

Noticias

El 20 de enero el periódico [El Economista](#) publicó en su versión digital, que Adif está buscando un socio privado para extender una red de “ferrolineras®” por España, que permita recargar los coches eléctricos. Adif cuenta en la actualidad con dos ferrolineras en Málaga y Santander que están pegadas a las estaciones del tren, pero el objetivo es ahora, poner estos puntos de recarga cerca de las subestaciones o de cualquier punto de la red convencional y de alta velocidad.

Por otra parte, [Adif](#) tiene protegidas en España las marcas “Ferrolinera” y “Ferrolinera Adif”, además de haber solicitado protección de la tecnología por medio de una patente nacional, así como de una solicitud internacional PCT.

La vicepresidenta y ministra para la Transición Ecológica y el Reto Demográfico, Teresa Ribera, adelantó el pasado 18 de febrero, durante las [Conferencias Sectoriales de Medio Ambiente y Energía](#),

la Segunda Edición del [Programa de Incentivos a la Movilidad Eficiente y Sostenible](#) (MOVES II), con una asignación de 65 millones de euros, un 40% más que en su primera edición convocada el año pasado.

Las ayudas se destinarán a la adquisición de vehículos de energías alternativas, instalación de infraestructuras de recarga de vehículos eléctricos, implantación de sistemas de préstamos de bicicletas eléctricas y puesta en marcha de medidas de planes de transporte al trabajo en empresas.

Pueden optar a las ayudas, profesionales autónomos, personas físicas y jurídicas, comunidades de propietarios y el sector público.

Su gestión, como en la anterior edición, corresponderá a las Comunidades Autónomas en coordinación con el IDAE.

[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 2020049249 A1	EXOES	System for cooling at least one electrical module comprising a plurality of battery cells immersed in a dielectric fluid
WO 2020049248 A1	EXOES	Electric module comprising a plurality of battery cells submerged in a dielectric fluid
WO 2020054227 A1	SANYO ELECTRIC CO	Power supply device
WO 2020054228 A1	SANYO ELECTRIC CO	Power supply device
WO 2020059131 A1	TOSHIBA KK	Battery and battery pack
WO 2020060108 A1	LG CHEMICAL LTD	Battery module and battery pack comprising battery module
WO 2020059802 A1	MURATA MANUFACTURING CO	Secondary battery
WO 2020056336 A1	TIVENI MERGECO INC	Battery module with bottom plate that functions as a heat spreader
WO 2020055038 A1	LG CHEMICAL LTD	Icb assembly, battery module comprising same, and method for manufacturing same
WO 2020055035 A1	LG CHEMICAL LTD	Icb assembly, battery module comprising same, and manufacturing method therefor
WO 2020055210 A1	POSCO	Cathode active material, method for preparing same, and lithium secondary battery comprising same
WO 2020059873 A1	MURATA MANUFACTURING CO	Secondary battery
WO 2020059928 A1	KERI KOREA ELECTROTECHNOLOGY RES INST	Electrode composition for secondary battery and method for preparing same
WO 2020058695 A1	MCLAREN AUTOMOTIVE LTD	Battery module coolant channels
WO 2020058696 A1	MCLAREN AUTOMOTIVE LTD	Trapezoidal battery modules
WO 2020053112 A1	VOLKSWAGEN AG	Method for producing an electric battery with separator material on a current collector base
WO 2020054546 A1	KUREHA CORP	Resin dispersion electrolyte solution, polymer gel electrolyte, production method for polymer gel electrolyte, secondary battery, and production method for secondary battery
WO 2020053702 A1	3M INNOVATIVE PROPERTIES CO	Active battery management method
WO 2020058295 A1	BOSCH GMBH ROBERT	Method for disconnecting a battery
WO 2020058572 A1	BROADBIT BATTERIES OY	A discharge state assembled rechargeable electrochemical cell comprising metallic electrodes
WO 2020058693 A1	MCLAREN AUTOMOTIVE LTD	Battery compartment
WO 2020054866 A1	ASAHI CHEMICAL IND	Nonaqueous secondary battery
WO 2020055162 A1	LG CHEMICAL LTD	Switch diagnosis device and method
WO 2020053115 A1	VOLKSWAGEN AG	Multilayer ceramic solid electrolyte separator with plastic reinforcement for increasing the fracture stability and reducing short circuits in electric batteries
WO 2020055198 A1	LG CHEMICAL LTD	Method for manufacturing positive electrode material for lithium secondary battery, and positive electrode material for lithium secondary battery manufactured by same
WO 2020059169 A1	TOSHIBA KK	Secondary battery, battery pack, vehicle, and stationary power supply
WO 2020059549 A1	FUJIFILM CORP	All-solid secondary battery and all-solid secondary battery negative electrode sheet
WO 2020060048 A1	LG CHEMICAL LTD	Battery module
WO 2020059927 A1	KERI KOREA ELECTROTECHNOLOGY RES INST	Method for manufacturing cathode material for secondary battery electrode
WO 2020058423 A1	HOEGANAES AB PUBL	Metal hydride alloy powder for nimh batteries having improved properties, method for preparing the same, and nimh battery with improved properties comprising the metal hydride alloy powder

WO 2020059874 A1	MURATA MANUFACTURING CO	Secondary battery
WO 2020059080 A1	NISSAN MOTOR	Battery pack
WO 2020043396 A1	BOSCH GMBH ROBERT	Battery system with fans in the battery cell holder, and method for a homogeneous temperature distribution within the battery system
WO 2020054997 A1	LG CHEMICAL LTD	Battery module, battery pack comprising battery module, and vehicle comprising battery pack
WO 2020054998 A1	LG CHEMICAL LTD	Battery module, battery pack comprising same battery module, and vehicle comprising same battery pack
WO 2020059711 A1	SEKISUI CHEMICAL CO LTD	Lithium-ion secondary cell, method for manufacturing same, and positive electrode for lithium-ion secondary cell
WO 2020059550 A1	FUJIFILM CORP	Production method for all-solid secondary battery layered member, and production method for all-solid secondary battery
WO 2020060131 A1	LG CHEMICAL LTD	Lithium secondary battery electrode comprising lioh, manufacturing method therefor, and lithium secondary battery comprising electrode
WO 2020059805 A1	MURATA MANUFACTURING CO	Secondary battery
WO 2020058690 A1	MCLAREN AUTOMOTIVE LTD	Battery assembly
WO 2020060341 A1	LG HAUSYS LTD	Battery case for electric car
WO 2020064221 A1	BAYERISCHE MOTOREN WERKE AG	Detection of abnormal self-discharge of lithium ion cells, and battery system
WO 2020047143 A1	RIVIAN IP HOLDING LLC	Cylindrical battery cell packaging and cooling configuration
WO 2020054171 A1	HONDA MOTOR CO LTD	Arrangement planning device
WO 2020054229 A1	SANYO ELECTRIC CO	Power supply device
WO 2020059833 A1	HONDA MOTOR CO LTD	Power storage device management system, storage device, server device, power storage device management method, program, and storage medium
WO 2020059941 A1	UNIV DONG A RES FOUND FOR IND ACAD COOP	Composition for cathode active material surface treatment, method for preparing same, and cathode active material surface-treated with same
WO 2020058092 A1	CONTINENTAL AUTOMOTIVE GMBH	Method and battery sensor for monitoring a circuit in a vehicle
WO 2020002552 A1	SGL CARBON SE	Sealing segment for temperature control of a fluid-cooled battery
WO 2020002099 A1	COVESTRO DEUTSCHLAND AG	Device for dissipating heat from an arrangement of rechargeable electrochemical energy accumulators
WO 2020044275 A1	ULTRAVIOLETTE AUTOMOTIVE PVT LTD	A system to interconnect a plurality of battery cells within a battery pack
WO 2020045306 A1	ZEON CORP	Slurry composition for all-solid-state secondary battery, solid-electrolyte-containing layer, and all-solid-state secondary battery
WO 2020045227 A1	ZEON CORP	Binder composition for all-solid-state secondary battery, slurry composition for all-solid-state secondary battery electrode mixture layer, slurry composition for all-solid-state secondary battery solid electrolyte layer, electrode for all-solid-state secondary battery, solid electrolyte layer for all-solid-state secondary battery, and all-solid-state secondary battery
WO 2020050551 A1	LG CHEMICAL LTD	Secondary battery pack provided with heat dissipation plate
WO 2020054863 A1	ASAHI CHEMICAL IND	Nonaqueous electrolytic solution and nonaqueous secondary battery
WO 2020002551 A1	SGL CARBON SE	Battery module and use thereof
WO 2020007853 A1	TOTAL MARKETING SERVICES	Composition for cooling and lubricating a propulsion system of an electric or hybrid vehicle
WO 2020025298 A1	BAYERISCHE MOTOREN WERKE AG	Method for controlling the temperature of electrical components of a vehicle, and vehicle
WO 2020035641 A1	PSA AUTOMOBILES SA	Battery pack with cooler
WO 2020047540 A1	UNIV COLUMBIA	Nanoscale interfacial coating for stabilizing electrolyte with high-voltage cathode
WO 2020043768 A1	BOSCH GMBH ROBERT	Battery system with at least one fan
WO 2020044717 A1	HONDA MOTOR CO LTD	Electric vehicle
WO 2020045160 A1	DKS CO LTD	Insulating sheet and battery pack
WO 2020045418 A1	PANASONIC IP MAN CO LTD	Cell monitoring circuit and management system
WO 2020049909 A1	PANASONIC IP MAN CO LTD	Energy transfer circuit and power storage system
WO 2020054549 A1	MURATA MANUFACTURING CO	Solid-state battery and solid-state battery group

WO 2020054107 A1	TOSHIBA KK	Electrode, secondary battery, battery pack, vehicle and stationary power source
WO 2020025499 A1	SOLVAY	New components for electrolyte compositions
WO 2020035701 A1	HYPERDRIVE INNOVATION LTD	Method and apparatus
WO 2020045226 A1	ZEON CORP	Binder composition for all-solid-state secondary battery, slurry composition for all-solid-state secondary battery electrode mixture layer, slurry composition for all-solid-state secondary battery solid electrolyte layer, and all-solid-state secondary battery
WO 2020045820 A1	LG CHEMICAL LTD	Lithium secondary battery electrode and manufacturing method therefor
WO 2020050285 A1	SEKISUI CHEMICAL CO LTD	Lithium ion secondary battery, method for producing same, and electrode for lithium ion secondary batteries
WO 2020007994 A1	MAHLE INT GMBH	Battery cell arrangement and method for producing the battery cell arrangement
WO 2020007568 A1	BAYERISCHE MOTOREN WERKE AG	Battery management system for a high-voltage battery of a motor vehicle, high-voltage battery, and motor vehicle
WO 2020045802 A1	SAMSUNG SDI CO LTD	Cathode active material for rechargeable lithium battery, method for manufacturing same, and rechargeable lithium battery comprising same
WO 2020044597 A1	PANASONIC IP MAN CO LTD	Vehicle power supply system and vehicle dispatch system
WO 2020047846 A1	3M INNOVATIVE PROPERTIES CO	Fire protection article and related methods
WO 2020050661 A1	LG CHEMICAL LTD	Negative electrode and secondary battery comprising same
WO 2020050694 A1	LG CHEMICAL LTD	Cathode for secondary battery, method for manufacturing same, and lithium secondary battery including same
WO 2020054548 A1	KUREHA CORP	Resin dispersion electrolyte solution, polymer gel electrolyte, production method for polymer gel electrolyte, secondary battery, and production method for secondary battery
WO 2020007954 A1	BP PLC	Dielectric thermal management fluids and methods for using them
WO 2020007955 A1	BP PLC	Multiple cooling circuit systems and methods for using them
WO 2020043767 A1	BOSCH GMBH ROBERT	Battery system, and method for a homogenous temperature distribution within the battery system
WO 2020045613 A1	HONDA MOTOR CO LTD	Power supply system
WO 2020045793 A1	KOREA INST ENERGY RES	Aluminum secondary battery using composite of exfoliated transition metal chalcogenide and graphene as positive electrode active material, and method of manufacturing same
WO 2020049808 A1	MITSUBISHI MOTORS CORP	Method for controlling battery for driving electric vehicle
WO 2020049034 A1	BOSCH GMBH ROBERT	Method for forming an electrode stack
WO 2020049943 A1	SUMITOMO ELECTRIC INDUSTRIES	Secondary battery temperature-raising device, computer program, and secondary battery temperature-raising method
WO 2020052176 A1	CHONGQING JINKANG NEW ENERGY VEHICLE CO LTD	Dual polarity lid for battery cell of an electric vehicle
WO 2020002254 A1	APR TECH AB	Immersion cooling of battery device
WO 2020045500 A1	HONDA MOTOR CO LTD	Battery pack, electrical device, and power feeding and receiving system
WO 2020046019 A1	LG CHEMICAL LTD	Battery management device, battery managing method, battery pack and electric vehicle
WO 2020050559 A1	LG CHEMICAL LTD	Secondary battery separator having no separator substrate
WO 2020055037 A1	LG CHEMICAL LTD	Icb assembly, battery module including same, and manufacturing method therefor
WO 2020054544 A1	MURATA MANUFACTURING CO	Solid-state battery and solid-state battery group
WO 2020011889 A1	TOTAL MARKETING SERVICES	Cooling and flame-retardant lubricating composition for a propulsion system of an electric or hybrid vehicle
WO 2020017907 A1	SAMSUNG SDI CO LTD	System and method for detecting misalignment of electrode
WO 2020026058 A1	SEMICONDUCTOR ENERGY LAB	Power storage system and method for operating power storage system
WO 2020025638 A1	RHODIA OPERATIONS	Positive electrode composition
WO 2020026853 A1	MITSUI CHEMICALS INC	Non-aqueous electrolytic solution for batteries, and lithium secondary battery
WO 2020031810 A1	MURATA MANUFACTURING CO	Solid-state battery
WO 2020040959 A1	CABOT CORP	Compositions containing conductive additives, related electrodes and related batteries

WO 2020038782 A1	KAUTEX TEXTRON GMBH & CO KG	Battery housing for a traction battery and traction battery for a motor vehicle
WO 2020040044 A1	MITSUBISHI GAS CHEMICAL CO	Ionic conductor containing high-temperature phase of licb9h10, method for manufacturing same, and solid electrolyte for all-solid-state battery containing said ion conductor
WO 2020039999 A1	MTEK SMART CORP	Method for manufacturing all-solid-state battery
WO 2020045634 A1	GS YUASA INT LTD	Method for manufacturing sulfide solid electrolyte, sulfide solid electrolyte, all-solid battery, and method for selecting raw material compound used to manufacture sulfide solid electrolyte
WO 2020043140 A1	BYD CO LTD	Ternary cathode material, preparation method therefor, and lithium ion battery
WO 2020013695 A1	TNO	Electrode for use in a layered device structure, as well as a battery device.
WO 2020017439 A1	HITACHI CHEMICAL CO LTD	Electrolyte sheet production method and secondary battery production method
WO 2020023642 A1	LUBRIZOL CORP	Aqueous heat transfer system and method of dispersing heat from electrical componentry
WO 2020025931 A1	PETALITE LTD	Battery controller communication systems
WO 2020026965 A1	SANYO ELECTRIC CO	Management device and power supply system
WO 2020026963 A1	SANYO ELECTRIC CO	Battery system for vehicle and vehicle equipped with battery system
WO 2020031620 A1	DENSO CORP	Battery pack
WO 2020040314 A1	MURATA MANUFACTURING CO	Nonaqueous electrolyte secondary battery
WO 2020040460 A1	LG CHEMICAL LTD	Battery module including busbar plate
WO 2020012809 A1	TOYOTA JIDOSHOKKI KK	Nickel metal hydride battery
WO 2020026914 A1	MURATA MANUFACTURING CO	Lithium ion secondary battery
WO 2020031779 A1	CALSONIC KANSEI CORP	Switch unit and battery device
WO 2020031619 A1	DENSO CORP	Assembled battery
WO 2020031467 A1	MURATA MANUFACTURING CO	Battery holder, battery pack, electronic device and electric vehicle
WO 2020045785 A1	UNIV YEUNGNAM RES COOPERATION FOUNDATION	Device and method for charging lithium ion battery
WO 2020011477 A1	BAYERISCHE MOTOREN WERKE AG	Vehicle with a high-voltage accumulator
WO 2020017098 A1	BROTHER IND LTD	Lithium-sulfur battery and method of manufacturing lithium-sulfur battery
WO 2020021405 A1	TEXA SPA	Battery pack
WO 2020026702 A1	NIPPON CATALYTIC CHEM IND	Electrolyte composition, electrolyte film, and method of manufacturing electrolyte film
WO 2020031424 A1	MURATA MANUFACTURING CO	Solid-state battery
WO 2020039987 A1	TOYOTA JIDOSHOKKI KK	Power storage module
WO 2020040613 A1	LG CHEMICAL LTD	Anode active material, anode comprising same, and lithium secondary battery
WO 2020017817 A1	LG CHEMICAL LTD	Device and method for diagnosing switch
WO 2020026705 A1	PANASONIC IP MAN CO LTD	Lithium secondary battery
WO 2020026888 A1	NIDEC READ CORP	Battery impedance measuring device
WO 2020027623 A1	KOREA RES INST CHEMICAL TECH	Hybrid battery structure
WO 2020026487 A1	PANASONIC IP MAN CO LTD	Positive electrode active material and secondary battery
WO 2020031869 A1	PANASONIC CORP	Non-aqueous electrolyte secondary battery
WO 2020031899 A1	MINEBEA MITSUMI INC	Degradation determination system and degradation determination method for secondary battery
WO 2020031736 A1	SANYO ELECTRIC CO	Battery system, vehicle including battery system, and power storage device
WO 2020031431 A1	MURATA MANUFACTURING CO	Secondary battery, battery pack, electric vehicle, power storage system, electric tool, and electronic apparatus
WO 2020031432 A1	MURATA MANUFACTURING CO	Secondary battery, battery pack, electric vehicle, energy storage system, electric tool and electronic device
WO 2020030649 A1	WEBASTO SE	Battery system for a vehicle
WO 2020040446 A1	LG CHEMICAL LTD	Cathode active material for lithium secondary battery, manufacturing method thereof, and lithium secondary battery comprising same

WO 2020047153 A1	A123 SYSTEMS LLC	Polymer binder additives for electrodes
WO 2020026483 A1	PANASONIC IP MAN CO LTD	Lithium secondary battery
WO 2020026486 A1	PANASONIC IP MAN CO LTD	Positive electrode material and secondary battery
WO 2020026079 A1	SEMICONDUCTOR ENERGY LAB	Abnormality sensing system for secondary cell
WO 2020027003 A1	HITACHI CHEMICAL CO LTD	Electrolyte and electrochemical device
WO 2020040586 A1	LG CHEMICAL LTD	Silicon-based composite, anode comprising same, and lithium secondary battery
WO 2020007582 A1	BAYERISCHE MOTOREN WERKE AG	Vehicle having a high-voltage store and method for generating an acoustic warning signal
WO 2020013036 A1	MAKITA CORP	Charge/discharge device and method for managing stored electric power in electric power storage unit
WO 2020011886 A1	TOTAL MARKETING SERVICES	Cooling and flame-retardant composition for a propulsion system of an electric or hybrid vehicle
WO 2020013482 A1	LG CHEMICAL LTD	Method for preparing iron nitrate oxyhydroxide, cathode containing iron nitrate oxyhydroxide prepared thereby for lithium secondary battery, and lithium secondary battery comprising same
WO 2020017467 A1	HONDA MOTOR CO LTD	Positive electrode for solid-state battery, manufacturing method for positive electrode for solid-state battery, and solid-state battery
WO 2020022065 A1	DENSO CORP	Heat-retaining device
WO 2020021955 A1	MURATA MANUFACTURING CO	Assembled battery
WO 2020021749 A1	PANASONIC IP MAN CO LTD	Secondary battery and method of manufacturing same
WO 2020032454 A1	LG CHEMICAL LTD	Sulfur-carbon composite, preparation method therefor, and positive electrode and lithium secondary battery comprising same
WO 2020033921 A1	TIVENI MERGECO INC	Battery module with cell fixation brackets
WO 2020036396 A1	SK INNOVATION CO LTD	Positive electrode active material for lithium secondary battery, method for manufacturing same, and lithium secondary battery including same
WO 2020036461 A1	LG CHEMICAL LTD	Anode active material, method for preparing anode active material, anode, and secondary battery including anode
WO 2020003693 A1	DENSO CORP	Battery temperature adjustment device and control device
WO 2020004313 A1	SOKEN INC	Battery temperature adjustment device
WO 2020004774 A1	LG CHEMICAL LTD	Apparatus and method for testing circuit board included in battery management system
WO 2020004988 A1	LG CHEMICAL LTD	Cathode active material for lithium secondary battery, method for manufacturing same, cathode comprising same for lithium secondary battery, and lithium secondary battery
WO 2020013671 A1	LG CHEMICAL LTD	Separator for electrochemical device, and electrochemical device comprising same
WO 2020017318 A1	UBE INDUSTRIES	Nonaqueous electrolyte solution and electricity storage device using same
WO 2020022851 A1	LG CHEMICAL LTD	Separator and electrochemical device comprising same
WO 2020022678 A1	LG CHEMICAL LTD	Secondary battery pack comprising cell frame having application preventing portion
WO 2020020995 A1	FAHRENHEIT GMBH	Temperature-control element with sorption material, in particular for controlling the temperature of a battery cell unit of a motor vehicle
WO 2020032545 A1	LG CHEMICAL LTD	Method for precisely analyzing degree of impregnation of electrolyte of electrode in cell
WO 2020036392 A1	LG CHEMICAL LTD	Anode for lithium secondary battery and lithium secondary battery comprising same
WO 2020041775 A1	FISKER INC	Microscopically ordered solid electrolyte architecture manufacturing methods and processes thereof for use in solid-state and hybrid lithium ion batteries
WO 2020004929 A1	KOREA ADVANCED INST SCI & TECH	Thermoelectric cooling method and device
WO 2020005020 A1	LG CHEMICAL LTD	Battery management system, battery pack comprising same and fault determination method for current measuring circuit
WO 2020011888 A1	TOTAL MARKETING SERVICES	Cooling and flame-retardant composition for a propulsion system of an electric or hybrid vehicle
WO 2020011885 A1	TOTAL MARKETING SERVICES	Cooling and flame-retardant composition for a propulsion system of an electric or hybrid vehicle

WO 2020032480 A1	LG CHEMICAL LTD	Secondary battery having lead film including light-emitting material, and secondary battery defect inspection method
WO 2020032471 A1	LG CHEMICAL LTD	Electrode for lithium secondary battery and lithium secondary battery comprising same
WO 2020036397 A1	ULSAN NAT INST SCIENCE & TECH UNIST	Negative electrode active material, method for producing same, and lithium secondary battery having negative electrode including same
WO 2020013120 A1	SANYO ELECTRIC CO	Battery system, electric vehicle equipped with battery system, and electricity storage device
WO 2020012891 A1	TOYOTA JIDOSHOKKI KK	Nickel-metal hydride battery
WO 2020013251 A1	HINO MOTORS LTD	Motor control device
WO 2020012769 A1	MURATA MANUFACTURING CO	Control device, battery pack, electric vehicle, control method, and method for controlling battery pack
WO 2020017099 A1	BROTHER IND LTD	Lithium-sulfur battery
WO 2020017181 A1	SANDEN AUTOMOTIVE CLIMATE SYSTEMS CORP	Vehicular air-conditioning device
WO 2020022844 A1	LG CHEMICAL LTD	Battery module and battery pack comprising same battery module
WO 2020022777 A1	LG CHEMICAL LTD	Polymer electrolyte and method for producing same
WO 2020022305 A1	MITSUI MINING & SMELTING CO	Positive electrode active material
WO 2020021848 A1	NIPPON LIGHT METAL CO	Cooler
WO 2020023346 A1	DARAMIC INC	Improved lead acid battery separators.
WO 2020003582 A1	PANASONIC IP MAN CO LTD	Battery system and battery management device
WO 2020003802 A1	SANYO ELECTRIC CO	Power supply device and vehicle equipped with same
WO 2020004741 A1	LG CHEMICAL LTD	Secondary battery pack having holder
WO 2020001265 A1	BYD CO LTD	External charging method and device for vehicle
WO 2020003841 A1	PANASONIC IP MAN CO LTD	Battery monitoring device, integrated circuit, and battery monitoring system
WO 2020012720 A1	SUMITOMO ELECTRIC INDUSTRIES	Secondary battery parameter estimation device, secondary battery parameter estimation method, and program
WO 2020011459 A1	BOSCH GMBH ROBERT	Method for operating a battery module
WO 2020016455 A1	WEBASTO SE	Battery module for an electric vehicle, and holder for battery cells in a battery module of said type
WO 2020017378 A1	ADEKA CORP	Nonaqueous electrolyte secondary battery
WO 2020022452 A1	MITSUI CHEMICALS INC	Nonaqueous electrolyte solution for batteries and lithium secondary battery
WO 2020033139 A1	MODINE MFG CO	Battery cooling plate
WO 2020036984 A1	BATTERYCHECK LLC	Power cell tracking and optimization system
WO 2020002293 A1	BOSCH GMBH ROBERT	Battery system for an electric vehicle, method for operating a battery system, and electric vehicle
WO 2020003806 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Battery management device and integrated circuit
WO 2020004135 A1	SANYO ELECTRIC CO	Nonaqueous electrolyte secondary battery
WO 2020013766 A1	UNIV NANYANG TECH	Electrochemically active interlayers for rechargeable batteries
WO 2020016138 A1	RENAULT SAS	Assembly comprising a device for cooling by phase change
WO 2020016286 A1	MAHLE INT GMBH	Storage battery assembly
WO 2020017782 A1	LG CHEMICAL LTD	Cathode of lithium secondary battery comprising iron oxide, and lithium secondary battery comprising same
WO 2020021204 A1	ARKEMA FRANCE	Anode for li-ion battery
WO 2020022195 A1	FUJIFILM CORP	Solid electrolyte composition, solid electrolyte-containing sheet, all-solid secondary battery, and methods for producing solid electrolyte-containing sheet and all-solid secondary battery
WO 2020022273 A1	FDK CORP	Battery unit
WO 2020022735 A1	LG CHEMICAL LTD	Bus bar assembly
WO 2020036331 A1	LG CHEMICAL LTD	Battery pack comprising battery frame
WO 2020041484 A1	NIO USA INC	Lithium-ion cell using aluminum can
WO 2020038011 A1	BYD CO LTD	Lithium ion battery and preparation method therefor, and electric vehicle
WO 2020009333 A1	LG CHEMICAL LTD	Sulfur-carbon composite, method for producing same, and positive electrode for lithium-sulfur battery and lithium-sulfur battery which comprise same
WO 2020009337 A1	JEONGAN SYSTEM CO LTD	Method and apparatus for inspecting damage to electrode in pouch-type secondary battery
WO 2020009465 A1	LG CHEMICAL LTD	Battery module
WO 2020009484 A1	LG CHEMICAL LTD	Battery module including heat shrinkable tube

WO 2020017515 A1	ASAHI CHEMICAL IND	Lithium ion secondary cell
WO 2020033148 A1	BAE SYS CONTROLS INC	Active internal air cooled vehicle battery pack
WO 2020004343 A1	HITACHI CHEMICAL CO LTD	Secondary battery and manufacturing method therefor
WO 2020036612 A1	CORA AERO LLC	Capacitance reduction in battery systems
WO 2020003846 A1	ENVISION AESC ENERGY DEVICES LTD	Lithium ion secondary battery
WO 2020008565 A1	TOSHIBA KK	Positive electrode, non-aqueous electrolyte battery, and battery pack
WO 2020011806 A1	VITESCO TECH GMBH	Multi-voltage battery device and electrical system for a motor vehicle
WO 2020018957 A1	CELLMOBILITY INC	Rechargeable lithium-ion battery with metal-foam anode and cathode
WO 2020022342 A1	UNIV PUBLIC CORPORATION OSAKA	Solid electrolyte for all-solid-state sodium battery, manufacturing method therefor, and all-solid-state sodium battery
WO 2020020323 A1	AULTON NEW ENERGY AUTOMOTIVE TECH GROUP	Intelligent battery box and detection method
WO 2020014474 A1	CUMMINS INC	Integration of second-use li-ion batteries in power generation
WO 2020003850 A1	PANASONIC IP MAN CO LTD	Integrated circuit, battery monitoring device, and battery monitoring system
WO 2020009343 A1	LG CHEMICAL LTD	Method and apparatus for testing secondary battery internal short-circuiting, and secondary battery used therefor to test internal short-circuiting
WO 2020009332 A1	LG CHEMICAL LTD	Sulfur-carbon composite, method for producing same, and positive electrode for lithium-sulfur battery and lithium-sulfur battery which comprise same
WO 2020013745 A1	SCANIA CV AB	Method and arrangement for heating a high voltage battery for a vehicle
WO 2020022111 A1	HONDA MOTOR CO LTD	Positive electrode for solid-state battery, manufacturing method of positive electrode for solid-state battery, and solid-state battery
WO 2020022142 A1	MITSUI CHEMICALS INC	Lithium borate compound, additive for lithium secondary cell, nonaqueous liquid electrolyte for lithium secondary cell, lithium secondary cell precursor, and lithium secondary cell and method for manufacturing same
WO 2020000087 A1	DANA CANADA CORP	Heat exchanger with internal manifold structure
WO 2020016175 A1	BOSCH GMBH ROBERT	Circuit assembly for a battery system
WO 2020005008 A1	HANON SYSTEMS	Battery cooler
WO 2020018731 A1	NANOTEK INSTRUMENTS INC	Fast-chargeable lithium battery electrodes
WO 2020019058 A1	DANA CANADA CORP	Heat exchanger with parallel flow features to enhance heat conduction
WO 2020000090 A1	MAGNA INT INC	Battery frame
WO 2020009997 A1	MODINE MFG CO	Battery cooling plate and fluid manifold

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SUPERCONDENSADORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020054305 A1	TOYOTA JIDOSHOKKI KK	Power storage module
WO 2020025772 A1	SOLVAY SPECIALTY POLYMERS IT	Battery separator coating
WO 2020045337 A1	SEKISUI CHEMICAL CO LTD	Carbon material and production method therefor, electrode material for power storage device, and power storage device
WO 2020049910 A1	PANASONIC IP MAN CO LTD	Equalization circuit and power storage system
WO 2020044246 A1	SEKISUI PLASTICS	Hydrogel and uses therefor
WO 2020017581 A1	GS YUASA INT LTD	Nonaqueous electrolyte power storage element, and power storage device
WO 2020026509 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Cell state estimation device and cell control device
WO 2020008095 A1	EIKA S COOP	Automatic stop and start module for vehicles and associated method
WO 2020021889 A1	PANASONIC IP MAN CO LTD	Management device and power supply system
WO 2020027111 A1	SEKISUI CHEMICAL CO LTD	Carbon material and method for producing same, electrode material for electrical storage device, and electrical storage device
WO 2020004332 A1	ZEON CORP	Binder composition for electrochemical device electrode, slurry composition for electrochemical device electrode, electrochemical device electrode, and electrochemical device
WO 2020004819 A1	LS MTRON LTD	Ultra-capacitor module
WO 2020021888 A1	PANASONIC IP MAN CO LTD	Management device and power supply system

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SISTEMAS DE RECUPERACIÓN DE ENERGÍA; FRENOS REGENERATIVOS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020044354 A1	ATHALYE RAVI GANESH	An epicyclic transmission gear and disk brake based regenerative braking device
WO 2020050047 A1	mitsubishi motors corp	Electric vehicle
WO 2020049625 A1	NISSAN MOTOR	Control method and control device for hybrid vehicle
WO 2020025611 A1	VALEO EQUIP ELECTR MOTEUR	Rotating electrical machine with optimised dimensioning
WO 2020026621 A1	BOSCH CORP	Vehicle control device
WO 2020028487 A1	CUMMINS INC	System and method for regenerative braking torque scheduling
WO 2020004241 A1	ADVICS CO LTD	Brake control device for vehicles
WO 2020013614 A1	HYOSUNG HEAVY IND CORPORATION	Ess charging and discharging operation method
WO 2020011241 A1	BYTON LTD	Battery protection with downhill charge sustain
WO 2020034556 A1	CHONGQING JINKANG NEW ENERGY VEHICLE CO LTD	Adaptive off-throttle regenerative braking

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MÁQUINAS ELÉCTRICAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020048776 A1	VOITH PATENT GMBH	Coupling system for establishing an electrically conductive connection
WO 2020052925 A1	BOSCH GMBH ROBERT	Rotor assembly for an electric motor and method for installing the rotor assembly in a housing part of the electric motor
WO 2020043826 A1	SIEMENS AG	Electric machine, method for producing an electric machine, and electric vehicle
WO 2020059909 A1	LG ELECTRONICS INC	Electric motor and intelligent power generation module having same
WO 2020043966 A1	PSA AUTOMOBILES SA	Method for balancing an electric motor rotor with machining of the lamination
WO 2020007766 A1	BROSE FAHRZEUGTEILE	Rotor
WO 2020017175 A1	E GLE CO LTD	Outer rotor motor and electric vehicle
WO 2020038866 A1	CARCOUSTICS TECHCONSULT GMBH	Shielding element
WO 2020026904 A1	MAZDA MOTOR	Vehicle drive device
WO 2020017227 A1	HITACHI LTD	Rotary electric machine, rotary electric motor drive system, and electric vehicle
WO 2020040478 A1	AMOGREENTECH CO LTD	Electric motor having improved heat dissipation performance, and manufacturing method therefor
WO 2020011820 A1	SIEMENS AG	Robust material layers
WO 2020021941 A1	BOSCH CORP	Control device and control method for hybrid vehicle
WO 2020025859 A1	RETRO EV OY	A modular electric vehicle system for transforming pre-existing fossil-fueled vehicles into electric vehicles
WO 2020038680 A1	BAYERISCHE MOTOREN WERKE AG	Stator for an electric machine
WO 2020021087 A1	VALEO EQUIP ELECTR MOTEUR	Rotating electrical machine with an optimized configuration
WO 2020022282 A1	DENSO CORP	Rotating electrical machine
WO 2020016320 A2	THYSSENKRUPP AG	Rotor for an electric motor, method for the production thereof, and electric motor

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CONVERTIDORES, INVERSORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020059852 A1	NIPPON STEEL CORP	System for exciting iron core in electrical machine, method for exciting iron core in electrical machine, program, and modulation operation setting device for inverter power source
WO 2020059880 A1	UNIV TOHOKU	Ac voltage output system, power system control system, power system, dc power transmission system, power generation system, and battery system
WO 2020057912 A1	VITESCO TECH GMBH	Vehicle electrical system having a stored energy source and having charging terminals
WO 2020056534 A1	UNIV TECNICA FEDERICO SANTA MARIA	Transformerless partial power converter (ppc) for the dc-dc stage of rapid-charging stations for electric vehicles (ev)
WO 2020059645 A1	PANASONIC IP MAN CO LTD	Power supply control device and power supply device
WO 2020001779 A1	VOLVO TECH CORPORATION	An electric propulsion system for a vehicle
WO 2020049782 A1	HITACHI LTD	Power conversion device and power conversion method
WO 2020048966 A1	BRUSA ELEKTRONIK AG	Converter device
WO 2020002656 A1	WOBBEN PROPERTIES GMBH	Inverter with direct voltage source and control unit
WO 2020054054 A1	FUJI ELECTRIC CO LTD	Inverter device, control circuit therefor, and motor drive system
WO 2020001951 A1	VALEO SIEMENS EAUTOMOTIVE GERMANY GMBH	Control device and method for discharging a link capacitor, power converter and vehicle
WO 2020049801 A1	MITSUBISHI ELECTRIC CORP	Power conversion device
WO 2020035527 A1	PRODRIVE TECH B V	Electrical power converter
WO 2020045636 A1	AISIN AW CO	Rotating electrical machine control device
WO 2020039986 A1	MITSUBISHI ELECTRIC CORP	Power semiconductor device, method for manufacturing same, and power conversion device
WO 2020049161 A2	AVL SOFTWARE & FUNCTIONS GMBH	Method and amplifier circuit for increasing an inductance
WO 2020031553 A1	DENSO CORP	Control circuit
WO 2020035294 A1	WOBBEN PROPERTIES GMBH	Method for controlling electrical consumers of an electrical supply grid
WO 2020031626 A1	PANASONIC IP MAN CO LTD	Power conversion device
WO 2020040279 A1	NIDEC ELESYS CORP	Inverter unit and motor unit
WO 2020044625 A1	HITACHI LTD	Gate drive circuit and driving method for voltage-driven wide-gap semiconductor
WO 2020026660 A1	DENSO CORP	Power conversion device
WO 2020021757 A1	OMRON TATEISI ELECTRONICS CO	Switch circuit and power conversion device
WO 2020004549 A1	DENSO CORP	Power semiconductor device and power conversion device
WO 2020021880 A1	DENSO CORP	Power conversion device
WO 2020022366 A1	DENSO CORP	Dynamo-electric machine and wheel using said dynamo-electric machine
WO 2020041904 A1	GOVERNING COUNCIL UNIV TORONTO	An integrated three-phase ac charger for vehicle applications with dual-inverter drive
WO 2020020968 A1	VITESCO TECH GMBH	Device and method for adapting a direct current intermediate circuit by varying the voltage and adapting the phase number of a dc/dc converter
WO 2020035969 A1	TANAKA SHOUICHI	Dc power supply
WO 2020047072 A1	TEXAS INSTRUMENTS INC	Methods and apparatus to transmit signals in isolated gate drivers
WO 2020037291 A1	UNIV COLORADO REGENTS	Composite dc-dc converter
WO 2020041163 A1	TEXAS INSTRUMENTS INC	Gate driver controller and associated discharge method
WO 2020021881 A1	DENSO CORP	Power module and power conversion device
WO 2020008922 A1	HITACHI LTD	Power conversion device
WO 2020008843 A1	HITACHI AUTOMOTIVE SYSTEMS LTD	Power conversion device

[WO 2020007767 A1](#)

HELLA GMBH & CO
KGAA

Device for coupling electrical grids

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RECARGA DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020044051 A1	FLEETDRIVE MAN LIMITED	Electrical vehicle power grid management system and method
WO 2020055308 A1	SCANIA CV AB	Vibration-assisted charging of electrified vehicle batteries
WO 2020047667 A1	MAGNA INT INC	Dual dc-dc converter
WO 2020016997 A1	HONDA MOTOR CO LTD	Battery sharing service management device, management method, and program
WO 2020026656 A1	DAIHEN CORP	Utility interconnection system, interconnection control device, and utility interconnection method
WO 2020013455 A1	LG CHEMICAL LTD	Electric vehicle battery pack cooling system and electric vehicle battery pack system cooling method using same
WO 2020006570 A1	COBURN MATTHEW	Exterior light and charge indicator
WO 2020017168 A1	BOSCH CORP	Power control device and power control method for hybrid vehicle
WO 2020024259 A1	BOSCH GMBH ROBERT	Methods for discharging and for charging a hybrid battery system and battery system
WO 2020008741 A1	AUTONETWORKS TECHNOLOGIES LTD	Power source system
WO 2020038747 A1	THYSSENKRUPP AG	Charging device having controllable dc link center point voltage, and drive system having such a charging device
WO 2020009257 A1	DONGYANG PC INC	Charging system for rotary type parking equipment
WO 2020016764 A1	META SYSTEM SPA	Battery charger for electric or hybrid motor vehicles
WO 2020008985 A1	DAIHEN CORP	System interconnection system, system interconnection unit, system interconnection method, and installation method for system interconnection system
WO 2020009817 A1	RODDY DANIEL FRANCIS	Portable modular energy storage
WO 2020023933 A2	SWIFTMILE INC	Light electric vehicle parking and charging stations and smart charging systems for the vehicle batteries

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CAMBIO DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2020020150 A1	AULTON NEW ENERGY AUTOMOTIVE TECH GROUP	Battery-swapping and encryption system and method for electric vehicle
WO 2020020151 A1	AULTON NEW ENERGY AUTOMOTIVE TECH GROUP	Battery replacement device and control method therefor
WO 2020015756 A1	AULTON NEW ENERGY AUTOMOTIVE TECH GROUP	Battery swapping control system and control method therefor

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EJECUCIÓN



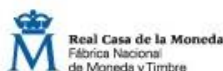
Los ITPs** de la OEPM detectaron solicitudes de patente relevantes cuando estábamos a mitad del proyecto y gracias a ello pudimos reconducir nuestra investigación.



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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