

Noticias

El Consejo de Ministros aprobó el pasado 3 de julio, un Real Decreto-ley con medidas urgentes para apoyar la reactivación económica y el empleo, entre las que se encuentra el Programa de Renovación de Vehículos 2020 ([RENOVE 2020](#)).

Dicho plan Incentiva la sustitución de vehículos contaminantes en circulación por vehículos nuevos de menores emisiones y de todas las tecnologías disponibles actualmente: vehículos eléctricos, híbridos, de hidrógeno, de combustión, GLP y gas natural.

Las ayudas se concederán de forma directa y pueden ir desde los 300€ hasta los 4.000€ según el tipo de vehículo y del beneficiario, que podrán contar con 500€ adicionales para el caso de achatarramiento de un vehículo de más de veinte años, beneficiarios con movilidad reducida o aquellos que pertenezcan a hogares con ingresos mensuales inferiores a 1.500€.

Se admitirán adquisiciones realizadas desde el 16 de junio de 2020, y el programa finalizará el 31 de diciembre de 2020 o hasta que se agote el crédito habilitado a tal efecto.

Se estima un impacto económico para España de 1.104 M€ a lo largo de toda la cadena de valor y de los servicios asociados, y el mantenimiento de 7.400 empleos en el sector.

El 4 de agosto el Consejo de Ministros autorizó la compra de vehículos sin emisiones, con el fin de [renovar la flota de la Administración General del Estado](#) por un valor de 100 millones de euros distribuidos en las siguientes anualidades: 30 millones

de euros en la anualidad de 2020 y 70 millones de euros con cargo al crédito del ejercicio 2021.

Desde el 22 de septiembre, está disponible en la página Web de la [Oficina Europea de Patentes](#) (EPO en inglés), un estudio realizado por la EPO junto con la Agencia Internacional de la Energía (IEA), sobre la importancia de las invenciones relacionadas con las baterías, en la transición energética. De dicho estudio se pueden extraer conclusiones interesantes como:

- anualmente el número de solicitudes de patentes sobre baterías se incrementa en un 14%;
- están centradas principalmente en la tecnología Li-ion para el vehículo eléctrico;
- los países que más patentes solicitan son Corea del Sur y Japón;
- y en el Top 5 de empresas con más solicitudes, aparece Bosch en 5º lugar.

El 28 de septiembre supimos que el [Ministerio de Transportes, Movilidad y Agenda Urbana \(MITMA\)](#) ha iniciado el trámite de audiencia e información pública sobre el proyecto de Real Decreto por el que se modifica el Real Decreto 314/2006, de 17 de marzo, por el que se aprueba el Código Técnico de la Edificación. El proyecto establece las condiciones de las infraestructuras mínimas necesarias para la recarga inteligente de los vehículos eléctricos en los aparcamientos de los edificios y modifica la Instrucción técnica complementaria (ITC) BT-52 del Reglamento electrotécnico para baja

tensión. El Proyecto de Real Decreto es una propuesta del Ministerio de Transportes, Movilidad y Agenda Urbana, siendo los Ministerios de Industria, Comercio y Turismo y el Ministerio para la Transición Ecológica y el Reto Demográfico coproponentes de algunas disposiciones.

Se establece la obligación de que los edificios de nueva construcción y los que sufran una intervención importante cuenten con una precanalización para el 100% de las plazas de aparcamiento a ellos adscritas, en el caso de edificios residenciales privados, y para el 20% de las plazas en el resto de

edificios. Éstos últimos, adicionalmente, cuando tengan más de 10 plazas, deberán contar con una estación de recarga por cada 40 plazas, elevándose esta obligación a una estación cada 20 plazas en el caso de edificios de la Administración General del Estado.

[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](#)
 - [Cambio de baterías](#)

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 2020188707 A1	DAICEL CORP	Slurry
WO 2020189975 A1	LG CHEMICAL LTD	Battery module and manufacturing method therefor
WO 2020190062 A1	LG CHEMICAL LTD	Battery module having thin-plate type module housing and battery pack comprising same
WO 2020188863 A1	BASF TODA BATTERY MAT LLC	Positive electrode active material for non-aqueous electrolyte secondary battery, positive electrode for non-aqueous electrolyte secondary battery, and non-aqueous electrolyte secondary battery
WO 2020189659 A1	GS YUASA INT LTD	Electricity storage device and method for manufacturing electricity storage device
WO 2020188902 A1	VEHICLE ENERGY JAPAN INC	Secondary battery
WO 2020188901 A1	VEHICLE ENERGY JAPAN INC	Battery system
WO 2020189694 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Battery management device, battery management method, and electric power storage system
WO 2020189225 A1	DEXERIALS CORP	Battery pack and protection circuit
WO 2020189657 A1	GS YUASA INT LTD	Power storage device
WO 2020202751 A1	TOYO SYSTEM CO LTD	Battery residual value display device
WO 2020202752 A1	TOYO SYSTEM CO LTD	Battery residual value determination system
WO 2020189161 A1	GS YUASA INT LTD	Power storage device
WO 2020189590 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Battery pack
WO 2020189658 A1	GS YUASA INT LTD	Power storage device
WO 2020189622 A1	VALEO JAPAN CO LTD	Vehicle battery cooling device
WO 2020137005 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020174496 A1	KPIT TECH LIMITED	A high-power density sodium-ion battery
WO 2020184689 A1	DAINIPPON PRINTING CO LTD	Packaging container and storage device
WO 2020136975 A1	PANASONIC IP MAN CO LTD	Battery material, battery, and method for producing battery material
WO 2020137923 A1	TOYOTA JIDOSHOKKI KK	Power storage device
WO 2020137912 A1	POWER IV INC	Secondary battery
WO 2020137776 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020184692 A1	DAINIPPON PRINTING CO LTD	Sheathing material for all solid state battery, all solid state battery, and method for manufacturing same
WO 2020183612 A1	HONDA MOTOR CO LTD	Positive electrode for lithium ion batteries, and lithium ion battery
WO 2020137388 A1	PANASONIC IP MAN CO LTD	All-solid-state battery, and method for manufacturing all-solid-state battery
WO 2020138317 A1	MURATA MANUFACTURING CO	Nonaqueous electrolyte and nonaqueous electrolyte secondary cell
WO 2020137700 A1	DENSO CORP	Battery cooling system
WO 2020175781 A1	SM LAB CO LTD	Cathode active material, method for preparing same, and secondary battery including cathode comprising same
WO 2020137714 A1	SANYO ELECTRIC CO	Secondary battery
WO 2020136971 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020147869 A1	SCIO TECH GMBH	Battery cell module, positioning device for producing battery cell modules and method for producing battery cell modules
WO 2020174954 A1	GS YUASA INT LTD	Power storage device
WO 2020175638 A1	MITSUBISHI CHEM CORP	Non-aqueous electrolyte solution for sodium ion secondary battery, and sodium ion secondary battery
WO 2020175201 A1	GS YUASA INT LTD	Power storage device

WO 2020175782 A1	SM LAB CO LTD	Positive active material, method for manufacturing same and lithium secondary battery comprising positive electrode comprising positive active material
WO 2020180408 A2	UT BATTELLE LLC	Cobalt-free layered oxide cathodes
WO 2020184690 A1	MITSUI CHEMICALS INC	Lithium borate compound, additive for lithium secondary battery, nonaqueous electrolytic solution for lithium secondary battery, precursor for lithium secondary battery, and production method for lithium secondary battery
WO 2020191003 A1	FORD CHEER INTERNATIONAL LTD	Electrospun composite separator for electrochemical devices and applications of same
WO 2020137560 A1	PANASONIC IP MAN CO LTD	Non-aqueous electrolyte secondary battery
WO 2020137777 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020138233 A1	KURARAY CO	Carbonaceous material for electrochemical device, anode for electrochemical device, and electrochemical device
WO 2020137062 A1	SANYO ELECTRIC CO	Separator for insulating adjacent battery cells, and power source device provided with same
WO 2020187942 A1	CONSTELLIUM NEUF BRISACH	Battery box bottom part for electric vehicles
WO 2020137909 A1	SHOWA DENKO KK	Graphite material for negative electrode of lithium-ion secondary battery
WO 2020138492 A1	PANASONIC IP MAN CO LTD	Battery and method for producing same
WO 2020136508 A1	SEMICONDUCTOR ENERGY LAB	Secondary battery protection circuit and secondary battery module
WO 2020137817 A1	SANYO ELECTRIC CO	Non-aqueous electrolyte secondary battery
WO 2020137816 A1	SANYO ELECTRIC CO	Non-aqueous electrolyte secondary battery and method for manufacturing same
WO 2020174953 A1	GS YUASA INT LTD	Electricity storage device
WO 2020175883 A1	LG CHEMICAL LTD	Battery module including connector having shock absorbing structure
WO 2020187535 A1	BOSCH GMBH ROBERT	Method for checking the plausibility of at least one coolant temperature in a drive unit for an electric vehicle, and drive unit for an electric vehicle
WO 2020134977 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery pack and apparatus
WO 2020134070 A1	BYD CO LTD	Battery tray and power battery pack
WO 2020137715 A1	SANYO ELECTRIC CO	Electrode plate and secondary battery using same
WO 2020137006 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020138870 A1	LG CHEMICAL LTD	Battery module, battery pack comprising such battery module, and vehicle comprising such battery pack
WO 2020138318 A1	MURATA MANUFACTURING CO	Battery, battery pack, electronic apparatus, electric vehicle, and electric power system
WO 2020174616 A1	HONDA MOTOR CO LTD	End plate securing structure and battery device
WO 2020175555 A1	NATIONAL UNIV CORPORATION YOKOHAMA NATIONAL UNIV	Lithium-sulfur battery, and lithium-sulfur battery production method
WO 2020183795 A1	PANASONIC IP MAN CO LTD	Laminated battery
WO 2020184340 A1	MITSUBISHI GAS CHEMICAL CO	Method for producing all-solid-state battery
WO 2020190508 A1	BATTELLE ENERGY ALLIANCE LLC	Multispectral impedance determination under dynamic load conditions
WO 2020138629 A1	SJ ADVANCED MAT CO LTD	Composite anode active material, method for manufacturing same, and lithium secondary battery having anode containing same
WO 2020137353 A1	PANASONIC IP MAN CO LTD	Battery and method for manufacturing battery
WO 2020138216 A1	FUJIFILM CORP	Solid electrolyte composition, sheet for all-solid-state secondary cell, all-solid-state secondary cell, and manufacturing method for all-solid-state secondary cell or for sheet for all-solid-state secondary cell
WO 2020137411 A1	GS YUASA INT LTD	Power storage device
WO 2020138848 A1	LG CHEMICAL LTD	Battery module, battery pack comprising same battery module, and vehicle comprising same battery pack

WO 2020183794 A1	PANASONIC IP MAN CO LTD	Laminated battery
WO 2020184693 A1	DAINIPPON PRINTING CO LTD	Outer package material for all-solid-state batteries, method for producing same and all-solid-state battery
WO 2020184068 A1	GS YUASA INT LTD	Power storage device
WO 2020137298 A1	TOYO SEIKAN GROUP HOLDINGS LTD	Sealing material, method for manufacturing same, and all-solid-state secondary battery
WO 2020136970 A1	PANASONIC IP MAN CO LTD	Battery and layered battery
WO 2020137410 A1	GS YUASA INT LTD	Power storage device
WO 2020138122 A1	FUJIFILM CORP	Solid electrolyte composition, solid-electrolyte-containing sheet, all-solid-state secondary cell, and method for manufacturing solid-electrolyte-containing sheet and all-solid-state secondary cell
WO 2020138187 A1	UBE INDUSTRIES	Electrode for all-solid-state secondary batteries, all-solid-state secondary battery and method for producing all-solid-state secondary battery
WO 2020136021 A1	RENAULT SAS	Motor vehicle structure
WO 2020175361 A1	SANYO ELECTRIC CO	Non-aqueous electrolyte secondary battery
WO 2020175925 A1	LG CHEMICAL LTD	Cathode active material precursor for secondary battery, cathode active material, preparation method therefor, and lithium secondary battery comprising same
WO 2020184464 A1	NATIONAL UNIV CORPORATION TOYOHASHI UNIV OF TECHNOLOGY	Solid electrolyte, electrode for lithium ion battery, and lithium ion battery
WO 2020141034 A1	DEUTSCH ZENTR LUFT & RAUMFAHRT	Electrolyte for a zinc battery
WO 2020171111 A1	SUMITOMO METAL MINING CO LTD	Positive electrode active material for lithium ion secondary battery, method for manufacturing positive electrode active material for lithium ion secondary battery, and lithium ion secondary battery
WO 2020141574 A1	HITACHI CHEMICAL CO LTD	Negative electrode material for lithium ion secondary cell, method for manufacturing negative electrode material for lithium ion secondary cell, negative electrode for lithium ion secondary cell, and lithium ion secondary cell
WO 2020149250 A1	JXTG NIPPON OIL & ENERGY CORP	Synthetic graphite material, synthetic graphite material production method, negative electrode for lithium ion secondary battery, and lithium ion secondary battery
WO 2020149251 A1	JXTG NIPPON OIL & ENERGY CORP	Synthetic graphite material, synthetic graphite material production method, negative electrode for lithium ion secondary battery, and lithium ion secondary battery
WO 2020149557 A1	LG CHEMICAL LTD	Battery management apparatus and method
WO 2020162284 A1	MTEK-SMART CORP	Method for manufacturing all-solid-state battery
WO 2020171089 A1	SUMITOMO METAL MINING CO LTD	Method for producing positive electrode active material for lithium ion secondary batteries, positive electrode active material for lithium ion secondary batteries, and lithium ion secondary battery
WO 2020141573 A1	HITACHI CHEMICAL CO LTD	Negative electrode material for lithium ion secondary battery, negative electrode for lithium ion secondary battery, and lithium ion secondary battery
WO 2020149622 A1	LG CHEMICAL LTD	Anode and secondary battery comprising said anode
WO 2020171939 A1	CORNING INC	Sintered electrodes for batteries and method of preparing same
WO 2020146395 A1	TESLA MOTORS CANADA ULC	Electrolytes with lithium difluoro(oxalato)borate and lithium tetrafluoroborate salts for lithium metal and anode-free cells
WO 2020162028 A1	mitsubishi motors corp	Battery pack mounting structure
WO 2020178493 A1	PSA AUTOMOBILES SA	Motor vehicle equipped with an impact protection device for underfloor elements
WO 2020149404 A1	NIPPON STEEL CORP	Negative electrode active material, negative electrode, and battery
WO 2020171056 A1	HONDA MOTOR CO LTD	Storage device, estimation device, storage method, program, and memory medium
WO 2020170598 A1	SANYO ELECTRIC CO LTD	Electrode plate and method for manufacturing same, and secondary battery and method for manufacturing same
WO 2020149133 A1	SHINETSU CHEMICAL CO	Negative electrode active substance for non-aqueous electrolyte secondary cell, non-aqueous electrolyte secondary cell, and method for manufacturing negative electrode material for non-aqueous electrolyte secondary cell

WO 2020149252 A1	JXTG NIPPON OIL & ENERGY CORP	Synthetic graphite material, synthetic graphite material production method, negative electrode for lithium ion secondary battery, and lithium ion secondary battery
WO 2020171170 A1	HONDA MOTOR CO LTD	Information processing device, information processing method, service system, program, and storage medium
WO 2020179409 A1	JNC CORP	Sioc structure and composition for negative electrode using same, negative electrode, and secondary battery
WO 2020185664 A1	WANG DONGHAI	Polymer-inorganic solid-electrolyte interphase for stable metal batteries under lean electrolyte conditions
WO 2020144142 A1	UCL BUSINESS LTD	Method of enhancing electrochemical cell performance
WO 2020146473 A1	TIVENI MERGECO INC	Multi-layer contact plate and method thereof
WO 2020149199 A1	NISSHINBO HOLDINGS INC	Secondary battery
WO 2020178509 A1	EASYL	Electrode for rechargeable energy storage device
WO 2020149681 A1	LG CHEMICAL LTD	Anode and secondary battery comprising anode
WO 2020149724 A1	LG CHEMICAL LTD	Anode active material for lithium secondary battery, and lithium secondary battery comprising same
WO 2020162505 A1	DENKA COMPANY LTD	Composition, slurry for positive electrode, and battery
WO 2020170833 A1	ADEKA CORP	Electrolyte composition, nonaqueous electrolyte, and nonaqueous electrolyte secondary battery
WO 2020177569 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery module and battery pack
WO 2020171442 A1	LG CHEM LTD	Battery management system, battery management method, battery pack, and electric vehicle
WO 2020171088 A1	SUMITOMO METAL MINING CO LTD	Method for producing positive electrode active material for lithium ion secondary batteries, positive electrode active material for lithium ion secondary batteries, and lithium ion secondary battery
WO 2020171126 A1	SUMITOMO METAL MINING CO LTD	Positive electrode active material for lithium ion secondary battery, method for producing same, and lithium ion secondary battery
WO 2020179262 A1	PANASONIC IP MAN CO LTD	Battery managing system, battery managing method, and terminal device
WO 2020166998 A1	LG CHEMICAL LTD	Battery module, manufacturing method therefor, and battery pack including battery module
WO 2020169200 A1	COMMISSARIAT ENERGIE ATOMIQUE	Nitrile solvent-based electrolyte for organic battery
WO 2020173351 A1	CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	Battery pack thermal management system and thermal management system for electric vehicle
WO 2020180156 A1	LG CHEMICAL LTD	Negative electrode active material and lithium secondary battery comprising same
WO 2020146218 A1	A123 SYSTEMS LLC	Abuse-tolerant lithium ion battery cathode blends with symbiotic power performance benefits
WO 2020145338 A1	HITACHI CHEMICAL CO LTD	Electrolytic solution, electrolyte slurry composition, and secondary cell
WO 2020152567 A1	3M INNOVATIVE PROPERTIES CO	Thermal management of battery modules
WO 2020171093 A1	SUMITOMO METAL MINING CO LTD	Method for producing positive electrode active material for lithium ion secondary batteries
WO 2020171392 A1	LG CHEM LTD	Battery cell, battery module comprising same, battery rack, and power storage device
WO 2020172427 A1	RIVIAN IP HOLDINGS LLC	Battery module gas sensor for battery cell monitoring
WO 2020179523 A1	MITSUBISHI GAS CHEMICAL CO	Method for producing sulfide solid electrolyte
WO 2020144082 A1	MEESE LUDWIG	Transportable charging station
WO 2020146948 A1	BLUE SOLUTIONS CANADA INC	Hybrid solid electrolyte for all-solid-state battery
WO 2020153095 A1	SUMITOMO METAL MINING CO	Nickel-cobalt-aluminum composite hydroxide, production method for nickel-cobalt-aluminum composite hydroxide, lithium-nickel-cobalt-aluminum composite oxide, and lithium ion secondary battery
WO 2020161972 A1	HONDA MOTOR CO LTD	Battery identification system and battery identification method
WO 2020162277 A1	MURATA MANUFACTURING CO	Positive electrode active material for secondary battery, and secondary battery
WO 2020180163 A1	LG CHEMICAL LTD	Carbon nanotube, electrode including carbon nanotube, and secondary battery
WO 2020136630 A1	TERAWATT TECH INC	Electric vehicle solid state battery cell

WO 2020145116 A1	SUMITOMO METAL MINING CO	Method for producing positive electrode active material for lithium ion secondary battery, and molded article
WO 2020158306 A1	SEKISUI CHEMICAL CO LTD	Electrode for lithium ion secondary battery and lithium ion secondary battery
WO 2020143413 A1	NINGDE AMPEREX TECHNOLOGY LTD	Electrode used for improving battery performance and comprising composite layer with bracket structure and protective layer, and battery
WO 2020144905 A1	KANEKA CORP	Negative electrode for nonaqueous electrolyte secondary batteries and nonaqueous electrolyte secondary battery
WO 2020150542 A1	GLOBAL GRAPHENE GROUP INC	Process for producing semiconductor nanowires and nanowire-graphene hybrid particulates
WO 2020153096 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, lithium-nickel-manganese-cobalt composite oxide, and lithium ion secondary battery
WO 2020158430 A1	GS YUASA INT LTD	Power storage device
WO 2020158935 A1	ENVISION AESC JAPAN LTD	Electrode tab forming method and electrode tab forming device
WO 2020158885 A1	NICHIA CORP	Electrode active material for non-aqueous secondary battery and method for producing same
WO 2020162291 A1	DENSO CORP	Vehicle driving control device and driving system
WO 2020171640 A1	POSTECH RES & BUSINESS DEV FOUND	Method for preparing solid electrolyte for all-solid battery, and solid electrolyte
WO 2020171629 A1	LG CHEM LTD	Battery module including terminal connecting structure provided with floating nut and battery pack including the same
WO 2020176520 A1	CORESHELL TECH INC	Solution-phase deposition of thin films on conversion anodes in lithium-ion batteries
WO 2020180160 A1	LG CHEMICAL LTD	Lithium secondary battery
WO 2020179196 A1	HITACHI LTD	Battery pack
WO 2020145298 A1	NEC CORP	Reduced graphene oxide-graphite composite material, method for producing same, and lithium ion secondary battery using same
WO 2020143912 A1	MAX PLANCK GESELLSCHAFT	Electrochemical device, batteries, method for harvesting light and storing electrical energy, and detection methods
WO 2020153409 A1	AIST	Titanium oxide, method for producing titanium oxide, and lithium secondary battery using titanium oxide-containing electrode active material
WO 2020158887 A1	NICHIA CORP	Method for manufacturing electrode active material for non-aqueous secondary cell
WO 2020179669 A1	SEKISUI CHEMICAL CO LTD	Electrode for lithium ion secondary batteries, and lithium ion secondary battery
WO 2020141114 A1	BOSCH GMBH ROBERT	Electric vehicle, in particular construction machine, and method for operating an electric vehicle
WO 2020145638 A1	LG CHEMICAL LTD	Method for producing positive electrode active material for lithium secondary battery, and positive electrode active material produced thereby
WO 2020145549 A1	LG CHEMICAL LTD	Battery module having swelling gauge, and battery pack comprising same
WO 2020163712 A1	CPS TECH HOLDINGS LLC	Terminal cover
WO 2020166165 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020165517 A1	NOVARES FRANCE	Battery unit and motor vehicle provided with at least one such unit
WO 2020141942 A1	LG CHEMICAL LTD	Battery pack and battery pack assembly device
WO 2020145600 A1	LG CHEMICAL LTD	Battery module, and battery pack including same
WO 2020163665 A1	CPS TECH HOLDINGS LLC	Battery system having a passive heat sink
WO 2020165509 A1	HUTCHINSON	Electric energy management system
WO 2020179752 A1	SANTOKU CORP	Negative electrode active material powder, negative electrode and nickel hydrogen secondary battery
WO 2020145626 A1	LG CHEMICAL LTD	Jig for tack welding of battery cell electrode lead
WO 2020162000 A1	SANYO ELECTRIC CO	Method for manufacturing nonaqueous electrolyte secondary battery and nonaqueous electrolyte secondary battery
WO 2020171372 A1	SAMSUNG SDI CO LTD	Secondary battery and method for manufacturing same
WO 2020146630 A1	UNIV LELAND STANFORD JUNIOR	Red phosphorus/carbon nanocomposite as high capacity and fast-charging battery anode material
WO 2020157601 A1	SEMICONDUCTOR ENERGY LAB	Method for analyzing lithium composite oxide, positive electrode active material and secondary battery
WO 2020165510 A2	HUTCHINSON	Thermoelectric device employing the seebeck effect

WO 2020168206 A1	CPS TECH HOLDINGS LLC	Sensor for battery module
WO 2020181046 A1	THE TRUSTEES OF INDIANA UNIV	Lithium silicate cathodes for lithium-ion batteries
WO 2020179515 A1	JX NIPPON MINING & METALS CORP	Rolled copper foil for secondary battery negative electrode current collectors, secondary battery negative electrode current collector and secondary battery each using same, and method for manufacturing rolled copper foil for secondary battery negative electrode current collectors
WO 2020144732 A1	HITACHI CHEMICAL CO LTD	Separator and lead storage battery
WO 2020153728 A1	LG CHEMICAL LTD	Anode active material for lithium secondary battery, and anode and lithium secondary battery which comprise same
WO 2020158181 A1	PANASONIC IP MAN CO LTD	Lithium metal secondary battery
WO 2020160765 A1	ABB SCHWEIZ AG	Unit to test and/or charge battery cells or battery modules for electrical vehicles
WO 2020166599 A1	MITSUI MINING & SMELTING COLTD	Active material
WO 2020179695 A1	KAWASAKI HEAVY IND LTD	Apparatus for roasting lithium ion battery waste
WO 2020153833 A1	IUCF HYU	Composite metal oxide for lithium secondary battery comprising doping element, positive electrode active material for lithium secondary battery prepared from same, and lithium secondary battery comprising same
WO 2020152883 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, lithium-nickel-manganese-cobalt composite oxide, and lithium ion secondary battery
WO 2020152880 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, lithium-nickel-manganese-cobalt composite oxide, and lithium ion secondary battery
WO 2020158626 A1	ZEON CORP	Binder composition for nonaqueous secondary battery electrodes, slurry composition for nonaqueous secondary battery electrodes, electrode for nonaqueous secondary batteries, and nonaqueous secondary battery
WO 2020166270 A1	DENSO CORP	Refrigeration cycle device
WO 2020180060 A1	LG CHEMICAL LTD	Method for preparing cathode active material precursor for lithium secondary battery, and cathode active material precursor prepared by preparation method
WO 2020179355 A1	DENSO CORP	Battery pack
WO 2020152541 A1	SEMICONDUCTOR ENERGY LAB	Semiconductor device and method of operating semiconductor device
WO 2020154947 A1	SUZHOU JK ENERGY LTD	Method and system for managing vehicle-mounted intelligent battery pack, and device and storage medium
WO 2020145639 A1	LG CHEMICAL LTD	Positive electrode active material, method for manufacturing positive electrode active material, and positive electrode and lithium secondary battery comprising positive electrode active material
WO 2020153093 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, lithium-nickel-manganese-cobalt composite oxide, and lithium ion secondary battery
WO 2020152769 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, and lithium-nickel-manganese-cobalt composite oxide
WO 2020152882 A1	SUMITOMO METAL MINING CO	Nickel-cobalt-aluminum composite hydroxide, production method for nickel-cobalt-aluminum composite hydroxide, lithium-nickel-cobalt-aluminum composite oxide, and lithium ion secondary battery
WO 2020158555 A1	NEC CORP	Secondary battery which uses radical polymer for electrode
WO 2020162292 A1	DENSO CORP	Vehicle driving control device and driving system
WO 2020149244 A1	NIPPON CHEMICAL IND	Positive electrode active material for lithium secondary battery, method for producing same, and lithium secondary battery
WO 2020153094 A1	SUMITOMO METAL MINING CO	Nickel-manganese-cobalt composite hydroxide, production method for nickel-manganese-cobalt composite hydroxide, lithium-nickel-manganese-cobalt composite oxide, and lithium ion secondary battery

WO 2020153637 A1	LG CHEMICAL LTD	Battery management device, battery management method, and battery pack
WO 2020171426 A1	LG CHEM LTD	Bus bar for battery cell connection, battery pack, and manufacturing method therefor
WO 2020180116 A1	LG CHEMICAL LTD	Battery module, and battery pack and vehicle comprising same
WO 2020179990 A1	LG CHEMICAL LTD	Pouch for secondary battery and pouch-type secondary battery
WO 2020145504 A1	NAT UNIV GYEONGSANG IACF	Composite sulfide electrode and manufacturing method therefor
WO 2020144985 A1	VEHICLE ENERGY JAPAN INC	Battery pack
WO 2020153456 A1	DAINIPPON PRINTING CO LTD	Exterior material for all-solid-state battery, method for manufacturing same, and all-solid-state battery
WO 2020154759 A1	RE:START CHARGING SERVICES PTY LTD	Battery pack
WO 2020158299 A1	PANASONIC IP MAN CO LTD	Non-aqueous electrolyte secondary battery and electrolytic solution used therefor
WO 2020158867 A1	DENSO CORP	Heat transfer medium and vehicular heat management system
WO 2020149659 A1	LG CHEMICAL LTD	Lithium secondary battery
WO 2020152901 A1	HITACHI LTD	Secondary battery module remaining life diagnosis method and remaining life diagnosis system
WO 2020154552 A1	GLOBAL GRAPHENE GROUP INC	Lithium metal secondary battery containing elastic polymer foam as an anode-protecting layer
WO 2020166655 A1	MITSUI MINING & SMELTING COLTD	Active material
WO 2020158423 A1	DENSO CORP	Refrigeration cycle device
WO 2020168558 A1	BOE TECH GROUP CO LTD	Lithium ion battery and preparation method therefor
WO 2020153458 A1	DAINIPPON PRINTING CO LTD	Exterior material for all-solid-state battery, method for manufacturing same, and all-solid-state battery
WO 2020142702 A1	CELGARD LLC	Battery separators that include a microporous membrane and a coating.
WO 2020166658 A1	MITSUI MINING & SMELTING COLTD	Active material
WO 2020158137 A1	PANASONIC CORP	Stacked secondary battery
WO 2020158223 A1	PANASONIC IP MAN CO LTD	Nonaqueous electrolyte secondary battery and electrolyte solution used in same
WO 2020154652 A1	UNIV CENTRAL FLORIDA RES FOUND INC	Self-standing tin sulfide film for flexible batteries
WO 2020159202 A1	LG CHEMICAL LTD	Anode and lithium secondary battery comprising same
WO 2020166166 A1	PANASONIC IP MAN CO LTD	Battery
WO 2020170135 A1	UMICORE NV	Powderous solid electrolyte compound for solid-state rechargeable lithium ion battery
WO 2020166601 A1	MITSUI MINING & SMELTING COLTD	Active material
WO 2020153477 A1	HONDA MOTOR CO LTD	Power storage device management system, keeping apparatus, and power storage device management method
WO 2020159310 A1	LG CHEMICAL LTD	Positive electrode active material for secondary battery and lithium secondary battery comprising same
WO 2020162001 A1	SUMITOMO WIRING SYSTEMS	Terminal holding structure, and wiring module
WO 2020166803 A1	LG CHEMICAL LTD	Secondary battery and battery module
WO 2020166802 A1	LG CHEMICAL LTD	Secondary battery and battery module
WO 2020163960 A1	HYDRO-QUÉBEC	Cellulose-based separators comprising flame retardant, and uses thereof in electrochemistry
WO 2020159116 A1	LG CHEMICAL LTD	Electrode assembly having different-sized pressure-welded portions of electrode tab-welded joint and ultrasonic welding device for manufacturing same
WO 2020154053 A2	PIMEMS INC	Mems anode battery
WO 2020159263 A1	LG CHEMICAL LTD	Method for manufacturing anode for secondary battery
WO 2020146264 A2	THE BOARD OF REGENTS FOR THE OKLAHOMA AGRICULTURAL AND MECH COLLEGES	Preparation of silicon-based anode for use in a Li-ion battery

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SUPERCONDENSADORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020189662 A1	SEKISUI CHEMICAL CO LTD	Composite material, electrode material for electricity storage devices, and electricity storage device
WO 2020184125 A1	GS YUASA INT LTD	Non-aqueous electrolyte power storage element and power storage device
WO 2020184157 A1	NIPPON CHEMICON	Electrode and method for manufacturing electrode

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SISTEMAS DE RECUPERACIÓN DE ENERGÍA; FRENOS REGENERATIVOS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020138167 A1	ADVICS CO LTD	Braking system for vehicle
WO 2020188520 A1	FCA ITALY SPA	Management of the cleaning of friction bodies of automotive braking system
WO 2020158087 A1	HITACHI IND PRODUCTS LTD	Regenerative braking system and electrically driven vehicle

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MÁQUINAS ELÉCTRICAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020137579 A1	DENSO CORP	Rotary electric machine
WO 2020135663 A1	UNIV OF SHANGHAI FOR SCIENCE AND TECHNOLOGY	Parallel-series excited direct current motor driving device, and apparatus
WO 2020136171 A1	ZUMA INNOVATION S L	Electric vehicles provided with control systems based on stimuli to the user
WO 2020138530 A1	UNIV JEONJU IND UNIV COOP	Brushless DC motor core using hybrid composite containing aluminum, multi-walled carbon nanotube, iron, and cobalt
WO 2020144492 A1	ROOHIAN GHASEM	A combined cycle generator with a 100% efficiency
WO 2020174190 A1	NIDEC PSA EMOTORS	Stator for a rotating electrical machine
WO 2020174333 A1	TEXA DYNAMICS S R L	Electric motor and clutch
WO 2020162233 A1	DENSO CORP	Rotary electric machine
WO 2020174184 A1	NIDEC PSA EMOTORS	Rotating electrical machine having an annular cooling chamber
WO 2020163221 A1	DRIV AUTOMOTIVE INC	Electric propulsion, suspension, and steering systems
WO 2020183492 A1	NIMBALKAR SHRIKANT DILIP	Hybrid and electric vehicles, kits and conversion methods
WO 2020160785 A1	GKN AUTOMOTIVE LTD	Connector assembly and a method for electrically connecting an inverter busbar to an electrical connector of a drive unit and such a drive unit
WO 2020156830 A1	NIDEC GPM GMBH	Pump having an electric motor with a plug attachment in the form of an intermediate ring
WO 2020149405 A1	NIPPON STEEL CORP	Non-oriented electrical steel sheet, segmented stator, and dynamo-electric machine
WO 2020162253 A1	DENSO CORP	Rotary electric machine and wheel drive device
WO 2020157501 A1	SAIETTA GROUP LTD	Axial flux electrical machine
WO 2020164992 A1	BOSCH GMBH ROBERT	Drive unit for an electric vehicle and method for detecting faults in a drive unit
WO 2020173755 A1	MAHLE INT GMBH	Method for operating a three-phase electric motor, and three-phase electric motor
WO 2020162337 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Rotary electric machine and method for manufacturing rotary electric machine
WO 2020164112 A1	SHENZHEN A&E MOTOR TECH CO LTD	Switched reluctance motor, electric vehicle, and electric device
WO 2020149100 A1	TOYOTA JIDOSHOKKI KK	Hybrid system, hybrid system control device, and hybrid system control method
WO 2020151870 A1	AUDI AG	Rotor for an electric motor
WO 2020145518 A1	GOO JEI HYUN	Apparatus for operating as DC (direct current) generator and DC motor
WO 2020165261 A1	PUNCH POWERTRAIN NV	Electric drive unit and method of manufacturing the same

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CONVERTIDORES, INVERSORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020138927 A1	SAMSUNG ELECTRONICS CO LTD	Inverter and refrigerator comprising inverter
WO 2020138968 A1	LG INNOTEK CO LTD	Power conversion device
WO 2020189312 A1	KYOCERA CORP	Laminated capacitor, linked capacitor, inverter, and electric vehicle
WO 2020137721 A1	PANASONIC IP MAN CO LTD	Power conversion apparatus
WO 2020188189 A1	INST VEDECOM	Electrical converter, in particular for incorporation in an electric vehicle
WO 2020190614 A1	TULA ETECHNOLOGY INC	Boosted converter for pulsed electric machine control
WO 2020186363 A1	OSSIACO INC	Converter with power management system for household users to manage power between different loads including their electric vehicle
WO 2020188186 A1	INST VEDECOM	Isolated reversible electric charger, in particular for integration into an electric vehicle
WO 2020142231 A1	TEXAS INSTRUMENTS INC	Powertrain architecture for a vehicle utilizing an on-board charger
WO 2020162984 A1	HUAWEI ADMINISTRATION BUILDING BANTIAN	Wide-voltage-range DC-DC converters
WO 2020169575 A1	VITESCO TECH GMBH	On-board vehicle electrical system having an accumulator, an alternating voltage connection and a direct voltage connection
WO 2020161883 A1	MITSUBISHI ELECTRIC CORP	Power supply device and capacitor
WO 2020144815 A1	MITSUBISHI ELECTRIC CORP	Method for controlling power conditioner and system interconnection inverter device
WO 2020181384 A1	OSSIACO INC	Multiple port power converter device
WO 2020159324 A1	WIPOWERONEINC	Power feeding and current collecting system for on-road wireless charging of electric vehicle and industrial machine
WO 2020154669 A1	MAGNA INT INC	Design and optimization of a high power density low voltage DC-DC converter for electric vehicles
WO 2020157053 A1	ETH ZÜRICH	Method for closed-loop control of a three-phase pulse rectifier system with current intermediate circuit
WO 2020179219 A1	NIDEC CORP	Motor unit
WO 2020178131 A1	AUDI AG	Direct cooling of a power converter by using a stamped plate
WO 2020158128 A1	DENSO CORP	Rotating electric machine drive device
WO 2020164895 A1	POWER RES ELECTRONICS B V	Bidirectional power converter
WO 2020152733 A1	MITSUBISHI ELECTRIC CORP	Power conversion device
WO 2020151996 A1	VALEO EMBRAYAGES	Propulsion module for an electric or hybrid vehicle
WO 2020164946 A1	HUDDIG AB	Arrangement and method for hybrid power generation

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RECARGA DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020186357 A1	OSSIACO INC	EV charger with adaptable charging protocol
WO 2020188590 A1	TVS MOTOR CO LTD	Battery charging system for a hybrid electric vehicle
WO 2020183960 A1	MITSUBISHI MOTORS CORP	Hybrid vehicle
WO 2020188163 A1	PSA AUTOMOBILES SA	Method for controlling the charging of a rechargeable battery module by means of a dynamic programming algorithm
WO 2020187814 A1	RENAULT SAS	Method for controlling the electromagnetic relays of an electric or hybrid motor vehicle
WO 2020191037 A1	CHONGQING JINKANG NEW ENERGY AUTOMOBILE CO LTD	Methods and systems for variable maximum current protection for battery systems
WO 2020148111 A1	FORSCHNER EUGEN GMBH	Device for energy distribution and/or energy conversion
WO 2020149944 A1	FUTUREWEI TECHNOLOGIES INC	Integrated charger and motor control system isolated by motor
WO 2020180657 A1	FERMATA LLC	Methods for using temperature data to protect electric vehicle battery health during use of bidirectional charger
WO 2020151872 A1	AUDI AG	Method for charging a battery
WO 2020145527 A1	HANON SYSTEMS	Thermal management system
WO 2020149537 A1	LG CHEMICAL LTD	Battery charging system and battery charging method
WO 2020153107 A1	HONDA MOTOR CO LTD	Power supply/reception matching device, power supply/reception matching method, and program
WO 2020150155 A1	CUMMINS INC	Systems, apparatuses, and methods for charging multiple vehicles in close proximity
WO 2020164952 A1	REMA LIPPRANDT GMBH CO KG	Electrical charging connector
WO 2020149102 A1	TOYOTA JIDOSHOKKI KK	Charging system and method for controlling charging system
WO 2020176860 A1	MOTION FUSION INC	Autonomous wireless electric vehicle charging system
WO 2020170798 A1	AUTONETWORKS TECHNOLOGIES LTD	Vehicle charge switching device and vehicle charging control device
WO 2020162553 A1	TOYOTA JIDOSHOKKI KK	Charging equipment, and method for controlling charging equipment
WO 2020166602 A1	HONDA MOTOR CO LTD	Charging apparatus, charging method, program, and memory medium

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CAMBIO DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020179261 A1	PANASONIC IP MAN CO LTD	Battery management system, battery management method, and terminal device
WO 2020153481 A1	HONDA MOTOR CO LTD	Storing device and storing method
WO 2020156771 A1	BOSCH GMBH ROBERT	A method of swapping at least one battery in an electric vehicle

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LANZAMIENTO



Los ITPs** de la OEPM nos han ahorrado horas de revisión bibliográfica para definir el punto de partida de nuestros proyectos de I+D.



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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