

### Noticias

El fin de semana del 7 al 9 de junio de 2.019 tuvo lugar en la Plaza de Colón de Madrid, la [5ª Feria del Vehículo Eléctrico \(VEM\)](#), la cual fue inaugurada por Inés Sabanés, junto con la ministra de Transición Ecológica, Teresa Ribera.

Además de numerosos expositores, también hubo juegos y animación infantil, "foodtrucks" y la 7ª marcha del vehículo eléctrico entre el estadio Santiago Bernabéu y la Plaza de Colón.

El pasado día 19 de junio de 2.019, la ministra de Industria, Comercio y Turismo en funciones, Reyes Maroto, acompañada por el subsecretario del Ministerio, Fernando Valdés, presentó en la sede del Ministerio, el [monográfico sobre vehículo eléctrico de la revista Economía Industrial](#), (número:411), dedicado al vehículo eléctrico, su situación actual y perspectivas de futuro.

Intervinieron además, el director de Comunicación de España y Portugal del Grupo PSA, José Antonio León; el profesor de la Universidad de Sevilla, Ángel Vargas; el secretario general de Industria y de la PYME en funciones, Raúl Blanco; la responsable de Formación de SERNAUTO, Celia Medina; el miembro de la Real Academia de Ingeniería, Eloy Álvarez y la profesora de la Universidad de Sevilla, Rocío Román.

Según publicó el periódico [El Independiente](#) el 27 de junio, y de acuerdo

con una nueva versión modificada del anteproyecto de Ley de Cambio Climático que prepara el Ejecutivo, a la que habría tenido acceso, el Gobierno estaría trabajando en una página Web que proporcionará a los conductores en un mapa información sobre las gasolineras que cuentan con puntos de recarga así como el precio de la electricidad. Para ello, los prestadores del servicio de recarga eléctrica, deberán remitir por medios telemáticos al Ministerio para la Transición Ecológica, información actualizada de la localización, características, y disponibilidad de dichas instalaciones, así como del precio de venta al público de la electricidad o del servicio de recarga.

El jueves 11 de julio de 2019 se celebró en el auditorio de la Casa del Lector en Matadero, Madrid, el foro "[Los retos del coche eléctrico](#)". En dicho foro participaron la ministra en funciones para la Transición Ecológica, Teresa Ribera; la de Industria, Comercio y Turismo, Reyes Maroto; José Bogas, consejero delegado de Endesa, y Luis Antonio Ruiz, presidente y consejero delegado de Jaguar Land Rover, además de catedráticos y expertos en ingeniería de automoción y materiales.

Todos los boletines que publica periódicamente la OEPM están disponibles en el siguiente enlace:

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NIPO: 116-19-009-9

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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
<a href="#">WO 2019060996 A1</a>	SENECA EXPERTS CONSEILS INC	Lithium-ion batteries recycling process
<a href="#">WO 2019062883 A1</a>	BYD CO LTD	Hybrid vehicle and power generation control method and device thereof
<a href="#">WO 2019062937 A1</a>	BYD CO LTD	Temperature regulation system for vehicle-mounted battery
<a href="#">WO 2019061245 A1</a>	BOSCH GMBH ROBERT	Battery pack including cell restraint
<a href="#">WO 2019066358 A1</a>	LG CHEMICAL LTD	Method for preventing swelling of battery cell and battery pack using same
<a href="#">WO 2019065844 A1</a>	TORAY INDUSTRIES	Porous composite film, separator for battery, battery, and porous composite film production method
<a href="#">WO 2019066213 A1</a>	LG CHEMICAL LTD	Battery module
<a href="#">WO 2019069021 A1</a>	VALEO SYSTEMES THERMIQUES	Battery pack protective casing incorporating a header
<a href="#">WO 2019069659 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Secondary battery
<a href="#">WO 2019078093 A1</a>	FUJIFILM CORP	Electrode laminate, all-solid laminated secondary cell, and method for manufacturing same
<a href="#">WO 2019078130 A1</a>	MITSUBISHI GAS CHEMICAL CO	Production method for all-solid-state battery
<a href="#">WO 2019078475 A1</a>	LG CHEMICAL LTD	Heater control system for battery packs having parallel connection structure, and method therefor
<a href="#">WO 2019079234 A1</a>	NEAPCO INTELLECTUAL PROPERTY HOLDINGS LLC	High coverage battery usage monitor
<a href="#">WO 2019078001 A1</a>	NIPPON ELECTRIC GLASS CO	Bipolar all-solid-state sodium ion secondary battery
<a href="#">WO 2019078450 A1</a>	SAMSUNG SDI CO LTD	Battery pack
<a href="#">WO 2019079173 A1</a>	INEVIT LLC	Pressure equalization between battery module compartments of an energy storage system and external environment
<a href="#">WO 2019082543 A1</a>	DAIKIN IND LTD	Electrolyte solution, electrochemical device, and lithium ion secondary battery and module
<a href="#">WO 2019083123 A1</a>	SAMSUNG SDI CO LTD	Battery module and method for producing same
<a href="#">WO 2019082477 A1</a>	OHARA KK	Lithium ion conductor precursor glass and lithium ion conductor
<a href="#">WO 2019093159 A1</a>	DAIKIN IND LTD	Electrolyte solution, electrochemical device, lithium ion secondary battery, and module
<a href="#">WO 2019093653 A1</a>	SAMSUNG SDI CO LTD	Positive electrode active material for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019093610 A1</a>	LG CHEMICAL LTD	Electrode assembly and manufacturing method therefor
<a href="#">WO 2019113528 A1</a>	ENEVATE CORP	Silicon-based energy storage devices with carboxylic ether, carboxylic acid based salt, or acrylate electrolyte containing electrolyte additives
<a href="#">WO 2019110317 A1</a>	BOSCH GMBH ROBERT	Prismatic-pouch hybrid battery module
<a href="#">WO 2019122983 A1</a>	TI GROUP AUTOMOTIVE SYSTEMS LLC	Heated plastic fluid lines for thermal systems in a hybrid/electric vehicle (h/ev) and use thereof
<a href="#">WO 2019124796 A1</a>	LG CHEMICAL LTD	Battery module, and battery pack and vehicle comprising same
<a href="#">WO 2019124898 A1</a>	LEE YOUNG JO	Electric car battery replacement system having energy saving system (ess) and method for operating same
<a href="#">WO 2019065196 A1</a>	PANASONIC IP MAN CO LTD	Nonaqueous electrolyte secondary battery
<a href="#">WO 2019062956 A1</a>	BYD CO LTD	Temperature regulation system for vehicle-mounted battery
<a href="#">WO 2019065110 A1</a>	SANYO ELECTRIC CO	Power supply device
<a href="#">WO 2019065195 A1</a>	PANASONIC IP MAN CO LTD	Nonaqueous electrolyte secondary battery
<a href="#">WO 2019065169 A1</a>	SANYO ELECTRIC CO	Power supply device
<a href="#">WO 2019065660 A1</a>	TORAY INDUSTRIES	Porous film, separator for secondary batteries, and secondary battery

<a href="#">WO 2019068197 A1</a>	DANA CANADA CORP	Heat exchanger with integrated support structure
<a href="#">WO 2019071184 A1</a>	JOHNSON CONTROLS TECH CO	Lithium ion battery
<a href="#">WO 2019069020 A1</a>	VALEO SYSTEMES THERMIQUES	Protective housing for a battery pack integrating circulation channels for a heat-transfer fluid
<a href="#">WO 2019074144 A1</a>	EDISON MOTORS CO LTD	Active indoor/outdoor cooling-air complex flow control type battery air conditioning apparatus
<a href="#">WO 2019074193 A1</a>	LG CHEMICAL LTD	Cylindrical secondary battery module and method for producing cylindrical secondary battery module
<a href="#">WO 2019074925 A1</a>	OPTODOT CORP	Separator for electrochemical cells and method of making the same
<a href="#">WO 2019074076 A1</a>	FUJIFILM CORP	Electrode sheet for all-solid secondary batteries, all-solid secondary battery, and production methods for electrode sheet for all-solid secondary batteries and all-solid secondary battery
<a href="#">WO 2019075017 A1</a>	INEVIT LLC	Clamp-based fixation of battery module compartment cover
<a href="#">WO 2019078505 A1</a>	LG CHEMICAL LTD	Binder, and electrode and lithium secondary battery comprising same
<a href="#">WO 2019078160 A1</a>	NISSAN MOTOR	Resin current collector, multilayer current collector and lithium ion battery
<a href="#">WO 2019079723 A2</a>	UNIV CORNELL	Layered lithium-oxygen cathodes
<a href="#">WO 2019076245 A1</a>	NIO NEXTEV LTD	Method for determining charging strategy of spent batteries in battery swap station, and device
<a href="#">WO 2019083177 A1</a>	LG CHEMICAL LTD	Battery module integrated with battery cell cooling and fixing structure, and battery pack including same
<a href="#">WO 2019082509 A1</a>	PANASONIC IP MAN CO LTD	Battery cell and battery pack using same
<a href="#">WO 2019083176 A1</a>	LG CHEMICAL LTD	Battery module in which cooling and assembly structure is simplified, and manufacturing method therefor
<a href="#">WO 2019087187 A1</a>	TECH INNOVATION MOMENTUM FUND ISRAEL LIMITED PARTNERSHIP	Nanostructured composite electrodes
<a href="#">WO 2019086338 A1</a>	KUKA IND GMBH & CO KG	Connection technique for pole contacts of batteries
<a href="#">WO 2019086600 A1</a>	KAUTEX TEXTRON GMBH & CO KG	Battery housing for a drive battery
<a href="#">WO 2019093226 A1</a>	NEC ENERGY DEVICES LTD	Lithium ion secondary battery
<a href="#">WO 2019093862 A1</a>	LG CHEMICAL LTD	Composition for gel polymer electrolyte, gel polymer electrolyte prepared therefrom, and lithium secondary battery comprising same
<a href="#">WO 2019091667 A1</a>	TOPSOE HALDOR AS	High tap density lithium positive electrode active material, intermediate and process of preparation
<a href="#">WO 2019093065 A1</a>	DENSO CORP	Evaporator
<a href="#">WO 2019093160 A1</a>	DAIKIN IND LTD	Electrolytic solution, electrochemical device, lithium-ion secondary cell, and module
<a href="#">WO 2019093798 A1</a>	LG CHEMICAL LTD	Separator and electrochemical device comprising same
<a href="#">WO 2019093824 A1</a>	LG CHEMICAL LTD	Multilayer electrode for secondary battery, comprising binder having high crystallinity
<a href="#">WO 2019097249 A1</a>	IMPERIAL INNOVATIONS LTD	Energy storage device
<a href="#">WO 2019110720 A1</a>	COMMISSARIAT ENERGIE ATOMIQUE	Method for determining the state of health of a battery and device for implementing the method
<a href="#">WO 2019121572 A1</a>	ELRINGKLINGER AG	Cooling module for a cell stack, cell stack and battery device
<a href="#">WO 2019124282 A1</a>	DAINIPPON PRINTING CO LTD	Battery packaging material and battery
<a href="#">WO 2019121575 A1</a>	ELRINGKLINGER AG	Cooling module for a cell stack, cell stack, battery device and method for cooling cells
<a href="#">WO 2019123824 A1</a>	DAIMLER AG	Battery housing
<a href="#">WO 2019125085 A1</a>	LG CHEMICAL LTD	Flexible secondary battery comprising bipolar electrode
<a href="#">WO 2019069459 A1</a>	GS YUASA INT LTD	Pole plate, electricity storage element, and pole plate manufacturing method
<a href="#">WO 2019068983 A1</a>	VALEO SYSTEMES THERMIQUES	Battery support housing
<a href="#">WO 2019074217 A1</a>	LG CHEMICAL LTD	Wireless battery management apparatus and battery pack including same

<a href="#">WO 2019076532 A1</a>	BAYERISCHE MOTOREN WERKE AG	Cover device for a battery housing of a traction battery of a motor vehicle, battery housing, traction battery and motor vehicle
<a href="#">WO 2019076592 A1</a>	BOSCH GMBH ROBERT	Method for producing a battery cell and battery cell
<a href="#">WO 2019077902 A1</a>	DENSO CORP	Cooling device
<a href="#">WO 2019076908 A1</a>	LITHIUM ENERGY & POWER GMBH & CO KG	Energy storage device
<a href="#">WO 2019078155 A1</a>	OKURA INDUSTRIAL CO LTD	Tab lead film, and tab lead using same
<a href="#">WO 2019079226 A1</a>	NEAPCO INTELLECTUAL PROPERTY HOLDINGS LLC	Battery cell monitoring system
<a href="#">WO 2019083254 A1</a>	LG CHEMICAL LTD	Method for manufacturing cylindrical battery case having improved surface roughness
<a href="#">WO 2019082338 A1</a>	TOSHIBA KK	Nonaqueous electrolyte battery and battery pack
<a href="#">WO 2019081408 A1</a>	BOSCH GMBH ROBERT	Battery cell and method for producing same
<a href="#">WO 2019083157 A1</a>	LG CHEMICAL LTD	Positive electrode active material comprising lithium-rich lithium manganese oxide having formed thereon coating layer comprising lithium-deficient transition metal oxide, and lithium secondary battery comprising same
<a href="#">WO 2019086847 A1</a>	DYSON TECHNOLOGY LTD	Electric vehicle
<a href="#">WO 2019087750 A1</a>	FUJIFILM CORP	Composition for forming active material layer, method for preparing same, electrode sheet for all-solid secondary battery, and method for manufacturing all-solid secondary battery
<a href="#">WO 2019093820 A1</a>	LG CHEMICAL LTD	Negative electrode active material, negative electrode comprising same negative electrode active material, and secondary battery comprising same negative electrode
<a href="#">WO 2019093851 A1</a>	LG CHEMICAL LTD	Negative electrode for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019093800 A1</a>	LG CHEMICAL LTD	Three-dimensionally structured electrode and electrochemical device comprising same
<a href="#">WO 2019093411 A1</a>	UNIV TOKYO	Electrolyte exhibiting fire-extinguishing properties, and secondary battery including said electrolyte
<a href="#">WO 2019092072 A1</a>	LION SMART GMBH	Module housing for a stackable battery module, battery module, and battery stack
<a href="#">WO 2019110645 A1</a>	BOSCH GMBH ROBERT	Device and method for controlling the temperature of a housing
<a href="#">WO 2019110933 A1</a>	ELECTRICITE DE FRANCE	Method for producing a graphene oxide-based compound for an air electrode of a metal-air battery and associated compound
<a href="#">WO 2019115220 A1</a>	DAIMLER AG	Battery system for a motor vehicle
<a href="#">WO 2019115496 A1</a>	BAYERISCHE MOTOREN WERKE AG	Electrochemical energy storage module and vehicle
<a href="#">WO 2019115972 A1</a>	VALEO SYSTEMES THERMIQUES	Device for regulating the temperature of a battery using a dielectric fluid, and battery pack comprising such a device
<a href="#">WO 2019120238 A1</a>	BYD CO LTD	Battery cover assembly, single cell, battery module, power battery, and electric vehicle
<a href="#">WO 2019123306 A1</a>	UMICORE NV	A positive electrode material for rechargeable lithium ion batteries and methods of making thereof
<a href="#">WO 2019130994 A1</a>	TEIJIN LTD	Separator for non-aqueous secondary batteries, and non-aqueous secondary battery
<a href="#">WO 2019065151 A1</a>	MAXELL HOLDINGS LTD	Non-aqueous secondary cell, non-aqueous electrolyte used in same, and method for manufacturing non-aqueous secondary cell
<a href="#">WO 2019062988 A1</a>	BYD CO LTD	Temperature regulation method and temperature regulation system for vehicle-mounted battery
<a href="#">WO 2019066585 A1</a>	LG CHEMICAL LTD	Method for preparing cathode active material for secondary battery, cathode active material prepared thereby, and lithium secondary battery comprising same
<a href="#">WO 2019071176 A1</a>	JOHNSON CONTROLS TECH CO	Method for bonding thermoplastic components in a battery module
<a href="#">WO 2019068332 A1</a>	THYSSENKRUPP AG	Battery housing for a vehicle
<a href="#">WO 2019069022 A1</a>	VALEO SYSTEMES THERMIQUES	Protective housing of a battery pack incorporating channels for transporting a heat-transfer fluid
<a href="#">WO 2019074538 A1</a>	L LIVERMORE NAT SECURITY LLC	Three-dimensional rechargeable battery with solid-state electrolyte
<a href="#">WO 2019073830 A1</a>	DENKA COMPANY LTD	Positive electrode composition for lithium ion secondary batteries, positive electrode for lithium ion secondary batteries, and lithium ion secondary battery



<a href="#">WO 2019074287 A1</a>	RENAULT SAMSUNG MOTORS CO LTD	Electric vehicle charger using energy storage system
<a href="#">WO 2019079228 A1</a>	NEAPCO INTELLECTUAL PROPERTY HOLDINGS LLC	Battery cell monitoring system
<a href="#">WO 2019082482 A1</a>	TOSHIBA MEMORY CORP	Information processing device, information processing method and information processing program
<a href="#">WO 2019087800 A1</a>	DENSO CORP	Equipment temperature control device
<a href="#">WO 2019090360 A1</a>	QUANTUMSCAPE CORP	Lithium-stuffed garnet thin films and pellets having an oxyfluorinated and/or fluorinated surface and methods of making and using the thin films and pellets
<a href="#">WO 2019085719 A1</a>	WM SMART MOBILITY SHANGHAI CO LTD	Battery management method and apparatus, and computer program
<a href="#">WO 2019092070 A1</a>	LION SMART GMBH	Module housing for a stackable battery module, battery module, and battery stack
<a href="#">WO 2019093498 A1</a>	ASAHI CHEMICAL IND	Separator for electricity storage devices, and electricity storage device
<a href="#">WO 2019093462 A1</a>	SUMITOMO METAL MINING CO	Positive electrode active material for lithium ion secondary batteries, lithium ion secondary battery, and method for producing positive electrode active material for lithium ion secondary batteries
<a href="#">WO 2019092007 A1</a>	BOSCH GMBH ROBERT	Battery cell with improved cooling
<a href="#">WO 2019119110 A1</a>	ELECTRAMECCANICA VEHICLES CORP	Electric motor vehicle battery system
<a href="#">WO 2019124281 A1</a>	DAINIPPON PRINTING CO LTD	Packaging material for battery, method for producing same, and battery
<a href="#">WO 2019124813 A1</a>	LG CHEMICAL LTD	System and method for diagnosing abnormality in main control unit
<a href="#">WO 2019124795 A1</a>	LG CHEMICAL LTD	Apparatus for sealing pouch case
<a href="#">WO 2019122034 A1</a>	REINZ DICHTUNG GMBH	Plate-like fluid container
<a href="#">WO 2019062940 A1</a>	BYD CO LTD	Temperature regulation method and temperature regulation system for vehicle-mounted battery
<a href="#">WO 2019064345 A1</a>	TOSHIBA KK	Hybrid vehicle
<a href="#">WO 2019066072 A1</a>	DAINIPPON PRINTING CO LTD	Battery packaging material, manufacturing method therefor, battery, and aluminum alloy foil
<a href="#">WO 2019066244 A1</a>	LG CHEMICAL LTD	Cooling jacket having nonuniform flow paths, for cooling battery cell surface, and battery module including same
<a href="#">WO 2019065004 A1</a>	NAT INSTITUTE FOR MATERIALS SCIENCE	Graphene-containing electrode, method of manufacturing same, and electricity storage device using same
<a href="#">WO 2019070078 A1</a>	DAINIPPON PRINTING CO LTD	Battery packaging material and battery
<a href="#">WO 2019069018 A1</a>	VALEO SYSTEMES THERMIQUES	Case for a motor vehicle battery pack
<a href="#">WO 2019068599 A1</a>	ARKEMA FRANCE	Battery compartment
<a href="#">WO 2019074074 A1</a>	FUJIFILM CORP	Solid electrolyte composition, solid electrolyte-containing sheet, all-solid secondary battery, and production methods for solid electrolyte-containing sheet and all-solid secondary battery
<a href="#">WO 2019074199 A1</a>	SAMSUNG SDI CO LTD	Secondary battery
<a href="#">WO 2019073949 A1</a>	MAXELL HOLDINGS LTD	Battery mounting unit, electric device, and power supply unit
<a href="#">WO 2019078691 A1</a>	LG CHEMICAL LTD	Lithium secondary battery having extended service life and ultra-high energy density
<a href="#">WO 2019078477 A1</a>	LG CHEMICAL LTD	Apparatus and method for estimating battery state-of-charge
<a href="#">WO 2019077903 A1</a>	DENSO CORP	Cooling device
<a href="#">WO 2019078503 A1</a>	LG CHEMICAL LTD	Cathode material for lithium secondary battery, fabrication method therefor, cathode comprising same for lithium secondary battery, and lithium secondary battery
<a href="#">WO 2019082766 A1</a>	HITACHI CHEMICAL CO LTD	Method for determining liquid reduction performance of lead storage battery, lead storage battery, and method for charging same
<a href="#">WO 2019093709 A1</a>	LG CHEMICAL LTD	Electrolyte composite for lithium-sulfur battery, electrochemical device comprising same, and preparation method therefor
<a href="#">WO 2019093769 A1</a>	LG CHEMICAL LTD	Bms wake-up device, and bms and battery pack including same
<a href="#">WO 2019093826 A1</a>	LG CHEMICAL LTD	Multilayer electrode for secondary battery, comprising binder having high crystallinity
<a href="#">WO 2019120236 A1</a>	BYD CO LTD	Cover plate assembly, single battery, battery module, power battery and electric vehicle

<a href="#">WO 2019123905 A1</a>	SANYO ELECTRIC CO	Method for cooling power supply device, cooling program, computer readable recording media and storage device thereof, power supply device, and vehicle comprising same
<a href="#">WO 2019122745 A1</a>	VALEO SYSTEMES THERMIQUES	Heat treatment device for battery
<a href="#">WO 2019065845 A1</a>	TORAY INDUSTRIES	Porous composite film, separator for battery, and method for manufacturing porous composite film
<a href="#">WO 2019065285 A1</a>	UNIV KANAGAWA	Melilite composite oxide
<a href="#">WO 2019065030 A1</a>	ZEON CORP	All-solid secondary battery electrode composite particles, method of manufacturing same, all-solid secondary battery electrode, and all-solid secondary battery
<a href="#">WO 2019069838 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Power storage module layered structure
<a href="#">WO 2019073044 A1</a>	GS YUASA INT LTD	Energy storage device and method of manufacturing energy storage device
<a href="#">WO 2019073595 A1</a>	NEC ENERGY DEVICES LTD	Lithium-ion secondary battery
<a href="#">WO 2019074198 A1</a>	SAMSUNG SDI CO LTD	Secondary battery
<a href="#">WO 2019074197 A1</a>	SAMSUNG SDI CO LTD	Electrode assembly and secondary battery comprising same
<a href="#">WO 2019073120 A1</a>	L7 DRIVE OY	Thermal management system for an electrical power source
<a href="#">WO 2019072476 A1</a>	BAYERISCHE MOTOREN WERKE AG	Method and device for determining a maximum cell temperature
<a href="#">WO 2019074016 A1</a>	DAINIPPON PRINTING CO LTD	Poly(butylene terephthalate) film, packaging material for batteries, method for producing packaging material for batteries, and battery
<a href="#">WO 2019078559 A1</a>	LG CHEMICAL LTD	Battery temperature detection system and method
<a href="#">WO 2019078544 A1</a>	LG CHEMICAL LTD	Negative electrode for lithium secondary battery, and lithium secondary battery comprising same
<a href="#">WO 2019078159 A1</a>	GS YUASA INT LTD	Non-aqueous electrolyte secondary cell
<a href="#">WO 2019083149 A1</a>	LG CHEMICAL LTD	Battery pack and vehicle including same
<a href="#">WO 2019082992 A1</a>	SUMITOMO METAL MINING CO	Nickel composite oxide and method for producing lithium-nickel composite oxide
<a href="#">WO 2019083124 A1</a>	SAMSUNG SDI CO LTD	Secondary battery
<a href="#">WO 2019083174 A1</a>	LG CHEMICAL LTD	Lamination apparatus and method for secondary battery
<a href="#">WO 2019093853 A1</a>	LG CHEMICAL LTD	Non-aqueous electrolyte for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019093825 A1</a>	LG CHEMICAL LTD	Negative electrode active material, negative electrode comprising same negative electrode active material, and secondary battery comprising same negative electrode
<a href="#">WO 2019118552 A1</a>	CADENZA INNOVATION INC	Overcharge electrical disconnect system
<a href="#">WO 2019121332 A1</a>	BOSCH GMBH ROBERT	Pouch cell and method of manufacturing same
<a href="#">WO 2019120570 A1</a>	VOLVO TRUCK CORP	A method of controlling a state of charge operation range of a vehicle electrical system
<a href="#">WO 2019121641 A1</a>	H K O ISOLIER UND TEXTILTECHNIK GMBH	Multi-layer thermal insulation element for batteries
<a href="#">WO 2019125284 A1</a>	SCANIA CV AB	An arrangement for cooling of electrical energy storage units
<a href="#">WO 2019078672 A2</a>	LG CHEMICAL LTD	Method for producing positive electrode active material for secondary battery, and secondary battery using same
<a href="#">WO 2019088449 A1</a>	SAMSUNG SDI CO LTD	Secondary battery
<a href="#">WO 2019088195 A1</a>	IBIDEN CO LTD	Heat insulation sheet for battery pack, and battery pack
<a href="#">WO 2019088492 A1</a>	LG CHEMICAL LTD	Method, apparatus, and recording medium for estimating parameter of battery equivalent circuit model
<a href="#">WO 2019089897 A1</a>	CELGARD LLC	Improved microporous membranes, battery separators, batteries, and devices having the same
<a href="#">WO 2019087494 A1</a>	SUMITOMO METAL MINING CO	Nonaqueous electrolyte secondary battery positive electrode active material and method for producing same, and nonaqueous electrolyte secondary battery which uses positive electrode active material
<a href="#">WO 2019094359 A1</a>	UNIV MICHIGAN REGENTS	Solid-state battery electrolyte having increased stability towards cathode materials
<a href="#">WO 2019093869 A2</a>	LG CHEMICAL LTD	Method for manufacturing positive electrode active material for secondary battery
<a href="#">WO 2019101487 A1</a>	AUDI AG	Method for producing a cooling system
<a href="#">WO 2019102319 A1</a>	SEMICONDUCTOR ENERGY LAB	Secondary battery and secondary battery production method
<a href="#">WO 2019103357 A1</a>	LG CHEMICAL LTD	Pouch type secondary battery
<a href="#">WO 2019104181 A1</a>	HARVARD COLLEGE	Solid state electrolytes and methods of production thereof

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<a href="#">WO 2019103264 A1</a>	SAMSUNG SDI CO LTD	Temperature sensor thermal contact testing method and circuit
<a href="#">WO 2019102639 A1</a>	HIRAI MASAACKI	Auxiliary wheel, auxiliary wheel power generation system, and moving vehicle power generation system
<a href="#">WO 2019103330 A1</a>	LG CHEMICAL LTD	Cathode material for lithium secondary battery, and preparation method therefor
<a href="#">WO 2019107982 A1</a>	LG CHEMICAL LTD	Battery pack
<a href="#">WO 2019107990 A1</a>	LG CHEMICAL LTD	Anode for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019105674 A1</a>	BAYERISCHE MOTOREN WERKE AG	Storage housing for a high-voltage accumulator of a motor vehicle, high-voltage accumulator, and motor vehicle
<a href="#">WO 2019107747 A1</a>	LG CHEMICAL LTD	Positive electrode for lithium secondary battery and manufacturing method therefor
<a href="#">WO 2019111422 A1</a>	NIPPON LIGHT METAL CO	Aluminum alloy plate for battery cover for forming integrated round explosion-proof valve and method for manufacturing same
<a href="#">WO 2019110640 A1</a>	HIRSCHMANN AUTOMOTIVE GMBH	Plug connection for a battery charger connection, without interlocking housing engagement
<a href="#">WO 2019111616 A1</a>	NEC ENERGY DEVICES LTD	Current collector electrode sheet, method of manufacturing same, battery, and method of manufacturing same
<a href="#">WO 2019111628 A1</a>	HITACHI CHEMICAL CO LTD	Separator for lead acid storage batteries, and lead acid storage battery
<a href="#">WO 2019111910 A1</a>	ASAHI CHEMICAL IND	Vehicle-mounted lithium ion battery member
<a href="#">WO 2019117556 A1</a>	LG CHEMICAL LTD	Method and device for detecting battery short circuit
<a href="#">WO 2019078688 A2</a>	LG CHEMICAL LTD	Lithium secondary battery positive electrode active material, method for preparing same, and lithium secondary battery positive electrode and lithium secondary battery comprising same
<a href="#">WO 2019083332 A2</a>	LG CHEMICAL LTD	Silicon-carbon composite and lithium secondary battery comprising same
<a href="#">WO 2019083303 A1</a>	SAMSUNG ELECTRONICS CO LTD	Battery and electronic device including the same
<a href="#">WO 2019088628 A2</a>	LG CHEMICAL LTD	Sulfur-carbon composite, method for preparing same and lithium secondary battery comprising same
<a href="#">WO 2019088558 A1</a>	LG CHEMICAL LTD	Battery pack
<a href="#">WO 2019087493 A1</a>	SUMITOMO METAL MINING CO	Nonaqueous electrolyte secondary battery positive electrode active material and method for producing same, and nonaqueous electrolyte secondary battery which uses positive electrode active material
<a href="#">WO 2019093863 A2</a>	LG CHEMICAL LTD	Lithium cobalt-based positive electrode active material, method for preparing same, positive electrode comprising same, and secondary battery
<a href="#">WO 2019093461 A1</a>	AIST	Solid-state battery and negative electrode
<a href="#">WO 2019103037 A1</a>	SUMITOMO METAL MINING CO	Positive-electrode active material for nonaqueous electrolyte secondary battery and method for manufacturing positive-electrode active material for nonaqueous electrolyte secondary battery
<a href="#">WO 2019103363 A1</a>	LG CHEMICAL LTD	Cathode active material for secondary battery, preparation method therefor, and lithium secondary battery comprising same
<a href="#">WO 2019102722 A1</a>	DAIKIN IND LTD	Electrolytic solution, electrochemical device, lithium ion secondary battery, and module
<a href="#">WO 2019107463 A1</a>	ZEON CORP	Conductive material paste for electrochemical elements, slurry composition for electrochemical element positive electrodes and method for producing same, positive electrode for electrochemical elements, and electrochemical element
<a href="#">WO 2019108026 A1</a>	LG CHEMICAL LTD	Electrode assembly and lithium secondary battery including same
<a href="#">WO 2019108027 A1</a>	LG CHEMICAL LTD	Method for manufacturing electrode for secondary battery
<a href="#">WO 2019105917 A1</a>	EINRIDE AB	Battery pack optimization transport planning method
<a href="#">WO 2019108698 A1</a>	QUANTUMSCAPE CORP	Catholyte management for a solid-state separator
<a href="#">WO 2019112125 A1</a>	LG CHEMICAL LTD	Battery module of cell edge direct cooling scheme, and battery pack comprising same
<a href="#">WO 2019112097 A1</a>	L&F CO LTD	Positive electrode active material for lithium secondary battery, production method thereof, and lithium secondary battery comprising same
<a href="#">WO 2019114130 A1</a>	NIO NEXTEV LTD	Visual human-computer interaction vehicle battery swapping control system, and vehicle-mounted battery operating system
<a href="#">WO 2019117449 A1</a>	SAMSUNG SDI CO LTD	Battery pack
<a href="#">WO 2019117687 A1</a>	LG CHEMICAL LTD	Porous separator and electrochemical device comprising same



<a href="#">WO 2019116582 A1</a>	NISSAN MOTOR	Control method for hybrid vehicle and control apparatus for hybrid vehicle
<a href="#">WO 2019116575 A1</a>	NISSAN MOTOR	Display method and display system in hybrid vehicle
<a href="#">WO 2019117281 A1</a>	GS YUASA INT LTD	Positive electrode active material for non-aqueous electrolyte secondary battery, transition metal hydroxide precursor, method for production of transition metal hydroxide precursor, method for production of positive electrode active material for non-aqueous electrolyte secondary battery, positive electrode for non-aqueous electrolyte secondary battery, and non-aqueous electrolyte secondary battery
<a href="#">WO 2019117339 A1</a>	SAMSUNG SDI CO LTD	Cylindrical lithium ion secondary battery
<a href="#">WO 2019078616 A2</a>	LG INNOTEK CO LTD	Electric vehicle charging apparatus
<a href="#">WO 2019083279 A2</a>	LG CHEMICAL LTD	Pouch case and secondary battery comprising same
<a href="#">WO 2019085868 A1</a>	HANGZHOU SANHUA RES INSTITUTE CO LTD	Heat exchange assembly, battery assembly and battery heat exchange system
<a href="#">WO 2019086241 A1</a>	BOSCH GMBH ROBERT	Method and device for producing a functional element for an electrode unit of a battery cell
<a href="#">WO 2019088474 A1</a>	SAMSUNG SDI CO LTD	Battery ventilation device and battery comprising same
<a href="#">WO 2019088570 A1</a>	LG CHEMICAL LTD	Electrode assembly and method for stabilizing secondary battery
<a href="#">WO 2019088438 A1</a>	LG CHEMICAL LTD	Battery pack having bottom connection type tray and manufacturing method thereof
<a href="#">WO 2019087503 A1</a>	SUMITOMO METAL MINING CO	Positive electrode active material for nonaqueous electrolyte secondary batteries, nonaqueous electrolyte secondary battery, and method for producing positive electrode active material for nonaqueous electrolyte secondary batteries
<a href="#">WO 2019087717 A1</a>	NATIONAL UNIV CORPORATION YOKOHAMA NATIONAL UNIV	Positive electrode active material for lithium-ion secondary battery, positive electrode for lithium-ion secondary battery, lithium-ion secondary battery, electronic device, and vehicle
<a href="#">WO 2019103412 A1</a>	LG CHEMICAL LTD	Battery device and battery temperature adjusting method
<a href="#">WO 2019107835 A1</a>	LG CHEMICAL LTD	Cathode additive, method for manufacturing same, and cathode and lithium secondary battery comprising same
<a href="#">WO 2019107752 A1</a>	LG CHEMICAL LTD	Sulfur-carbon composite, method for manufacturing same and lithium secondary battery comprising same
<a href="#">WO 2019107374 A1</a>	SUMITOMO METAL MINING CO	Positive-electrode active material precursor for non-aqueous electrolyte secondary battery, and method for manufacturing positive-electrode active material precursor for non-aqueous electrolyte secondary battery
<a href="#">WO 2019107983 A1</a>	LG CHEMICAL LTD	Battery pack
<a href="#">WO 2019108950 A1</a>	THERMAL CORP	Thermal management system
<a href="#">WO 2019111644 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Secondary battery
<a href="#">WO 2019111816 A1</a>	TOYO TIRE CORP	Monitoring sensor, sealed secondary battery, and method for manufacturing monitoring sensor
<a href="#">WO 2019112020 A1</a>	DAINIPPON PRINTING CO LTD	Battery packaging material, battery, method for manufacturing battery packaging material and battery, and polyester film
<a href="#">WO 2019112283 A1</a>	SK INNOVATION CO LTD	Porous composite separator for secondary battery, and lithium secondary battery comprising same
<a href="#">WO 2019116589 A1</a>	NISSAN MOTOR	Catalyst warm-up control method for hybrid vehicle and catalyst warm-up control apparatus for hybrid vehicle
<a href="#">WO 2019113849 A1</a>	SHENZHEN IMMOTOR TECH CO LTD	Battery compartment and electric vehicle
<a href="#">WO 2019116964 A1</a>	ZEON CORP	Binder composition for all-solid secondary battery, slurry composition for all-solid secondary battery, functional layer for all-solid secondary battery, and all-solid secondary battery
<a href="#">WO 2019117411 A1</a>	POSCO	Method for preparing cathode active material precursor for secondary battery, and preparation apparatus using same
<a href="#">WO 2019117368 A1</a>	SAMSUNG SDI CO LTD	Cylindrical secondary battery
<a href="#">WO 2019078690 A2</a>	LG CHEMICAL LTD	Negative active material, negative electrode comprising negative active material, and secondary battery comprising negative electrode
<a href="#">WO 2019083273 A2</a>	LG CHEMICAL LTD	One-sided electrode with reduced twisting for a secondary battery, and method for producing same
<a href="#">WO 2019087498 A1</a>	AUTOMOTIVE ENERGY SUPPLY CORP	Battery case
<a href="#">WO 2019088524 A1</a>	LG CHEMICAL LTD	Secondary battery and insulation plate for secondary battery
<a href="#">WO 2019088733 A1</a>	LG CHEMICAL LTD	Electrolyte for lithium secondary battery and lithium secondary battery comprising same

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<a href="#">WO 2019088805 A2</a>	LG CHEMICAL LTD	Lithium manganese positive electrode active material having spinel structure, and positive electrode and lithium secondary battery comprising same
<a href="#">WO 2019087752 A1</a>	FUJIFILM CORP	Solid electrolyte composition, solid electrolyte-containing sheet, all-solid-state secondary battery, method for producing solid electrolyte-containing sheet, and method for producing all-solid-state secondary battery
<a href="#">WO 2019093864 A2</a>	LG CHEMICAL LTD	Lithium cobalt-based positive electrode active material, method for preparing same, positive electrode comprising same, and secondary battery
<a href="#">WO 2019097575 A1</a>	HITACHI CHEMICAL CO LTD	Lead storage battery
<a href="#">WO 2019098491 A1</a>	LG CHEMICAL LTD	Battery module to which battery cell pressing-type end plate and expandable sensing housing structure are applied
<a href="#">WO 2019102782 A1</a>	DAIKIN IND LTD	Electrolytic solution, electrochemical device, lithium-ion secondary battery, and module
<a href="#">WO 2019102762 A1</a>	OHARA KK	Negative electrode material, negative electrode and battery
<a href="#">WO 2019103460 A1</a>	LG CHEMICAL LTD	Positive electrode material for secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019101698 A1</a>	SOLVAY SPECIALTY POLYMERS IT	A multilayer assembly for electrochemical cells
<a href="#">WO 2019103559 A1</a>	ETS CO LTD	Electrolyte injection device and electrolyte injection method
<a href="#">WO 2019101716 A1</a>	ARKEMA FRANCE	Device for cooling and/or heating a battery of an electric or hybrid motor vehicle
<a href="#">WO 2019103463 A1</a>	LG CHEMICAL LTD	Cathode material for lithium secondary battery, and cathode and lithium secondary battery which comprise same
<a href="#">WO 2019111742 A1</a>	SANYO ELECTRIC CO	Non-aqueous electrolyte secondary cell
<a href="#">WO 2019113362 A1</a>	UNIV NORTHWESTERN	Anionic redox active lithium iron oxide based cathode materials for rechargeable lithium ion batteries
<a href="#">WO 2019117027 A1</a>	SUMITOMO METAL MINING CO	Nickel-containing hydroxide and production method therefor
<a href="#">WO 2019117607 A1</a>	LG CHEMICAL LTD	Device and method for diagnosing negative electrode contactor of battery pack
<a href="#">WO 2019121403 A1</a>	BOSCH GMBH ROBERT	Guiding growth of solid-electrolyte interphases via gradient composition
<a href="#">WO 2019066369 A2</a>	LG CHEMICAL LTD	Carbon-sulfur composite, preparation method therefor, and lithium secondary battery comprising same
<a href="#">WO 2019078689 A2</a>	LG CHEMICAL LTD	Lithium secondary battery positive electrode active material, method for preparing same, and lithium secondary battery positive electrode and lithium secondary battery comprising same
<a href="#">WO 2019088806 A1</a>	LG CHEMICAL LTD	Positive electrode material comprising lithium manganese positive electrode active material having spinel structure, positive electrode and lithium secondary battery
<a href="#">WO 2019088758 A2</a>	KOREA ELECTROTECHNOLOGY RES INSTITUTE	Negative electrode for rapidly rechargeable lithium secondary battery and manufacturing method thereof
<a href="#">WO 2019093273 A1</a>	OSAKA PREFECTURE UNIV PUBLIC CORPORATION	Solid electrolyte for all-solid sodium batteries, and all-solid sodium battery
<a href="#">WO 2019094479 A1</a>	GREASON JEFFREY	Systems and methods for long-distance mobile wireless power
<a href="#">WO 2019096090 A1</a>	MINTRON ENERGY CORP	Thermal management system for independent electric device using large amount of power
<a href="#">WO 2019098733 A1</a>	LG CHEMICAL LTD	Sulfur-carbon composite, preparation method therefor, and lithium secondary battery comprising same
<a href="#">WO 2019098522 A1</a>	SAMSUNG SDI CO LTD	Pouch-type secondary battery having unsealed portion
<a href="#">WO 2019107187 A1</a>	SHOWA DENKO KK	Method for producing slurry for nonaqueous battery electrodes
<a href="#">WO 2019108039 A2</a>	LG CHEMICAL LTD	Anode and secondary battery comprising same
<a href="#">WO 2019107908 A1</a>	LG CHEMICAL LTD	Battery cell activation method and activation device
<a href="#">WO 2019107651 A1</a>	POSCO	Secondary battery positive electrode material sintering apparatus and sintering method
<a href="#">WO 2019112585 A1</a>	FORD GLOBAL TECH LLC	Dynamic vehicle charging
<a href="#">WO 2019113530 A1</a>	ENEVATE CORP	Silicon-based energy storage devices with ether containing electrolyte additives
<a href="#">WO 2019110216 A1</a>	BAYERISCHE MOTOREN WERKE AG	Battery module for a high-voltage battery of a motor vehicle, high-voltage battery and vehicle
<a href="#">WO 2019112325 A1</a>	DAEJOO ELECTRONIC MAT CO LTD	Negative electrode active material for non-aqueous electrolyte secondary battery and method for producing same

<a href="#">WO 2019112392 A1</a>	LG CHEMICAL LTD	Positive electrode active material precursor for lithium secondary battery and preparation method therefor
<a href="#">WO 2019116959 A1</a>	TOAGOSEI CO LTD	Ion trapping agent, lithium ion battery separator, and lithium ion secondary battery
<a href="#">WO 2019117531 A1</a>	LG CHEMICAL LTD	Cathode active material for lithium secondary battery, preparation method therefor, and lithium secondary battery cathode and lithium secondary battery which comprise same
<a href="#">WO 2019066402 A2</a>	LG CHEMICAL LTD	Yolk-shell structured particles, method for producing same, and lithium secondary battery comprising same
<a href="#">WO 2019083330 A2</a>	LG CHEMICAL LTD	Negative electrode active material for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019088807 A2</a>	LG CHEMICAL LTD	Lithium secondary battery
<a href="#">WO 2019088728 A2</a>	INDUSTRY UNIV COOPERATION FOUNDATION HANYANG UNIV	Li <sub>2</sub> S-p <sub>2</sub> S <sub>5</sub> -b <sub>2</sub> S <sub>3</sub> glass ceramic and all-solid secondary battery containing same as solid electrolyte
<a href="#">WO 2019088423 A1</a>	LG INNOTEK CO LTD	Vehicle control device
<a href="#">WO 2019093830 A1</a>	LG CHEMICAL LTD	Negative electrode active material, negative electrode comprising same negative electrode active material, and secondary battery comprising same negative electrode
<a href="#">WO 2019098056 A1</a>	PANASONIC CORP	Lithium ion secondary battery
<a href="#">WO 2019098541 A1</a>	LG CHEMICAL LTD	Cathode active material for secondary battery, fabrication method therefor, and lithium secondary battery comprising same
<a href="#">WO 2019103040 A1</a>	SUMITOMO METAL MINING CO	Tungsten trioxide
<a href="#">WO 2019102766 A1</a>	SUMITOMO METAL MINING CO	Positive electrode active material for lithium ion secondary batteries and method for producing same
<a href="#">WO 2019103008 A1</a>	TOYOTA MOTOR CO LTD	Electrode body for all-solid-state batteries, and method for producing same
<a href="#">WO 2019107976 A1</a>	LG CHEMICAL LTD	Battery pack
<a href="#">WO 2019112149 A1</a>	SAMSUNG SDI CO LTD	Battery module
<a href="#">WO 2019112160 A1</a>	SAMSUNG SDI CO LTD	Secondary battery
<a href="#">WO 2019112399 A2</a>	LG CHEMICAL LTD	Lithium cobalt-based cathode active material, production method therefor, cathode and secondary battery comprising same
<a href="#">WO 2019116571 A1</a>	NISSAN MOTOR	Hybrid vehicle control method and hybrid vehicle control device
<a href="#">WO 2019116586 A1</a>	NISSAN MOTOR	Method and device for controlling hybrid vehicle
<a href="#">WO 2019118061 A1</a>	INEVIT LLC	Clamping bar holder component for a battery module and method thereof
<a href="#">WO 2019066297 A2</a>	LG CHEMICAL LTD	Positive electrode active material comprising lithium-rich lithium manganese-based oxide, and lithium tungsten compound, or additionally, tungsten compound, on lithium-rich lithium manganese-based oxide, and lithium secondary battery positive electrode comprising same
<a href="#">WO 2019103546 A2</a>	LG CHEMICAL LTD	Anode for lithium secondary battery and lithium secondary battery comprising same
<a href="#">WO 2019103574 A2</a>	LG CHEMICAL LTD	Positive electrode additive, manufacturing method therefor and positive electrode and lithium secondary battery comprising same
<a href="#">WO 2019121078 A1</a>	BAYERISCHE MOTOREN WERKE AG	Motor vehicle
<a href="#">WO 2019066352 A2</a>	LG CHEMICAL LTD	Binder for preparing positive electrode for lithium-sulfur secondary battery, and method for preparing positive electrode using same
<a href="#">WO 2019103461 A2</a>	LG CHEMICAL LTD	Cathode active material precursor, manufacturing method therefor, and cathode active material, cathode and secondary battery manufactured by using same
<a href="#">WO 2019107776 A1</a>	LG CHEMICAL LTD	Electrode assembly and battery comprising same
<a href="#">WO 2019105860 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Housing for receiving at least one battery cell pack, battery, and method for producing a housing and a battery
<a href="#">WO 2019103947 A2</a>	ASAHI CHEMICAL IND	Separator for electric storage device
<a href="#">WO 2019103488 A1</a>	LG CHEMICAL LTD	Positive electrode active material for lithium secondary battery and manufacturing method therefor
<a href="#">WO 2019107521 A1</a>	TEIJIN LTD	Nonaqueous secondary battery separator and nonaqueous secondary battery
<a href="#">WO 2019107033 A1</a>	PANASONIC IP MAN CO LTD	Lithium ion battery

<a href="#">WO 2019066403 A2</a>	LG CHEMICAL LTD	Electrode active material complex for lithium secondary battery, and method for producing electrode active material complex
<a href="#">WO 2019099918 A2</a>	MAXWELL LAB	Non-aqueous solvent electrolyte formulations for energy storage devices
<a href="#">WO 2019108025 A1</a>	LG CHEMICAL LTD	Cathode for lithium secondary battery and lithium secondary battery comprising same

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## SUPERCONDENSADORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019086247 A1</a>	BOSCH GMBH ROBERT	Hybrid supercapacitor comprising lithium titanate doped with oxygen vacancies

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## SISTEMAS DE RECUPERACIÓN DE ENERGÍA; FRENOS REGENERATIVOS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019074581 A1</a>	CUMMINS INC	Torque deration in response traction control events
<a href="#">WO 2019064703 A1</a>	HITACHI CONSTRUCTION MACH CO	Power regeneration system for work vehicles
<a href="#">WO 2019065664 A1</a>	ADVICS CO LTD	Vehicle brake control device
<a href="#">WO 2019116553 A1</a>	NISSAN MOTOR	Regenerative braking control method and regenerative braking control device
<a href="#">WO 2019102778 A1</a>	DAIMLER AG	Electric vehicle control device
<a href="#">WO 2019116583 A1</a>	NISSAN MOTOR	Method and device for controlling hybrid vehicle
<a href="#">WO 2019116588 A1</a>	NISSAN MOTOR	Control method for hybrid vehicle and control apparatus for hybrid vehicle
<a href="#">WO 2019117787 A1</a>	SCANIA CV AB	Method and system for propelling a vehicle
<a href="#">WO 2019091909 A1</a>	BOSCH GMBH ROBERT	System and method in case of defect vehicle brake
<a href="#">WO 2019109102 A1</a>	FUTURE MOTION INC	Control system for electric vehicles
<a href="#">WO 2019093894 A2</a>	1E TARAZ HOLDING B V	Hybrid power train arrangement for a vehicle

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## MÁQUINAS ELÉCTRICAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019062907 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019062903 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019064899 A1</a>	NIDEC CORP	Motor
<a href="#">WO 2019065036 A1</a>	KYB CORP	Component-equipped body and electronic apparatus
<a href="#">WO 2019066568 A1</a>	KOREA INST IND TECH	Method for manufacturing coil unit
<a href="#">WO 2019062905 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019070776 A1</a>	SCHAEFFLER TECHNOLOGIES AG	Motor assembly for hybrid vehicle
<a href="#">WO 2019068281 A1</a>	KIEKERT AG	Electromotive drive for motor vehicle applications
<a href="#">WO 2019068282 A1</a>	KIEKERT AG	Electromotive drive for motor vehicle applications
<a href="#">WO 2019072477 A1</a>	BAYERISCHE MOTOREN WERKE AG	Interconnection device for an electric machine
<a href="#">WO 2019073128 A1</a>	WHYLOT	Reduced-stiffness rotor for an electromagnetic generator or motor
<a href="#">WO 2019063306 A1</a>	VALEO EQUIP ELECTR MOTEUR	Liquid cooling circuit for a rotary electric machine
<a href="#">WO 2019064733 A1</a>	HITACHI CONSTRUCTION MACH CO	Electric drive work vehicle and wheel electric drive unit
<a href="#">WO 2019072968 A1</a>	AUDI AG	Energy provision device
<a href="#">WO 2019081011 A1</a>	PIERBURG PUMP TECHNOLOGY GMBH	Electric fluid pump for a motor vehicle
<a href="#">WO 2019081516 A1</a>	AMK ARNOLD MUELLER GMBH & CO KG	Method for producing an electrical coil and winding device
<a href="#">WO 2019092034 A1</a>	VALEO EQUIP ELECTR MOTEUR	Rolling-bearing plate for a rotary electric machine
<a href="#">WO 2019092192 A1</a>	WEBASTO SE	Positioning motors by means of capacitive measuring
<a href="#">WO 2019096569 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Rotor for an electrical machine
<a href="#">WO 2019121415 A1</a>	RENAULT SAS	Operating process of a thermal control system of a hybrid or electric motor vehicle
<a href="#">WO 2019062923 A1</a>	BYD CO LTD	Stator assembly, and motor and vehicle having same
<a href="#">WO 2019062914 A1</a>	BYD CO LTD	Stator assembly, and motor and vehicle having same
<a href="#">WO 2019062921 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019068784 A1</a>	MMT AG	Compact gear motor
<a href="#">WO 2019072895 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Fuel pump and fuel supply unit
<a href="#">WO 2019082473 A1</a>	HITACHI LTD	Rotary electric machine, method for manufacturing rotary electric machine, and railway car
<a href="#">WO 2019065712 A1</a>	NTN TOYO BEARING CO LTD	In-wheel motor drive device
<a href="#">WO 2019073724 A1</a>	HITACHI AUTOMOTIVE SYSTEMS LTD	Stator for dynamo-electric machine
<a href="#">WO 2019077868 A1</a>	HITACHI LTD	Rotary electric machine and motor vehicle provided therewith
<a href="#">WO 2019082710 A1</a>	NIDEC CORP	Motor
<a href="#">WO 2019062896 A1</a>	BYD CO LTD	Stator assembly, motor, and vehicle
<a href="#">WO 2019062897 A1</a>	BYD CO LTD	Stator assembly, and motor and vehicle having same
<a href="#">WO 2019062904 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019064712 A1</a>	NIDEC CORP	Method for manufacturing coil, device for manufacturing coil, coil, and motor
<a href="#">WO 2019064898 A1</a>	NIDEC CORP	Motor
<a href="#">WO 2019062906 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019069573 A1</a>	HITACHI LTD	Permanent magnet synchronous machine and electric motor vehicle equipped with same
<a href="#">WO 2019081106 A1</a>	WABCO GMBH	Compressor assembly for operating a compressed air supply system, compressed air supply system, and vehicle
<a href="#">WO 2019092489 A1</a>	WHYLOT	Axial-flux electromagnetic machine having a cooling circuit common to the machine and to its electronic control and power means
<a href="#">WO 2019110242 A1</a>	BOSCH GMBH ROBERT	Electric drive system and method for operating an electrical machine
<a href="#">WO 2019114870 A1</a>	GROB GMBH & CO KG	Method and apparatus for producing slot insulations for winding slots of a component of an electrical machine

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<a href="#">WO 2019062909 A1</a>	BYD CO LTD	Stator assembly, motor provided with same, and vehicle
<a href="#">WO 2019062908 A1</a>	BYD CO LTD	Stator assembly, and motor and vehicle having same
<a href="#">WO 2019072926 A1</a>	HEINE PATRICK	Hybrid retrofit fit for retrofitting a vehicle driven using an internal combustion engine
<a href="#">WO 2019077821 A1</a>	HITACHI LTD	Rotating electrical machine
<a href="#">WO 2019121979 A1</a>	VALEO EQUIP ELECTR MOTEUR	Stator for a rotating electrical machine
<a href="#">WO 2019123133 A1</a>	WHYLOT	Stator for a motor or electromagnetic generator with individual winding support snap-fitted to an associated tooth
<a href="#">WO 2019123913 A1</a>	SANDEN HOLDINGS CORP	Electrically driven compressor
<a href="#">WO 2019094366 A1</a>	WAYMO LLC	Thermal management of hybrid vehicle
<a href="#">WO 2019101397 A1</a>	BAYERISCHE MOTOREN WERKE AG	Cooling cap for a stator of an electrical machine of a motor vehicle, stator and motor vehicle
<a href="#">WO 2019111443 A1</a>	NIDEC CORP	Motor and electric power steering device
<a href="#">WO 2019118866 A1</a>	RIVIAN IP HOLDINGS LLC	Electric vehicle drive units
<a href="#">WO 2019115585 A1</a>	CONTINENTAL AUTOMOTIVE GMBH	Hybrid system for driving a vehicle
<a href="#">WO 2019082123 A1</a>	UNIV INDIANA RES & TECH CORP	Planar high torque electric motor
<a href="#">WO 2019089244 A1</a>	SCHAEFFLER TECHNOLOGIES AG	Internal rotor damper modular hybrid transmission
<a href="#">WO 2019098278 A1</a>	NASHIKI MASAYUKI	Reluctance motor
<a href="#">WO 2019100133 A1</a>	CNH IND BRASIL LTDA	Power transmission unit for shafts and vehicles for carrying passengers and goods
<a href="#">WO 2019103124 A1</a>	NTN TOYO BEARING CO LTD	Electrically driven actuator
<a href="#">WO 2019110276 A1</a>	MAHLE INT GMBH	Electrical machine, in particular for a vehicle
<a href="#">WO 2019110500 A1</a>	RENAULT SAS	Motor vehicle seat with access to a battery main switch
<a href="#">WO 2019115137 A1</a>	BAYERISCHE MOTOREN WERKE AG	High-voltage plug connection part for a high-voltage plug connector of a motor vehicle, high-voltage electrical system, and motor vehicle
<a href="#">WO 2019101272 A1</a>	GROB GMBH & CO KG	Unit, device, apparatus and method for bending and producing wave windings for coil windings of electric machines
<a href="#">WO 2019107218 A1</a>	TRIS INC	Brush of motor for automotive electronics
<a href="#">WO 2019110388 A1</a>	PIERBURG GMBH	Drive device for adjusting a control shaft of a fully variable valve drive of an internal combustion engine
<a href="#">WO 2019121001 A1</a>	VOLKSWAGEN AG	Rotor assembly or stator assembly having permanent magnets

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## CONVERTIDORES, INVERSORES

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019082929 A1</a>	KYOCERA CORP	Film capacitor, connection-type capacitor, and inverter and electric vehicle in which said capacitors are used
<a href="#">WO 2019110297 A1</a>	VALEO SIEMENS EAUTOMOTIVE FRANCE SAS	Dc-dc converter with pre-charging of a first electrical grid from a second electrical grid
<a href="#">WO 2019097574 A1</a>	MITSUBISHI ELECTRIC CORP	Electric power converter
<a href="#">WO 2019122696 A1</a>	CONTINENTAL AUTOMOTIVE FRANCE	Method for controlling a dc-dc converter in a motor vehicle electrical system
<a href="#">WO 2019121477 A1</a>	RENAULT SAS	Dc-dc converter for a bidirectional charger
<a href="#">WO 2019071331 A1</a>	OSSIACO INC	Electric vehicle battery charger
<a href="#">WO 2019120589 A1</a>	HELIOX B V	A charging system and a method of charging an electrical energy storage device
<a href="#">WO 2019091465 A1</a>	NINGBO GEELY AUTOMOBILE RES & DEVELOPMENT CO LTD	Contactora control system and method for controlling a contactora
<a href="#">WO 2019107598 A1</a>	MTEK INFORMATION TECH CO LTD	Hybrid power pack power conversion apparatus applicable to eco-friendly vehicle
<a href="#">WO 2019099874 A1</a>	ABB SCHWEIZ AG	Isolated boost-buck power converter

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## RECARGA DE BATERÍAS

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019076483 A1</a>	SEW EURODRIVE GMBH & CO	Charging device and system for transmitting energy to a mobile part, comprising an energy store and a secondary winding
<a href="#">WO 2019110344 A1</a>	AUDI AG	Method for controlling an electrical system of an electrically drivable motor vehicle having a plurality of batteries, and electrical system of an electrically drivable motor vehicle having a plurality of batteries
<a href="#">WO 2019124898 A1</a>	LEE YOUNG JO	Electric car battery replacement system having energy saving system (ess) and method for operating same
<a href="#">WO 2019082778 A1</a>	DENSO CORP	Power storage system
<a href="#">WO 2019082919 A1</a>	KYOCERA CORP	Billing system for electric charging and billing method for electric charging
<a href="#">WO 2019118350 A1</a>	ZOOX INC	Underbody charging of vehicle batteries
<a href="#">WO 2019073271 A1</a>	URBAN ELECTRIC NETWORKS LTD	Retractable charging station
<a href="#">WO 2019074287 A1</a>	RENAULT SAMSUNG MOTORS CO LTD	Electric vehicle charger using energy storage system
<a href="#">WO 2019087754 A1</a>	AUTONETWORKS TECHNOLOGIES LTD	Charging communication control device and charging communication control method
<a href="#">WO 2019124427 A1</a>	GS YUASA INT LTD	Method for acquiring information about power storage element, charging control method, state estimation method, life estimation method, method for manufacturing power storage system, and management device for power storage element
<a href="#">WO 2019071359 A1</a>	OSSIACO INC	Electric vehicle battery charger
<a href="#">WO 2019120684 A1</a>	SIEMENS AG	Control device for a charging apparatus and method for controlling the charging apparatus
<a href="#">WO 2019122198 A1</a>	VOLVO TRUCK CORP	A method for determining a state-of-charge operating window of a battery
<a href="#">WO 2019117083 A1</a>	PANASONIC IP MAN CO LTD	Vehicle-mounted charging system
<a href="#">WO 2019078616 A2</a>	LG INNOTEK CO LTD	Electric vehicle charging apparatus
<a href="#">WO 2019101677 A1</a>	ALFRED KAERCHER SE & CO KG	Method for operating a cleaning system for vehicles and cleaning system for vehicles
<a href="#">WO 2019113143 A1</a>	CONTROL MODULE INC	Overhead evse with cable management
<a href="#">WO 2019083347 A2</a>	LEE JEONG YONG	Method for building electric vehicle charging infrastructure
<a href="#">WO 2019107324 A1</a>	PANASONIC CORP	Charging cable for electrically propelled vehicle and power source adapter mounted on charging cable for electrically propelled vehicle
<a href="#">WO 2019116145 A1</a>	SEMICONDUCTOR ENERGY LAB	Charging control device and electronic device having secondary battery
<a href="#">WO 2019108778 A1</a>	INTERTIE INCORPORATED	Devices, systems, and related methods for power conversion and management for energy exchange between an electrical vehicle and an electrical network

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## CAMBIO DE BATERÍAS

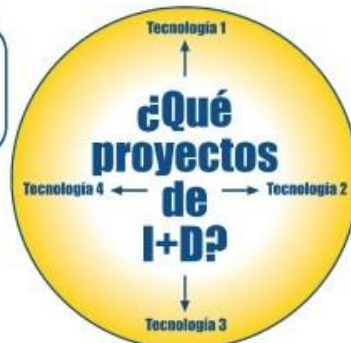
Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
<a href="#">WO 2019068579 A1</a>	UJET S A	Battery assembly and vehicle
<a href="#">WO 2019091674 A1</a>	VOLKSWAGEN AG	Mobile charging station and method for charging an electric vehicle
<a href="#">WO 2019092029 A1</a>	AUTOSTORE TECH AS	Multi charging station for a storage system
<a href="#">WO 2019086699 A1</a>	E BILITY GMBH	Removable storage-battery pack for an electrically drivable vehicle and electrically drivable vehicle
<a href="#">WO 2019086919 A1</a>	VOLVO TRUCK COPORATION	Device for power management, container, associated delivery vehicle and system
<a href="#">WO 2019105459 A1</a>	SHANGHAI DIANBA NEW ENERGY TECH CO LTD	Shuttle-type battery pack replacement device and battery swapping station comprising same
<a href="#">WO 2019109996 A1</a>	SHANGHAI DIANBA NEW ENERGY TECH CO LTD	Battery swapping system
<a href="#">WO 2019105458 A1</a>	SHANGHAI DIANBA NEW ENERGY TECH CO LTD	Battery swapping station and control method therefor
<a href="#">WO 2019114460 A1</a>	NIO NEXTEV LTD	Electric power control method and system for use in changing vehicle battery

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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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