Symbol	Typ	Titel
H	**Sektion**	**ELECTRICITY**
H01	**Klasse**	**BASIC ELECTRIC ELEMENTS**
H01M	**Unterklasse**	**PROCESSES OR MEANS, e.g. BATTERIES, FOR THE DIRECT CONVERSION OF CHEMICAL ENERGY INTO ELECTRICAL ENERGY [2]**
H01M 2/00	**Hauptgruppe**	**Constructional details, or processes of manufacture, of the non-active parts [2, 2006.01]**
H01M 2/02	1-Punkt Untergruppe	. Cases, jackets or wrappings [2, 2006.01]
H01M 2/04	2-Punkt Untergruppe	. . Lids or covers [2, 2006.01]
H01M 2/06	2-Punkt Untergruppe	. . Arrangements for introducing electric connectors into or through cases [2, 2006.01]
H01M 2/08	2-Punkt Untergruppe	. . Sealing materials [2, 2006.01]
H01M 2/10	1-Punkt Untergruppe	. Mountings; Suspension devices; Shock absorbers; Transport or carrying devices; Holders (structural combination of accumulators with charging apparatus H01M 10/46) [2, 2006.01]
H01M 2/12	1-Punkt Untergruppe	. Vent plugs or other mechanical arrangements for facilitating escape of gases [2, 2006.01]
H01M 2/14	1-Punkt Untergruppe	. Separators; Membranes; Diaphragms; Spacing elements [2, 2006.01]
H01M 2/16	2-Punkt Untergruppe	. . characterised by the material [2, 2006.01]
H01M 2/18	2-Punkt Untergruppe	. . characterised by the shape [2, 2006.01]
H01M 2/20	1-Punkt Untergruppe	. Current-conducting connections for cells [2, 2006.01]
H01M 2/22	2-Punkt Untergruppe	. . Fixed connections, i.e. not intended for disconnection [2, 2006.01]
H01M 2/24	3-Punkt Untergruppe	. . . Intercell connections through partitions, e.g. in a battery case [2, 2006.01]
H01M 2/26	3-Punkt Untergruppe	. . . Electrode connections [2, 2006.01]
H01M 2/28	4-Punkt Untergruppe	. . . . for lead-acid accumulators [2, 2006.01]
H01M 2/30	2-Punkt Untergruppe	. . Terminals [2, 2006.01]
H01M 2/32	2-Punkt Untergruppe	. . Methods or arrangements for affording protection against corrosion; Selection of materials therefor [2, 2006.01]
H01M 2/34	2-Punkt Untergruppe	. . with provision for preventing undesired use or discharge [2, 2006.01]
H01M 2/36	1-Punkt Untergruppe	. Arrangements for filling, topping-up or emptying cases with or of liquid, e.g. for filling with electrolytes, for washing-out [2, 2006.01]
H01M 2/38	1-Punkt Untergruppe	. Arrangements for moving electrolytes [2, 2006.01]
H01M 2/40	2-Punkt Untergruppe	. . with external circulating path (H01M 8/04 takes precedence) [2, 2006.01]
H01M 4/00	**Hauptgruppe**	**Electrodes [2, 2006.01]**
H01M 4/02	1-Punkt Untergruppe	. Electrodes composed of, or comprising, active material [2, 2006.01]
H01M 4/04	2-Punkt Untergruppe	. . Processes of manufacture in general [2, 2006.01]
H01M 4/06	2-Punkt Untergruppe	. . Electrodes for primary cells [2, 2006.01]
H01M 4/08	3-Punkt Untergruppe	. . . Processes of manufacture [2, 2006.01]
H01M 4/10	4-Punkt Untergruppe	. . . . of pressed electrodes with central core, i.e. dollies [2, 2006.01]

Symbol	Typ	Titel
H01M 4/12	4-Punkt Untergruppe	. . . . of consumable metal or alloy electrodes (use of alloy compositions as active materials H01M 4/38) [2, 2006.01]
H01M 4/13	2-Punkt Untergruppe	. . Electrodes for accumulators with non-aqueous electrolyte, e.g. for lithium-accumulators; Processes of manufacture thereof [2010.01]
H01M 4/131	3-Punkt Untergruppe	. . . Electrodes based on mixed oxides or hydroxides, or on mixtures of oxides or hydroxides, e.g. LiCoOx [2010.01]
H01M 4/1315	4-Punkt Untergruppe	. . . . containing halogen atoms, e.g. LiCoOxFy [2010.01]
H01M 4/133	3-Punkt Untergruppe	. . . Electrodes based on carbonaceous material, e.g. graphite-intercalation compounds or CFx [2010.01]
H01M 4/134	3-Punkt Untergruppe	. . . Electrodes based on metals, Si or alloys [2010.01]
H01M 4/136	3-Punkt Untergruppe	. . . Electrodes based on inorganic compounds other than oxides or hydroxides, e.g. sulfides, selenides, tellurides, halogenides or LiCoFy [2010.01]
H01M 4/137	3-Punkt Untergruppe	. . . Electrodes based on electro-active polymers [2010.01]
H01M 4/139	3-Punkt Untergruppe	. . . Processes of manufacture [2010.01]
H01M 4/1391	4-Punkt Untergruppe	. . . . of electrodes based on mixed oxides or hydroxides, or on mixtures of oxides or hydroxides, e.g. LiCoOx [2010.01]
H01M 4/13915	5-Punkt Untergruppe	. . . . . containing halogen atoms, e.g. LiCoOxFy [2010.01]
H01M 4/1393	4-Punkt Untergruppe	. . . . of electrodes based on carbonaceous material, e.g. graphite-intercalation compounds or CFx [2010.01]
H01M 4/1395	4-Punkt Untergruppe	. . . . of electrodes based on metals, Si or alloys [2010.01]
H01M 4/1397	4-Punkt Untergruppe	. . . . of electrodes based on inorganic compounds other than oxides or hydroxides, e.g. sulfides, selenides, tellurides, halogenides or LiCoFy [2010.01]
H01M 4/1399	4-Punkt Untergruppe	. . . . of electrodes based on electro-active polymers [2010.01]
H01M 4/14	2-Punkt Untergruppe	. . Electrodes for lead-acid accumulators [2, 2006.01]
H01M 4/16	3-Punkt Untergruppe	. . . Processes of manufacture [2, 2006.01]
H01M 4/18	4-Punkt Untergruppe	. . . . of Plante electrodes [2, 2006.01]
H01M 4/20	4-Punkt Untergruppe	. . . . of pasted electrodes [2, 2006.01]
H01M 4/21	5-Punkt Untergruppe	. . . . . Drying of pasted electrodes [2, 2006.01]
H01M 4/22	4-Punkt Untergruppe	. . . . Forming of electrodes [2, 2006.01]
H01M 4/23	5-Punkt Untergruppe	. . . . . Drying or preserving electrodes after forming [2, 2006.01]
H01M 4/24	2-Punkt Untergruppe	. . Electrodes for alkaline accumulators [2, 2006.01]
H01M 4/26	3-Punkt Untergruppe	. . . Processes of manufacture [2, 2006.01]
H01M 4/28	4-Punkt Untergruppe	. . . . Precipitating active material on the carrier [2, 2006.01]
H01M 4/29	5-Punkt Untergruppe	. . . . . by electrochemical methods [2, 2006.01]
H01M 4/30	4-Punkt Untergruppe	. . . . Pressing [2, 2006.01]
H01M 4/32	3-Punkt Untergruppe	. . . Nickel oxide or hydroxide electrodes [2, 2006.01]
H01M 4/34	3-Punkt Untergruppe	. . . Silver oxide or hydroxide electrodes [2, 2006.01]

Symbol	Typ	Titel
H01M 4/36	2-Punkt Untergruppe	. . Selection of substances as active materials, active masses, active liquids [2, 2006.01]
H01M 4/38	3-Punkt Untergruppe	. . . of elements or alloys [2, 2006.01]
H01M 4/40	4-Punkt Untergruppe	. . . . Alloys based on alkali metals [2, 2006.01]
H01M 4/42	4-Punkt Untergruppe	. . . . Alloys based on zinc [2, 2006.01]
H01M 4/44	4-Punkt Untergruppe	. . . . Alloys based on cadmium [2, 2006.01]
H01M 4/46	4-Punkt Untergruppe	. . . . Alloys based on magnesium or aluminium [2, 2006.01]
H01M 4/48	3-Punkt Untergruppe	. . . of inorganic oxides or hydroxides [2, 2006.01, 2010.01]
H01M 4/485	4-Punkt Untergruppe	. . . . of mixed oxides or hydroxides for inserting or intercalating light metals, e.g. $LiTi_2O_4$ or $LiTi_2OxFy$ (H01M 4/505, H01M 4/525 take precedence) [2010.01]
H01M 4/50	4-Punkt Untergruppe	. . . . of manganese [2, 2006.01, 2010.01]
H01M 4/505	5-Punkt Untergruppe	. . . . . of mixed oxides or hydroxides containing manganese for inserting or intercalating light metals, e.g. $LiMn_2O_4$ or $LiMn_2OxFy$ [2010.01]
H01M 4/52	4-Punkt Untergruppe	. . . . of nickel, cobalt or iron [2, 2006.01, 2010.01]
H01M 4/525	5-Punkt Untergruppe	. . . . . of mixed oxides or hydroxides containing iron, cobalt or nickel for inserting or intercalating light metals, e.g. $LiNiO_2$, $LiCoO_2$ or LiCoOxFy [2010.01]
H01M 4/54	4-Punkt Untergruppe	. . . . of silver [2, 2006.01]
H01M 4/56	4-Punkt Untergruppe	. . . . of lead [2, 2006.01]
H01M 4/57	5-Punkt Untergruppe	. . . . . of "grey lead", i.e. powders containing lead and lead oxide [2, 2006.01]
H01M 4/58	3-Punkt Untergruppe	. . . of inorganic compounds other than oxides or hydroxides, e.g. sulfides, selenides, tellurides, halogenides or $LiCoF_y$; of polyanionic structures, e.g. phosphates, silicates or borates [2, 2006.01, 2010.01]
H01M 4/583	4-Punkt Untergruppe	. . . . Carbonaceous material, e.g. graphite-intercalation compounds or CFx [2010.01]
H01M 4/587	5-Punkt Untergruppe	. . . . . for inserting or intercalating light metals [2010.01]
H01M 4/60	3-Punkt Untergruppe	. . . of organic compounds [2, 2006.01]
H01M 4/62	2-Punkt Untergruppe	. . Selection of inactive substances as ingredients for active masses, e.g. binders, fillers [2, 2006.01]
H01M 4/64	2-Punkt Untergruppe	. . Carriers or collectors [2, 2006.01]
H01M 4/66	3-Punkt Untergruppe	. . . Selection of materials [2, 2006.01]
H01M 4/68	4-Punkt Untergruppe	. . . . for use in lead-acid accumulators [2, 2006.01]
H01M 4/70	3-Punkt Untergruppe	. . . characterised by shape or form [2, 2006.01]
H01M 4/72	4-Punkt Untergruppe	. . . . Grids [2, 2006.01]
H01M 4/73	5-Punkt Untergruppe	. . . . . for lead-acid accumulators, e.g. frame plates [2, 2006.01]
H01M 4/74	5-Punkt Untergruppe	. . . . . Meshes or woven material; Expanded metal [2, 2006.01]
H01M 4/75	4-Punkt Untergruppe	. . . . Wires, rods, or strips [2, 2006.01]
H01M 4/76	4-Punkt Untergruppe	. . . . Containers for holding the active material, e.g. tubes, capsules [2, 2006.01]

Symbol	Typ	Titel
H01M 4/78	4-Punkt Untergruppe	. . . . Shapes other than plane or cylindrical, e.g. helical [2, 2006.01]
H01M 4/80	4-Punkt Untergruppe	. . . . Porous plates, e.g. sintered carriers [2, 2006.01]
H01M 4/82	3-Punkt Untergruppe	. . . Multi-step processes for manufacturing carriers for lead-acid accumulators [2, 2006.01]
H01M 4/84	4-Punkt Untergruppe	. . . . involving casting [2, 2006.01]
H01M 4/86	1-Punkt Untergruppe	. Inert electrodes with catalytic activity, e.g. for fuel cells [2, 2006.01]
H01M 4/88	2-Punkt Untergruppe	. . Processes of manufacture [2, 2006.01]
H01M 4/90	2-Punkt Untergruppe	. . Selection of catalytic material [2, 2006.01]
H01M 4/92	3-Punkt Untergruppe	. . . Metals of platinum group (H01M 4/94 takes precedence) [2, 2006.01]
H01M 4/94	2-Punkt Untergruppe	. . Non-porous diffusion electrodes, e.g. palladium membranes, ion exchange membranes [2, 2006.01]
H01M 4/96	2-Punkt Untergruppe	. . Carbon-based electrodes [2, 2006.01]
H01M 4/98	2-Punkt Untergruppe	. . Raney-type electrodes [2, 2006.01]
H01M 6/00	**Hauptgruppe**	**Primary cells; Manufacture thereof [2, 2006.01]**
H01M 6/02	1-Punkt Untergruppe	. Details (of non-active parts H01M 2/00, of electrodes H01M 4/00) [2, 2006.01]
H01M 6/04	1-Punkt Untergruppe	. Cells with aqueous electrolyte [2, 2006.01]
H01M 6/06	2-Punkt Untergruppe	. . Dry cells, i.e. cells wherein the electrolyte is rendered non-fluid [2, 2006.01]
H01M 6/08	3-Punkt Untergruppe	. . . with cup-shaped electrodes [2, 2006.01]
H01M 6/10	3-Punkt Untergruppe	. . . with wound or folded electrodes [2, 2006.01]
H01M 6/12	3-Punkt Untergruppe	. . . with flat electrodes [2, 2006.01]
H01M 6/14	1-Punkt Untergruppe	. Cells with non-aqueous electrolyte [2, 2006.01]
H01M 6/16	2-Punkt Untergruppe	. . with organic electrolyte (H01M 6/18 takes precedence) [2, 2006.01]
H01M 6/18	2-Punkt Untergruppe	. . with solid electrolyte [2, 2006.01]
H01M 6/20	3-Punkt Untergruppe	. . . working at high temperature (deferred-action thermal cells H01M 6/36) [2, 2006.01]
H01M 6/22	1-Punkt Untergruppe	. Immobilising of electrolyte [2, 2006.01]
H01M 6/24	1-Punkt Untergruppe	. Cells comprising two different electrolytes [2, 2006.01]
H01M 6/26	1-Punkt Untergruppe	. Cells without oxidising active material, e.g. Volta cells [2, 2006.01]
H01M 6/28	1-Punkt Untergruppe	. Standard cells, e.g. Weston cells [2, 2006.01]
H01M 6/30	1-Punkt Untergruppe	. Deferred-action cells [2, 2006.01]
H01M 6/32	2-Punkt Untergruppe	. . activated through external addition of electrolyte or of electrolyte components [2, 2006.01]
H01M 6/34	3-Punkt Untergruppe	. . . Immersion cells, e.g. sea-water cells [2, 2006.01]
H01M 6/36	2-Punkt Untergruppe	. . containing electrolyte and made operational by physical means, e.g. thermal cells [2, 2006.01]
H01M 6/38	3-Punkt Untergruppe	. . . by mechanical means [2, 2006.01]
H01M 6/40	1-Punkt Untergruppe	. Printed batteries [2, 2006.01]

Symbol	Typ	Titel
H01M 6/42	1-Punkt Untergruppe	. Grouping of primary cells into batteries (H01M 6/40 takes precedence) [2, 2006.01]
H01M 6/44	2-Punkt Untergruppe	. . of tubular or cup-shaped cells [2, 2006.01]
H01M 6/46	2-Punkt Untergruppe	. . of flat cells [2, 2006.01]
H01M 6/48	3-Punkt Untergruppe	. . . with bipolar electrodes [2, 2006.01]
H01M 6/50	1-Punkt Untergruppe	. Methods or arrangements for servicing or maintenance, e.g. maintaining operating temperature [2, 2006.01]
H01M 6/52	1-Punkt Untergruppe	. Reclaiming serviceable parts of waste cells or batteries [2, 2006.01]
H01M 8/00	**Hauptgruppe**	**Fuel cells; Manufacture thereof [2, 2006.01, 2016.01]**
H01M 8/008	1-Punkt Untergruppe	. Disposal or recycling of fuel cells [2016.01]
H01M 8/02	1-Punkt Untergruppe	. Details (electrodes H01M 4/86-H01M 4/98) [2, 2006.01, 2016.01]
H01M 8/0202	2-Punkt Untergruppe	. . Collectors; Separators, e.g. bipolar separators; Interconnectors [2016.01]
H01M 8/0204	3-Punkt Untergruppe	. . . Non-porous and characterised by the material [2016.01]
H01M 8/0206	4-Punkt Untergruppe	. . . . Metals or alloys [2016.01]
H01M 8/0208	5-Punkt Untergruppe	. . . . . Alloys [2016.01]
H01M 8/021	6-Punkt Untergruppe	. . . . . . Alloys based on iron [2016.01]
H01M 8/0213	4-Punkt Untergruppe	. . . . Gas-impermeable carbon-containing materials [2016.01]
H01M 8/0215	4-Punkt Untergruppe	. . . . Glass; Ceramic materials [2016.01]
H01M 8/0217	5-Punkt Untergruppe	. . . . . Complex oxides, optionally doped, of the type AMO_3, A being an alkaline earth metal or rare earth metal and M being a metal, e.g. perovskites [2016.01]
H01M 8/0221	4-Punkt Untergruppe	. . . . Organic resins; Organic polymers [2016.01]
H01M 8/0223	4-Punkt Untergruppe	. . . . Composites [2016.01]
H01M 8/0226	5-Punkt Untergruppe	. . . . . in the form of mixtures [2016.01]
H01M 8/0228	5-Punkt Untergruppe	. . . . . in the form of layered or coated products [2016.01]
H01M 8/023	3-Punkt Untergruppe	. . . Porous and characterised by the material [2016.01]
H01M 8/0232	4-Punkt Untergruppe	. . . . Metals or alloys [2016.01]
H01M 8/0234	4-Punkt Untergruppe	. . . . Carbonaceous material [2016.01]
H01M 8/0236	4-Punkt Untergruppe	. . . . Glass; Ceramics; Cermets [2016.01]
H01M 8/0239	4-Punkt Untergruppe	. . . . Organic resins; Organic polymers [2016.01]
H01M 8/0241	4-Punkt Untergruppe	. . . . Composites [2016.01]
H01M 8/0243	5-Punkt Untergruppe	. . . . . in the form of mixtures [2016.01]
H01M 8/0245	5-Punkt Untergruppe	. . . . . in the form of layered or coated products [2016.01]
H01M 8/0247	3-Punkt Untergruppe	. . . characterised by the form (characterised by a channel configuration H01M 8/0258) [2016.01]
H01M 8/025	4-Punkt Untergruppe	. . . . semicylindrical [2016.01]
H01M 8/0252	4-Punkt Untergruppe	. . . . tubular [2016.01]

Symbol	Typ	Titel
H01M 8/0254	4-Punkt Untergruppe	. . . . corrugated or undulated [2016.01]
H01M 8/0256	4-Punkt Untergruppe	. . . . Vias, i.e. connectors passing through the separator material [2016.01]
H01M 8/0258	3-Punkt Untergruppe	. . . characterised by the configuration of channels, e.g. by the flow field of the reactant or coolant [2016.01]
H01M 8/026	4-Punkt Untergruppe	. . . . characterised by grooves, e.g. their pitch or depth [2016.01]
H01M 8/0263	4-Punkt Untergruppe	. . . . having meandering or serpentine paths [2016.01]
H01M 8/0265	4-Punkt Untergruppe	. . . . the reactant or coolant channels having varying cross sections [2016.01]
H01M 8/0267	3-Punkt Untergruppe	. . . having heating or cooling means, e.g. heaters or coolant flow channels [2016.01]
H01M 8/0271	2-Punkt Untergruppe	. . Sealing or supporting means around electrodes, matrices or membranes [2016.01]
H01M 8/0273	3-Punkt Untergruppe	. . . with sealing or supporting means in the form of a frame [2016.01]
H01M 8/0276	3-Punkt Untergruppe	. . . Sealing means characterised by their form (H01M 8/0273 takes precedence) [2016.01]
H01M 8/028	3-Punkt Untergruppe	. . . Sealing means characterised by their material [2016.01]
H01M 8/0282	4-Punkt Untergruppe	. . . . Inorganic material [2016.01]
H01M 8/0284	4-Punkt Untergruppe	. . . . Organic resins; Organic polymers [2016.01]
H01M 8/0286	3-Punkt Untergruppe	. . . Processes for forming seals [2016.01]
H01M 8/0289	2-Punkt Untergruppe	. . Means for holding the electrolyte (solid polymer electrolytes H01M 8/1018) [2016.01]
H01M 8/0293	3-Punkt Untergruppe	. . . Matrices for immobilising electrolyte solutions [2016.01]
H01M 8/0295	3-Punkt Untergruppe	. . . Matrices for immobilising electrolyte melts [2016.01]
H01M 8/0297	2-Punkt Untergruppe	. . Arrangements for joining electrodes, reservoir layers, heat exchange units or bipolar separators to each other (H01M 8/0271 takes precedence) [2016.01]
H01M 8/04	1-Punkt Untergruppe	. Auxiliary arrangements, e.g. for control of pressure or for circulation of fluids [2, 2006.01, 2016.01]
H01M 8/04007	2-Punkt Untergruppe	. . related to heat exchange [2016.01]
H01M 8/04014	3-Punkt Untergruppe	. . . Heat exchange using gaseous fluids; Heat exchange by combustion of reactants [2016.01]
H01M 8/04029	3-Punkt Untergruppe	. . . Heat exchange using liquids [2016.01]
H01M 8/04044	3-Punkt Untergruppe	. . . Purification of heat exchange media [2016.01]
H01M 8/04082	2-Punkt Untergruppe	. . Arrangements for control of reactant parameters, e.g. pressure or concentration [2016.01]
H01M 8/04089	3-Punkt Untergruppe	. . . of gaseous reactants [2016.01]
H01M 8/04111	4-Punkt Untergruppe	. . . . using a compressor turbine assembly [2016.01]
H01M 8/04119	4-Punkt Untergruppe	. . . . with simultaneous supply or evacuation of electrolyte; Humidifying or dehumidifying [2016.01]
H01M 8/04186	3-Punkt Untergruppe	. . . of liquid-charged or electrolyte-charged reactants [2016.01]
H01M 8/04223	2-Punkt Untergruppe	. . during start-up or shut-down; Depolarisation or activation, e.g. purging; Means for short-circuiting defective fuel cells [2016.01]
H01M 8/04225	3-Punkt Untergruppe	. . . during start-up [2016.01]
H01M 8/04228	3-Punkt Untergruppe	. . . during shut-down [2016.01]

Symbol	Typ	Titel
H01M 8/04276	2-Punkt Untergruppe	. . Arrangements for managing the electrolyte stream, e.g. heat exchange [2016.01]
H01M 8/04291	2-Punkt Untergruppe	. . Arrangements for managing water in solid electrolyte fuel cell systems (H01M 8/04119 takes precedence) [2016.01]
H01M 8/04298	2-Punkt Untergruppe	. . Processes for controlling fuel cells or fuel cell systems [2016.01]
H01M 8/043	3-Punkt Untergruppe	. . . applied during specific periods [2016.01]
H01M 8/04302	4-Punkt Untergruppe	. . . . applied during start-up [2016.01]
H01M 8/04303	4-Punkt Untergruppe	. . . . applied during shut-down [2016.01]
H01M 8/04313	3-Punkt Untergruppe	. . . characterised by the detection or assessment of variables; characterised by the detection or assessment of failure or abnormal function [2016.01]
H01M 8/0432	4-Punkt Untergruppe	. . . . Temperature; Ambient temperature [2016.01]
H01M 8/0438	4-Punkt Untergruppe	. . . . Pressure; Ambient pressure; Flow [2016.01]
H01M 8/0444	4-Punkt Untergruppe	. . . . Concentration; Density (H01M 8/04492 takes precedence) [2016.01]
H01M 8/04492	4-Punkt Untergruppe	. . . . Humidity; Ambient humidity; Water content [2016.01]
H01M 8/04537	4-Punkt Untergruppe	. . . . Electric variables [2016.01]
H01M 8/04664	4-Punkt Untergruppe	. . . . Failure or abnormal function [2016.01]
H01M 8/04694	3-Punkt Untergruppe	. . . characterised by variables to be controlled [2016.01]
H01M 8/04701	4-Punkt Untergruppe	. . . . Temperature [2016.01]
H01M 8/04746	4-Punkt Untergruppe	. . . . Pressure; Flow [2016.01]
H01M 8/04791	4-Punkt Untergruppe	. . . . Concentration; Density (H01M 8/04828 takes precedence) [2016.01]
H01M 8/04828	4-Punkt Untergruppe	. . . . Humidity; Water content [2016.01]
H01M 8/04858	4-Punkt Untergruppe	. . . . Electric variables [2016.01]
H01M 8/04955	4-Punkt Untergruppe	. . . . Shut-off or shut-down of fuel cells [2016.01]
H01M 8/04992	3-Punkt Untergruppe	. . . characterised by the implementation of mathematical or computational algorithms, e.g. feedback control loops, fuzzy logic, neural networks or artificial intelligence [2016.01]
H01M 8/06	1-Punkt Untergruppe	. Combination of fuel cells with means for production of reactants or for treatment of residues (regenerative fuel cells H01M 8/18) [2, 2006.01, 2016.01]
H01M 8/0606	2-Punkt Untergruppe	. . with means for production of gaseous reactants [2016.01]
H01M 8/0612	3-Punkt Untergruppe	. . . from carbon-containing material [2016.01]
H01M 8/0637	4-Punkt Untergruppe	. . . . Direct internal reforming at the anode of the fuel cell [2016.01]
H01M 8/065	3-Punkt Untergruppe	. . . by dissolution of metals or alloys; by dehydriding metallic substances [2016.01]
H01M 8/0656	3-Punkt Untergruppe	. . . by electrochemical means (H01M 8/065 takes precedence) [2016.01]
H01M 8/0662	2-Punkt Untergruppe	. . Treatment of gaseous reactants or gaseous residues, e.g. cleaning [2016.01]
H01M 8/0668	3-Punkt Untergruppe	. . . Removal of carbon monoxide or carbon dioxide [2016.01]
H01M 8/08	1-Punkt Untergruppe	. Fuel cells with aqueous electrolytes [2, 2006.01, 2016.01]

Symbol	Typ	Titel
H01M 8/083	2-Punkt Untergruppe	. . Alkaline fuel cells [2016.01]
H01M 8/086	2-Punkt Untergruppe	. . Phosphoric acid fuel cells [PAFC] [2016.01]
H01M 8/10	1-Punkt Untergruppe	. Fuel cells with solid electrolytes [2, 2006.01, 2016.01]
H01M 8/1004	2-Punkt Untergruppe	. . characterised by membrane-electrode assemblies [MEA] (H01M 8/12 takes precedence) [2016.01]
H01M 8/1006	3-Punkt Untergruppe	. . . Corrugated, curved or wave-shaped MEA [2016.01]
H01M 8/1007	2-Punkt Untergruppe	. . with both reactants being gaseous or vaporised (H01M 8/12 takes precedence) [2016.01]
H01M 8/1009	2-Punkt Untergruppe	. . with one of the reactants being liquid, solid or liquid-charged (H01M 8/12 takes precedence) [2016.01]
H01M 8/1011	3-Punkt Untergruppe	. . . Direct alcohol fuel cells [DAFC], e.g. direct methanol fuel cells [DMFC] [2016.01]
H01M 8/1016	2-Punkt Untergruppe	. . characterised by the electrolyte material (H01M 8/12 takes precedence) [2016.01]
H01M 8/1018	3-Punkt Untergruppe	. . . Polymeric electrolyte materials [2016.01]
H01M 8/102	4-Punkt Untergruppe	. . . . characterised by the chemical structure of the main chain of the ion-conducting polymer [2016.01]
H01M 8/1023	5-Punkt Untergruppe	. . . . . having only carbon, e.g. polyarylenes, polystyrenes or polybutadiene-styrenes [2016.01]
H01M 8/1025	5-Punkt Untergruppe	. . . . . having only carbon and oxygen, e.g. polyethers, sulfonated polyetheretherketones [S-PEEK], sulfonated polysaccharides, sulfonated celluloses or sulfonated polyesters [2016.01]
H01M 8/1027	5-Punkt Untergruppe	. . . . . having carbon, oxygen and other atoms, e.g. sulfonated polyethersulfones [S-PES] [2016.01]
H01M 8/103	5-Punkt Untergruppe	. . . . . having nitrogen, e.g. sulfonated polybenzimidazoles [S-PBI], polybenzimidazoles with phosphoric acid, sulfonated polyamides [S-PA] or sulfonated polyphosphazenes [S-PPh] [2016.01]
H01M 8/1032	5-Punkt Untergruppe	. . . . . having sulfur, e.g. sulfonated-polyethersulfones [S-PES] [2016.01]
H01M 8/1034	5-Punkt Untergruppe	. . . . . having phosphorus, e.g. sulfonated polyphosphazenes [S-PPh] [2016.01]
H01M 8/1037	5-Punkt Untergruppe	. . . . . having silicon, e.g. sulfonated crosslinked polydimethylsiloxanes [2016.01]
H01M 8/1039	4-Punkt Untergruppe	. . . . halogenated, e.g. sulfonated polyvinylidene fluorides [2016.01]
H01M 8/1041	4-Punkt Untergruppe	. . . . Polymer electrolyte composites, mixtures or blends [2016.01]
H01M 8/1044	5-Punkt Untergruppe	. . . . . Mixtures of polymers, of which at least one is ionically conductive [2016.01]
H01M 8/1046	5-Punkt Untergruppe	. . . . . Mixtures of at least one polymer and at least one additive [2016.01]
H01M 8/1048	6-Punkt Untergruppe	. . . . . . Ion-conducting additives, e.g. ion-conducting particles, heteropolyacids, metal phosphate or polybenzimidazole with phosphoric acid [2016.01]
H01M 8/1051	6-Punkt Untergruppe	. . . . . . Non-ion-conducting additives, e.g. stabilisers, SiO_2 or ZrO_2 [2016.01]
H01M 8/1053	5-Punkt Untergruppe	. . . . . consisting of layers of polymers with at least one layer being ionically conductive [2016.01]
H01M 8/1058	4-Punkt Untergruppe	. . . . characterised by a porous support having no ion-conducting properties [2016.01]
H01M 8/106	5-Punkt Untergruppe	. . . . . characterised by the chemical composition of the porous support [2016.01]
H01M 8/1062	5-Punkt Untergruppe	. . . . . characterised by the physical properties of the porous support, e.g. its porosity or thickness [2016.01]
H01M 8/1065	4-Punkt Untergruppe	. . . . characterised by the form, e.g. perforated or wave-shaped [2016.01]
H01M 8/1067	4-Punkt Untergruppe	. . . . characterised by their physical properties, e.g. porosity, ionic conductivity or thickness [2016.01]

Symbol	Typ	Titel
H01M 8/1069	4-Punkt Untergruppe	. . . . characterised by the manufacturing processes [2016.01]
H01M 8/1072	5-Punkt Untergruppe	. . . . . by chemical reactions, e.g. insitu polymerisation or insitu crosslinking [2016.01]
H01M 8/1081	5-Punkt Untergruppe	. . . . . starting from solutions, dispersions or slurries exclusively of polymers [2016.01]
H01M 8/1086	5-Punkt Untergruppe	. . . . . After-treatment of the membrane other than by polymerisation [2016.01]
H01M 8/1088	6-Punkt Untergruppe	. . . . . . Chemical modification, e.g. sulfonation [2016.01]
H01M 8/1097	2-Punkt Untergruppe	. . Fuel cells applied on a support, e.g. miniature fuel cells deposited on silica supports [2016.01]
H01M 8/12	2-Punkt Untergruppe	. . operating at high temperature, e.g. with stabilised ZrO_2 electrolyte [2, 2006.01, 2016.01]
H01M 8/1213	3-Punkt Untergruppe	. . . characterised by the electrode/electrolyte combination or the supporting material [2016.01]
H01M 8/122	4-Punkt Untergruppe	. . . . Corrugated, curved or wave-shaped MEA [2016.01]
H01M 8/1226	4-Punkt Untergruppe	. . . . characterised by the supporting layer [2016.01]
H01M 8/1231	3-Punkt Untergruppe	. . . with both reactants being gaseous or vaporised [2016.01]
H01M 8/1233	3-Punkt Untergruppe	. . . with one of the reactants being liquid, solid or liquid-charged [2016.01]
H01M 8/124	3-Punkt Untergruppe	. . . characterised by the process of manufacturing or by the material of the electrolyte [2016.01]
H01M 8/1246	4-Punkt Untergruppe	. . . . the electrolyte consisting of oxides [2016.01]
H01M 8/1253	5-Punkt Untergruppe	. . . . . the electrolyte containing zirconium oxide [2016.01]
H01M 8/126	5-Punkt Untergruppe	. . . . . the electrolyte containing cerium oxide [2016.01]
H01M 8/1286	3-Punkt Untergruppe	. . . Fuel cells applied on a support, e.g. miniature fuel cells deposited on silica supports [2016.01]
H01M 8/14	1-Punkt Untergruppe	. Fuel cells with fused electrolytes [2, 2006.01]
H01M 8/16	1-Punkt Untergruppe	. Biochemical fuel cells, i.e. cells in which microorganisms function as catalysts [2, 2006.01]
H01M 8/18	1-Punkt Untergruppe	. Regenerative fuel cells, e.g. redox flow batteries or secondary fuel cells [2, 2006.01]
H01M 8/20	1-Punkt Untergruppe	. Indirect fuel cells, e.g. fuel cells with redox couple being irreversible (H01M 8/18 takes precedence) [2, 2006.01]
H01M 8/22	1-Punkt Untergruppe	. Fuel cells in which the fuel is based on materials comprising carbon or oxygen or hydrogen and other elements; Fuel cells in which the fuel is based on materials comprising only elements other than carbon, oxygen or hydrogen [2, 2006.01]
H01M 8/24	1-Punkt Untergruppe	. Grouping of fuel cells, e.g. stacking of fuel cells [2, 2006.01, 2016.01]
H01M 8/2404	2-Punkt Untergruppe	. . Processes or apparatus for grouping fuel cells [2016.01]
H01M 8/241	2-Punkt Untergruppe	. . with solid or matrix-supported electrolytes [2016.01]
H01M 8/2418	3-Punkt Untergruppe	. . . Grouping by arranging unit cells in a plane (H01M 8/2425, H01M 8/244 take precedence) [2016.01]
H01M 8/242	3-Punkt Untergruppe	. . . comprising framed electrodes or intermediary frame-like gaskets (H01M 8/2425, H01M 8/244 take precedence) [2016.01]
H01M 8/2425	3-Punkt Untergruppe	. . . High-temperature cells with solid electrolytes [2016.01]
H01M 8/2428	4-Punkt Untergruppe	. . . . Grouping by arranging unit cells on a surface of any form, e.g. planar or tubular [2016.01]
H01M 8/243	4-Punkt Untergruppe	. . . . Grouping of unit cells of tubular or cylindrical configuration [2016.01]

Symbol	Typ	Titel
H01M 8/2432	4-Punkt Untergruppe	. . . . Grouping of unit cells of planar configuration [2016.01]
H01M 8/2435	4-Punkt Untergruppe	. . . . with monolithic core structure, e.g. honeycombs [2016.01]
H01M 8/244	3-Punkt Untergruppe	. . . with matrix-supported molten electrolyte [2016.01]
H01M 8/2455	2-Punkt Untergruppe	. . with liquid, solid or electrolyte-charged reactants [2016.01]
H01M 8/2457	2-Punkt Untergruppe	. . with both reactants being gaseous or vaporised [2016.01]
H01M 8/2465	2-Punkt Untergruppe	. . Details of groupings of fuel cells [2016.01]
H01M 8/247	3-Punkt Untergruppe	. . . Arrangements for tightening a stack, for accommodation of a stack in a tank or for assembling different tanks [2016.01]
H01M 8/2475	4-Punkt Untergruppe	. . . . Enclosures, casings or containers of fuel cell stacks [2016.01]
H01M 8/248	4-Punkt Untergruppe	. . . . Means for compression of the fuel cell stacks [2016.01]
H01M 8/2483	3-Punkt Untergruppe	. . . characterised by internal manifolds [2016.01]
H01M 8/2484	3-Punkt Untergruppe	. . . characterised by external manifolds [2016.01]
H01M 8/2485	4-Punkt Untergruppe	. . . . Arrangements for sealing external manifolds; Arrangements for mounting external manifolds around a stack [2016.01]
H01M 8/249	2-Punkt Untergruppe	. . comprising two or more groupings of fuel cells, e.g. modular assemblies [2016.01]
H01M 8/2495	3-Punkt Untergruppe	. . . of fuel cells of different types [2016.01]
H01M 10/00	**Hauptgruppe**	**Secondary cells; Manufacture thereof [2, 2006.01]**
H01M 10/02	1-Punkt Untergruppe	. Details (of non-active parts H01M 2/00, of electrodes H01M 4/00) [2, 2006.01]
H01M 10/04	1-Punkt Untergruppe	. Construction or manufacture in general (H01M 10/058, H01M 10/12, H01M 10/28, H01M 10/38 take precedence) [2, 2006.01]
H01M 10/05	1-Punkt Untergruppe	. Accumulators with non-aqueous electrolyte (H01M 10/39 takes precedence) [2010.01]
H01M 10/052	2-Punkt Untergruppe	. . Li-accumulators [2010.01]
H01M 10/0525	3-Punkt Untergruppe	. . . Rocking-chair batteries, i.e. batteries with lithium insertion or intercalation in both electrodes; Lithium-ion batteries [2010.01]
H01M 10/054	2-Punkt Untergruppe	. . Accumulators with insertion or intercalation of metals other than lithium, e.g. with magnesium or aluminium [2010.01]
H01M 10/056	2-Punkt Untergruppe	. . characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes [2010.01]
H01M 10/0561	3-Punkt Untergruppe	. . . the electrolyte being constituted of inorganic materials only [2010.01]
H01M 10/0562	4-Punkt Untergruppe	. . . . Solid materials [2010.01]
H01M 10/0563	4-Punkt Untergruppe	. . . . Liquid materials, e.g. for Li-$SOCl_2$ cells [2010.01]
H01M 10/0564	3-Punkt Untergruppe	. . . the electrolyte being constituted of organic materials only [2010.01]
H01M 10/0565	4-Punkt Untergruppe	. . . . Polymeric materials, e.g. gel-type or solid-type [2010.01]
H01M 10/0566	4-Punkt Untergruppe	. . . . Liquid materials [2010.01]
H01M 10/0567	5-Punkt Untergruppe	. . . . . characterised by the additives [2010.01]
H01M 10/0568	5-Punkt Untergruppe	. . . . . characterised by the solutes [2010.01]

Symbol	Typ	Titel
H01M 10/0569	5-Punkt Untergruppe	. . . . . characterised by the solvents [2010.01]
H01M 10/058	2-Punkt Untergruppe	. . Construction or manufacture [2010.01]
H01M 10/0583	3-Punkt Untergruppe	. . . of accumulators with folded construction elements except wound ones, i.e. folded positive or negative electrodes or separators, e.g. with ‘’Z’’-shaped electrodes or separators [2010.01]
H01M 10/0585	3-Punkt Untergruppe	. . . of accumulators having only flat construction elements, i.e. flat positive electrodes, flat negative electrodes and flat separators [2010.01]
H01M 10/0587	3-Punkt Untergruppe	. . . of accumulators having only wound construction elements, i.e. wound positive electrodes, wound negative electrodes and wound separators [2010.01]
H01M 10/06	1-Punkt Untergruppe	. Lead-acid accumulators (semi-lead accumulators H01M 10/20) [2, 2006.01]
H01M 10/08	2-Punkt Untergruppe	. . Selection of materials as electrolytes [2, 2006.01]
H01M 10/10	3-Punkt Untergruppe	. . . Immobilising of electrolyte [2, 2006.01]
H01M 10/12	2-Punkt Untergruppe	. . Construction or manufacture [2, 2006.01]
H01M 10/14	3-Punkt Untergruppe	. . . Assembling a group of electrodes or separators [2, 2006.01]
H01M 10/16	3-Punkt Untergruppe	. . . Suspending or supporting electrodes or groups of electrodes in the case [2, 2006.01]
H01M 10/18	2-Punkt Untergruppe	. . with bipolar electrodes [2, 2006.01]
H01M 10/20	1-Punkt Untergruppe	. Semi-lead accumulators, i.e. accumulators in which only one electrode contains lead [2, 2006.01]
H01M 10/22	2-Punkt Untergruppe	. . Selection of materials as electrolytes [2, 2006.01]
H01M 10/24	1-Punkt Untergruppe	. Alkaline accumulators [2, 2006.01]
H01M 10/26	2-Punkt Untergruppe	. . Selection of materials as electrolytes [2, 2006.01]
H01M 10/28	2-Punkt Untergruppe	. . Construction or manufacture [2, 2006.01]
H01M 10/30	2-Punkt Untergruppe	. . Nickel accumulators (H01M 10/34 takes precedence) [2, 2006.01]
H01M 10/32	2-Punkt Untergruppe	. . Silver accumulators (H01M 10/34 takes precedence) [2, 2006.01]
H01M 10/34	1-Punkt Untergruppe	. Gastight accumulators [2, 2006.01]
H01M 10/36	1-Punkt Untergruppe	. Accumulators not provided for in groups H01M 10/05-H01M 10/34 [2, 2006.01, 2010.01]
H01M 10/38	2-Punkt Untergruppe	. . Construction or manufacture [2, 2006.01]
H01M 10/39	2-Punkt Untergruppe	. . working at high temperature [2, 2006.01]
H01M 10/42	1-Punkt Untergruppe	. Methods or arrangements for servicing or maintenance of secondary cells or secondary half-cells (H01M 10/60 takes precedence) [2, 2006.01]
H01M 10/44	2-Punkt Untergruppe	. . Methods for charging or discharging (circuits for charging H02J 7/00) [2, 2006.01]
H01M 10/46	2-Punkt Untergruppe	. . Accumulators structurally combined with charging apparatus (circuits for charging H02J 7/00) [2, 2006.01]
H01M 10/48	2-Punkt Untergruppe	. . Accumulators combined with arrangements for measuring, testing or indicating condition, e.g. level or density of the electrolyte [2, 2006.01]
H01M 10/52	2-Punkt Untergruppe	. . Removing gases inside the secondary cell, e.g. by absorption (vent plugs or other mechanical arrangements for facilitating escape of gases H01M 2/12) [2, 2006.01]
H01M 10/54	1-Punkt Untergruppe	. Reclaiming serviceable parts of waste accumulators [2, 2006.01]

Symbol	Typ	Titel
H01M 10/60	1-Punkt Untergruppe	. Heating or cooling; Temperature control [2014.01]
H01M 10/61	2-Punkt Untergruppe	. . Types of temperature control [2014.01]
H01M 10/613	3-Punkt Untergruppe	. . . Cooling or keeping cold [2014.01]
H01M 10/615	3-Punkt Untergruppe	. . . Heating or keeping warm [2014.01]
H01M 10/617	3-Punkt Untergruppe	. . . for achieving uniformity or desired distribution of temperature [2014.01]
H01M 10/62	2-Punkt Untergruppe	. . specially adapted for specific applications [2014.01]
H01M 10/623	3-Punkt Untergruppe	. . . Portable devices, e.g. mobile telephones, cameras or pacemakers [2014.01]
H01M 10/6235	4-Punkt Untergruppe	. . . . Power tools [2014.01]
H01M 10/625	3-Punkt Untergruppe	. . . Vehicles [2014.01]
H01M 10/627	3-Punkt Untergruppe	. . . Stationary installations, e.g. power plant buffering or backup power supplies [2014.01]
H01M 10/63	2-Punkt Untergruppe	. . Control systems (measurement of temperature H01M 10/48; charging or discharging in response to temperature H01M 10/44) [2014.01]
H01M 10/633	3-Punkt Untergruppe	. . . characterised by algorithms, flow charts, software details or the like [2014.01]
H01M 10/635	3-Punkt Untergruppe	. . . based on ambient temperature [2014.01]
H01M 10/637	3-Punkt Untergruppe	. . . characterised by the use of reversible temperature-sensitive devices, e.g. NTC, PTC or bimetal devices; characterised by control of the internal current flowing through the cells, e.g. by switching (H01M 2/34 takes precedence) [2014.01]
H01M 10/64	2-Punkt Untergruppe	. . characterised by the shape of the cells [2014.01]
H01M 10/643	3-Punkt Untergruppe	. . . Cylindrical cells [2014.01]
H01M 10/647	3-Punkt Untergruppe	. . . Prismatic or flat cells, e.g. pouch cells [2014.01]
H01M 10/65	2-Punkt Untergruppe	. . Means for temperature control structurally associated with the cells [2014.01]
H01M 10/651	3-Punkt Untergruppe	. . . characterised by parameters specified by a numeric value or mathematical formula, e.g. ratios, sizes or concentrations [2014.01]
H01M 10/652	4-Punkt Untergruppe	. . . . characterised by gradients (for achieving a desired temperature gradient H01M 10/617) [2014.01]
H01M 10/653	3-Punkt Untergruppe	. . . characterised by electrically insulating or thermally conductive materials [2014.01]
H01M 10/654	3-Punkt Untergruppe	. . . located inside the innermost case of the cells, e.g. mandrels, electrodes or electrolytes [2014.01]
H01M 10/655	3-Punkt Untergruppe	. . . Solid structures for heat exchange or heat conduction [2014.01]
H01M 10/6551	4-Punkt Untergruppe	. . . . Surfaces specially adapted for heat dissipation or radiation, e.g. fins or coatings [2014.01]
H01M 10/6552	4-Punkt Untergruppe	. . . . Closed pipes transferring heat by thermal conductivity or phase transition, e.g. heat pipes [2014.01]
H01M 10/6553	4-Punkt Untergruppe	. . . . Terminals or leads [2014.01]
H01M 10/6554	4-Punkt Untergruppe	. . . . Rods or plates [2014.01]
H01M 10/6555	5-Punkt Untergruppe	. . . . . arranged between the cells [2014.01]
H01M 10/6556	4-Punkt Untergruppe	. . . . Solid parts with flow channel passages or pipes for heat exchange (closed pipes H01M 10/6552) [2014.01]

Symbol	Typ	Titel
H01M 10/6557	5-Punkt Untergruppe	. . . . . arranged between the cells [2014.01]
H01M 10/656	3-Punkt Untergruppe	. . . characterised by the type of heat-exchange fluid [2014.01]
H01M 10/6561	4-Punkt Untergruppe	. . . . Gases [2014.01]
H01M 10/6562	5-Punkt Untergruppe	. . . . . with free flow by convection only [2014.01]
H01M 10/6563	5-Punkt Untergruppe	. . . . . with forced flow, e.g. by blowers [2014.01]
H01M 10/6564	6-Punkt Untergruppe	. . . . . . using compressed gas [2014.01]
H01M 10/6565	6-Punkt Untergruppe	. . . . . . with recirculation or U-turn in the flow path, i.e. back and forth [2014.01]
H01M 10/6566	5-Punkt Untergruppe	. . . . . Means within the gas flow to guide the flow around one or more cells, e.g. manifolds, baffles or other barriers (H01M 10/6565 takes precedence) [2014.01]
H01M 10/6567	4-Punkt Untergruppe	. . . . Liquids [2014.01]
H01M 10/6568	5-Punkt Untergruppe	. . . . . characterised by flow circuits, e.g. loops, located externally to the cells or cell casings [2014.01]
H01M 10/6569	4-Punkt Untergruppe	. . . . Fluids undergoing a liquid-gas phase change or transition, e.g. evaporation or condensation (heat pipes H01M 10/6552) [2014.01]
H01M 10/657	3-Punkt Untergruppe	. . . by electric or electromagnetic means [2014.01]
H01M 10/6571	4-Punkt Untergruppe	. . . . Resistive heaters (arrangements for heating the battery by its resistance to the internal current H01M 10/637) [2014.01]
H01M 10/6572	4-Punkt Untergruppe	. . . . Peltier elements or thermoelectric devices [2014.01]
H01M 10/658	3-Punkt Untergruppe	. . . by thermal insulation or shielding [2014.01]
H01M 10/659	3-Punkt Untergruppe	. . . by heat storage or buffering, e.g. heat capacity or liquid-solid phase changes or transition [2014.01]
H01M 10/6595	3-Punkt Untergruppe	. . . by chemical reactions other than electrochemical reactions of the cells, e.g. catalytic heaters or burners [2014.01]
H01M 10/66	2-Punkt Untergruppe	. . Heat-exchange relationships between the cells and other systems, e.g. central heating systems or fuel cells [2014.01]
H01M 10/663	3-Punkt Untergruppe	. . . the system being an air-conditioner or an engine [2014.01]
H01M 10/667	3-Punkt Untergruppe	. . . the system being an electronic component, e.g. a CPU, an inverter or a capacitor [2014.01]
H01M 12/00	**Hauptgruppe**	**Hybrid cells; Manufacture thereof (hybrid capacitors H01G 11/00) [2, 2006.01]**
H01M 12/02	1-Punkt Untergruppe	. Details (of non-active parts H01M 2/00, of electrodes H01M 4/00) [2, 2006.01]
H01M 12/04	1-Punkt Untergruppe	. composed of a half-cell of the fuel-cell type and of a half-cell of the primary-cell type [2, 2006.01]
H01M 12/06	2-Punkt Untergruppe	. . with one metallic and one gaseous electrode [2, 2006.01]
H01M 12/08	1-Punkt Untergruppe	. composed of a half-cell of a fuel-cell type and a half-cell of the secondary-cell type [2, 2006.01]
H01M 14/00	**Hauptgruppe**	**Electrochemical current or voltage generators not provided for in groups H01M 6/00-H01M 12/00; Manufacture thereof [2, 2006.01]**
H01M 16/00	**Hauptgruppe**	**Structural combinations of different types of electrochemical generators [2, 2006.01]**