CORP	Charging/discharging control device, and method for controlling charging and discharging
WO 2022039505 A1	LG ENERGY SOLUTION LTD	Battery management system, battery management method, battery pack, and electric vehicle
WO 2022039508 A1	LG ENERGY SOLUTION LTD	Battery cell having improved safety and method for manufacturing same
WO 2022039553 A1	LG ENERGY SOLUTION LTD	Unit cell including thermochromic polymer and defect detecting method using same
WO 2022030168 A1	DENSO CORP	Diagnostic device
WO 2022039535 A1	LG ENERGY SOLUTION LTD	Electrode active material for secondary battery and method of manufacturing same
WO 2022019532 A1	LG ENERGY SOLUTION LTD	Apparatus for measuring battery cell capacity and method for measuring battery cell capacity
WO 2022024885 A1	HITACHI HIGH TECH CORP	Battery pack diagnosing method, cell diagnosing method, battery pack diagnosing device, and cell diagnosing device
WO 2022030422 A1	AUTONETWORKS TECHNOLOGIES LTD	Circuit structure
WO 2022006895 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery and related apparatus thereof, preparation method and preparation device
WO 2022024468 A1	HITACHI LTD	Secondary battery
WO 2022005233 A1	LG ENERGY SOLUTION LTD	Battery module, battery pack comprising same and method for manufacturing same
WO 2022021065 A1	VIRIDI E MOBILITY TECH NINGBO CO LTD	Cell module liquid cooling structure and battery pack using same
WO 2022004623 A1	AIST	Dual-ion battery
WO 2022035304 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack including same
WO 2022046645 A2	ASPEN AEROGELS INC	Polyimide bead materials and methods of manufacture thereof
WO 2022019594 A1	LG ENERGY SOLUTION LTD	Battery module and battery pack including same
WO 2022016943 A1	GUANGZHOU AUTOMOBILE GROUP CO	Battery heating apparatus, thermal adjustment method for battery, computer-readable storage medium, and electronic device
WO 2022006214 A1	UNIV LELAND STANFORD JUNIOR	System and methods for detecting and mitigating lithium plating
WO 2022009225 A1	TVS MOTOR CO LTD	A battery pack
WO 2022024847 A1	PANASONIC IP MAN CO LTD	Computing system, battery deterioration predicting method, and battery deterioration predicting program
WO 2022031900 A1	IFBATTERY INC	Battery system
WO 2022040200 A1	BLUE WHALE MAT LLC	Method, apparatus, and system for lithium ion battery recycling

WO 2022005064 A1	IUCF HYU	Intermediate for preparation of porous silicon oxycarbide, preparation method therefor, and lithium secondary battery comprising porous silicon oxycarbide prepared therefrom as anode active material
WO 2022024848 A1	PANASONIC IP MAN CO LTD	Battery management system, calculation system, battery degradation prediction method, and battery degradation prediction program
WO 2022025167 A1	HITACHI LTD	Storage battery system, and method for diagnosing deterioration in capacity of storage battery
WO 2022004987 A1	SAMSUNG SDI CO LTD	Rechargeable battery
WO 2022006159 A1	ECO HOME AS	Energy storage system using second life batteries
WO 2022039944 A1	UNIV NORTHWESTERN	Graphene-functionalized composites for battery anodes, forming methods and applications of same
WO 2022025662 A1	LG ENERGY SOLUTION LTD	Method for manufacturing battery module
WO 2022024500 A1	PANASONIC IP CORP AMERICA	Information processing device, program, and information processing method
WO 2022039442 A1	LG ENERGY SOLUTION LTD	Battery module comprising heat insulating member
WO 2022005119 A1	SAMSUNG SDI CO LTD	Electrode assembly and secondary battery using same
WO 2022023908 A1	3M INNOVATIVE PROPERTIES CO	Article with thermal insulation properties
WO 2022039491 A1	LG CHEMICAL LTD	Method for manufacturing positive electrode active material
WO 2022008748 A1	SABIC GLOBAL TECHNOLOGIES BV	Battery
WO 2022025507 A1	LG ENERGY SOLUTION LTD	Anode for secondary battery and secondary battery including same
WO 2022006894 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery and related apparatus therefor, preparation method, and preparation device
WO 2022006899 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery case, battery cell, battery, and method and device for preparing battery case
WO 2022025483 A1	LG ENERGY SOLUTION LTD	Battery pack and manufacturing method therefor
WO 2022019595 A1	LG ENERGY SOLUTION LTD	Battery management system, battery management method, battery pack, and electric vehicle
WO 2022005374 A1	NAT ELECTRIC VEHICLE SWEDEN AB	Battery pack module and method for producing said module
WO 2022023280 A2	BOSCH GMBH ROBERT	A system and method for generation and validation of puf identifier of a battery pack
WO 2022025506 A1	LG ENERGY SOLUTION LTD	Electrode for secondary battery, and secondary battery comprising same
WO 2022028298 A1	GUANGDONG HANYU AUTO PARTS CO LTD	Electric pump for power battery thermal management system
WO 2022006891 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery, electric device, and method and device for preparing battery
WO 2022019605 A1	SAMSUNG SDI CO LTD	Porous composite, anode and lithium battery each including same, and method for preparing same
WO 2022019624 A1	LG ENERGY SOLUTION LTD	Battery pack and vehicle comprising same
WO 2022019516 A1	LG ENERGY SOLUTION LTD	Battery apparatus, battery management system, and method for correcting measured voltage
WO 2022019694 A1	LG ENERGY SOLUTION LTD	All-solid-state battery comprising thin film current collector and method for manufacturing same
WO 2022006898 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery, related apparatus therefor, preparation method therefor, and preparation device therefor
WO 2022003633 A1	STORA ENSO OYJ	A method for producing a carbon-silicon composite material powder, and a carbon-silicon composite material powder
WO 2022006897 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery and related apparatus thereof and preparation method and preparation device therefor
WO 2022019549 A1	LG ENERGY SOLUTION LTD	Battery module with simplified connection between electrode lead and voltage sensing member, and battery pack comprising same
WO 2022025576 A1	LG ENERGY SOLUTION LTD	Pressure device, battery module manufacturing device, and manufacturing method

WO 2022004972 A1	LG ENERGY SOLUTION LTD	Battery module comprising heat dissipating member, and method for manufacturing heat dissipating member
WO 2022030755 A1	LG ENERGY SOLUTION LTD	Battery module having improved fastening of cooling plate using reinforcement beam, and battery pack comprising same
WO 2022005372 A1	SCANIA CV AB	A method for connecting one or more electric battery units to an electrical system
WO 2022019550 A1	LG ENERGY SOLUTION LTD	Battery module having simplified connection between electrode lead and voltage sensing member and battery pack including same
WO 2022008743 A2	SABIC GLOBAL TECHNOLOGIES BV	Thermally conductive divider configuration for batteries
WO 2022016179 A1	UOP LLC	Mixed metal manganese oxide material

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SUPERCONDENSADORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022058099 A2	SHELL OIL CO	Battery supercapacitors hybrid systems
WO 2022018226 A1	K MOTORS	Power supply system for a traction motor
WO 2022050228 A1	TOYOTA JIDOSHOKKI KK	Electricity storage device
WO 2022013666 A1	SEMICONDUCTOR ENERGY LAB	Electrode, secondary battery, moving object, electronic device, and method for manufacturing lithium-ion secondary battery electrode
WO 2022011770 A1	XIAMEN YAXON NETWORK CO LTD	Electric vehicle energy management method, and terminal device and storage medium
WO 2022039211 A1	NIPPON CHEMICON	Conductive carbon, method for producing same, method for producing conductive carbon mixture containing said conductive carbon, and method for producing electrode using said conductive carbon or conductive carbon mixture
WO 2022039002 A1	JSR CORP	Power storage device binder composition, power storage device electrode slurry, power storage device electrode, and power storage device
WO 2022037380 A1	XIAMEN YAXON NETWORK CO LTD	Optimized energy allocation method and system for electric vehicle, and electric vehicle
WO 2022029575 A1	SEMICONDUCTOR ENERGY LAB	Electrode, negative electrode active material, negative electrode, secondary battery, moving body, electronic device, method for producing negative electrode active material, and method for producing negative electrode
WO 2022038454 A1	SEMICONDUCTOR ENERGY LAB	Method for producing positive electrode active material
WO 2022009019 A1	SEMICONDUCTOR ENERGY LAB	Electrode, secondary battery, moving body, and electronic device
WO 2022045551 A1	JEJU NATIONAL UNIV INDUSTRY ACADEMIC COOPERATION FOUNDATION	Method for manufacturing kenaf-derived active carbon
WO 2022023883 A1	SEMICONDUCTOR ENERGY LAB	Secondary battery production method and secondary battery manufacturing device

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SISTEMAS DE RECUPERACIÓN DE ENERGÍA; FRENOS REGENERATIVOS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022043418 A1	RENAULT SAS	Method for managing regenerative braking of a motor vehicle
WO 2022054473 A1	HITACHI ASTEMO LTD	Vehicle control device, vehicle control method, and vehicle control system
WO 2022065832 A1	KIM MIN CHUNG	System for generating electricity during coasting of electric vehicle
WO 2022008234 A1	BOSCH GMBH ROBERT	Closed-loop control of regenerative braking
WO 2022024770 A1	MITSUBISHI MOTORS CORP	Vehicle travel control device
WO 2022024273 A1	NISSAN MOTOR	Control method for series hybrid vehicle and series hybrid vehicle

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MÁQUINAS ELÉCTRICAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022043586 A1	VALEO SYSTEMES THERMIQUES	Cooling module for an electric motor vehicle, comprising a tangential-flow turbomachine
WO 2022069454 A1	SIEMENS AG	Electrical machine, method and system
WO 2022063358 A1	KIEKERT AG	Drive for motor-vehicle applications
WO 2022057976 A1	SCHAEFFLER TECHNOLOGIES AG	Electric machine and method for manufacturing and assembling an electric machine
WO 2022012706 A1	KIEKERT AG	Actuator in a motor vehicle component
WO 2022064983 A1	NTN TOYO BEARING CO LTD	Stator coil assembly and electric motor provided with same
WO 2022048702 A1	SCHAEFFLER TECHNOLOGIES AG	Drive unit and drive assembly
WO 2022023177 A1	VALEO SIEMENS EAUTOMOTIVE GERMANY GMBH	Electric machine
WO 2022017767 A1	BAYERISCHE MOTOREN WERKE AG	Device and method for increasing the range of an electric vehicle
WO 2022023128 A1	RENAULT SAS	Method for assembling a magnetic pole element for a rotor for an axial flow electric machine
WO 2022038204 A1	NIDEC MOTORS & ACTUATORS GERMANY GMBH	Motor shaft arrangement having a motor shaft and feed pipe
WO 2022033620 A1	SCHAEFFLER TECHNOLOGIES AG	Electric motor having a cooling device for active cooling of the winding portions within groove regions of a main body
WO 2022019003 A1	TOSHIBA IND PRODUCTS & SYSTEMS CORP	Rotating electric machine cooling-frame and method of manufacturing rotating electric machine cooling-frame
WO 2022036517 A1	HUAWEI DIGITAL POWER TECH CO LTD	Conducting member, liquid-cooled conductive structure, motor, and electric car power assembly
WO 2022003658 A1	FAHIMI MAHDI	Stator with magnetic disc coils suitable for dc three-phase electric motors
WO 2022040092 A2	INDIGO TECH INC	Manufacturing and assembling stator assemblies

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CONVERTIDORES, INVERSORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022064750 A1	HITACHI ASTEMO LTD	Electric motor control device, vehicle, and electric motor control method
WO 2022069349 A1	FUNDACIO INST DE RECERCA EN ENERGIA DE CATALUNYA IREC	Fault-tolerant DC-AC electric power conversion device
WO 2022054560 A1	MITSUBISHI ELECTRIC CORP	Semiconductor device, semiconductor device manufacturing method, and power converter
WO 2022044206 A1	SUMITOMO ELECTRIC INDUSTRIES	Power conversion device and vehicle including same
WO 2022056513 A1	VITESCO TECHNOLOGIES USA LLC	DC-DC converter with extended light load operating range, and method of using same
WO 2022059617 A1	FURUKAWA ELECTRIC CO LTD	Electric power converter, method for controlling electric power converter, electric power system, method for controlling electric power system, and program
WO 2022061102 A1	RIVIAN IP HOLDINGS LLC	Systems and methods for controlling an inverter of a towed electric vehicle
WO 2022013123 A1	AVL SOFTWARE & FUNCTIONS GMBH	Method for controlling electric machines
WO 2022043390 A1	ARMLEDER SEBASTIEN	Vehicle energy storage
WO 2022067337 A1	POLESTAR AUTOMOTIVE USA INC	Redundant power supply
WO 2022049720 A1	MITSUBISHI ELECTRIC CORP	Power conversion device and air conditioner
WO 2022061382 A1	MIBA ENERGY HOLDING GMBH	Power assembly for a medium-voltage or high-voltage converter or for a power electronics converter of an electric vehicle
WO 2022044228 A1	NISSAN MOTOR	Power conversion device
WO 2022053146 A1	TOYOTA MOTOR EUROPE	Multi-phase modular composite bidirectional DC/DC converter with reduced number of power switches
WO 2022044431 A1	HITACHI LTD	Power conversion device
WO 2022018215 A1	ZAHNRADFABRIK FRIEDRICHSHAFEN	Device and method for providing operating energy for an auxiliary drive for an electric vehicle, and electric vehicle
WO 2022038288 A1	PRODRIVE TECH BV	Modular reconfigurable electrical AC/DC converter
WO 2022050630 A1	LG ENERGY SOLUTION LTD	Protection circuit, DC-DC converter, battery charger and electric vehicle
WO 2022018114 A1	VALEO SYSTEMES DE CONTROLE MOTEUR	Assembly comprising at least a first and a second partially magnetically coupled inductor
WO 2022009984 A1	AUTONETWORKS TECHNOLOGIES LTD	Conversion device
WO 2022023527 A1	PRODRIVE TECH INNOVATION SERVICES B V	Multi-level bidirectional electrical AC/DC converter
WO 2022028777 A1	RENAULT SAS	Method for diagnosing the opening of the relays of a battery of a hybrid powertrain
WO 2022033633 A1	INNOLECTRIC AG	Coupled PFC choke
WO 2022044093 A1	NISSAN MOTOR	Power conversion device
WO 2022033635 A1	INNOLECTRIC AG	Resonance transformer having an additionally coupled inductor for an OBC
WO 2022045098 A1	SANDEN AUTOMOTIVE COMPONENTS CORP	Inverter device, and vehicular electric compressor provided with same
WO 2022054064 A1	REDLER TECH LTD	Versatile power stack unit
WO 2022029256 A1	TRUMPF HUETTINGER GMBH CO KG	NPC three-level converter comprising npc three-level compensating module for adjusting the centre potential
WO 2022009981 A1	AUTONETWORKS TECHNOLOGIES LTD	Converting device
WO 2022009964 A1	SUMITOMO WIRING SYSTEMS	Connector
WO 2022004611 A1	FURUKAWA ELECTRIC CO LTD	Power converter, control method for power converter, power system, control method for power system, and program
WO 2022014083 A1	HITACHI LTD	Motor control device, mechatronic unit, power generation system, boost converter system, and electric vehicle system
WO 2022030190 A1	DENSO CORP	Control circuit for power converter
WO 2022034728 A1	HITACHI LTD	Bidirectional DC-DC converter

WO 2022009982 A1	AUTONETWORKS TECHNOLOGIES LTD	Converting device
WO 2022015519 A1	CUMMINS INC	Bidirectional electric vehicle charging with multi-phase machines
WO 2022030167 A1	DENSO CORP	Control circuit for power converter
WO 2022010649 A1	PATEL HIMANSHU B	Electric vehicle home microgrid power system
WO 2022003553 A1	TONG YUI LUNG	Power supply apparatuses
WO 2022026959 A1	KARMA AUTOMOTIVE LLC	Vehicle drive system

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RECARGA DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022042916 A1	VOLKSWAGEN AG	Plug assembly, socket assembly, and charging system
WO 2022063382 A1	STRIM MOBILITY SAS	System and method for charging vehicles, a charging module for vehicles thereof and method for storing vehicles
WO 2022065176 A1	ISUZU MOTORS LTD	Power reception device
WO 2022053432 A1	ME ENERGY GMBH	Charging column
WO 2022066660 A1	ARGO AI LLC	Enhanced vehicle connection
WO 2022053437 A1	ME ENERGY GMBH	Charging post
WO 2022020566 A1	MARSCHARGE INC	Decentralized reserved power charger
WO 2022049942 A1	SONY GROUP CORP	Information processing device, information processing method, and information processing system
WO 2022018202 A1	ZAHNRADFABRIK FRIEDRICHSHAFEN	Converter apparatus for converting an operating voltage for an electric vehicle, drive apparatus and method for converting an operating voltage
WO 2022056486 A1	BIA POWER LLC	Electrochemical energy storage system for high-energy and high-power requirements
WO 2022006694 A1	BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD	Systems and methods for adaptively charging a battery system
WO 2022017319 A1	XIAMEN YAXON NETWORK CO LTD	Charging control method and system for extended-range electric vehicle, and electric vehicle
WO 2022045284 A1	ISUZU MOTORS LTD	Charge control device
WO 2022004829 A1	PANASONIC IP MAN CO LTD	Charging management device, charging management system, and charging management method
WO 2022020413 A1	CATERPILLAR INC	Charge-port capture detection mechanism for battery electric vehicle
WO 2022006352 A1	ELECTRIC POWER SYSTEMS INC	Hot charging systems and methods
WO 2022013664 A1	ENGELSTEIN SCHALOM	Electrically driven motorised vehicle with rechargeable battery and trolley provided therewith
WO 2022024836 A1	PANASONIC IP MAN CO LTD	Management device, power supply system, electrically driven moving body, and management method
WO 2022009669 A1	DENSO CORP	Storage battery control device
WO 2022009670 A1	DENSO CORP	Battery control device

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CAMBIO DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2022064230 A1	BAKOGIANNIS NIKOLAOS	System and method for electrical vehicles battery swapping
WO 2022007814 A1	AULTON NEW ENERGY AUTOM TECH GROUP	Battery pack removal control method and battery pack mounting control method
WO 2022048627 A1	AULTON NEW ENERGY AUTOM TECH GROUP	Battery swapping control method for battery swapping station
WO 2022048626 A1	AULTON NEW ENERGY AUTOM TECH GROUP	Bottom battery swapping method
WO 2022004693 A1	HONDA MOTOR CO LTD	Storage device, storage method, program, and memory medium
WO 2022023818 A1	LYVES HATCHER PTE LTD	Swappable battery system and method, electric vehicles, battery as a service (BAAS)
WO 2022013471 A1	SCUTUM LOGISTIC S L	System for exchanging batteries in electric vehicles and method for implementing same

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EJECUCIÓN



Los ITPs** de la OEPM detectaron solicitudes de patente relevantes cuando estábamos a mitad del proyecto y gracias a ello pudimos reconducir nuestra investigación.



CONCLUSIÓN



Gracias a los ITPs** de la OEPM hemos podido decidir la mejor forma de protección de nuestros resultados de I+D y redactar adecuadamente nuestras solicitudes de patente.



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