

# CPC COOPERATIVE PATENT CLASSIFICATION

## C CHEMISTRY; METALLURGY

(NOTES omitted)

### METALLURGY

## C25 ELECTROLYTIC OR ELECTROPHORETIC PROCESSES; APPARATUS THEREFOR

(NOTES omitted)

### C25B ELECTROLYTIC OR ELECTROPHORETIC PROCESSES FOR THE PRODUCTION OF COMPOUNDS OR NON-METALS; APPARATUS THEREFOR (anodic or cathodic protection [C23F 13/00](#); single-crystal growth [C30B](#))

#### NOTE

Compounds of particular interest are also classified in the relevant classes, e.g. in [C01](#), [C07](#), [C08](#).

#### 1/00 Electrolytic production of inorganic compounds or non-metals

1/042 . . . . by electrolysis of steam

#### WARNING

Group [C25B 1/00](#) is impacted by reclassification into groups [C25B 1/01](#), [C25B 1/135](#), [C25B 1/23](#), [C25B 1/27](#), and [C25B 1/50](#).

All groups listed in this Warning should be considered in order to perform a complete search.

#### WARNING

Group [C25B 1/042](#) is incomplete pending reclassification of documents from group [C25B 1/04](#).

Groups [C25B 1/04](#) and [C25B 1/042](#) should be considered in order to perform a complete search.

#### 1/01 . Products

1/044 . . . . producing mixed hydrogen and oxygen gas, e.g. Brown's gas [HHO]

#### WARNING

Group [C25B 1/01](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/01](#) should be considered in order to perform a complete search.

#### WARNING

Group [C25B 1/044](#) is incomplete pending reclassification of documents from group [C25B 1/04](#).

Groups [C25B 1/04](#) and [C25B 1/044](#) should be considered in order to perform a complete search.

#### 1/02 . . Hydrogen or oxygen

#### 1/04 . . . by electrolysis of water

1/13 . . Ozone

1/135 . . Carbon

#### WARNING

Group [C25B 1/04](#) is incomplete pending reclassification of documents from group [C25B 9/70](#).

Group [C25B 1/04](#) is also impacted by reclassification into groups [C25B 1/042](#), [C25B 1/044](#), [C25B 9/05](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/73](#), [C25B 9/75](#), [C25B 9/77](#), [C25B 11/00](#) and [C25B 11/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

#### WARNING

Group [C25B 1/135](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/135](#) should be considered in order to perform a complete search.

1/14 . . Alkali metal compounds

1/16 . . . Hydroxides (by simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine [C25B 1/34](#))

1/18 . . Alkaline earth metal compounds or magnesium compounds

1/20 . . . Hydroxides

1/21 . . Manganese oxides

1/22 . . Inorganic acids

- 1/23 . . Carbon monoxide or syngas

#### **WARNING**

Group [C25B 1/23](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/23](#) should be considered in order to perform a complete search.

- 1/24 . . Halogens or compounds thereof  
 1/245 . . . Fluorine; Compounds thereof  
 1/26 . . . Chlorine; Compounds thereof (by simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine [C25B 1/34](#))  
 1/265 . . . . {Chlorates}  
 1/27 . . Ammonia

#### **WARNING**

Group [C25B 1/27](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/27](#) should be considered in order to perform a complete search.

- 1/28 . . Per-compounds  
 1/29 . . . Persulfates  
 1/30 . . . Peroxides  
 1/32 . . . Perborates  
 1/33 . . Silicon  
 1/34 . . Simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine, e.g. by chlor-alkali electrolysis  
 1/36 . . . in mercury cathode cells  
 1/42 . . . . Decomposition of amalgams  
 1/44 . . . . with the aid of catalysts  
 1/46 . . . in diaphragm cells  
 1/50 . Processes

#### **WARNING**

Group [C25B 1/50](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/50](#) should be considered in order to perform a complete search.

- 1/55 . . Photoelectrolysis

### **3/00 Electrolytic production of organic compounds**

#### **WARNING**

Group [C25B 3/00](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#), [C25B 3/20](#), [C25B 3/21](#) and [C25B 3/26](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 3/01 . Products

#### **WARNING**

Groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#) and [C25B 3/11](#) are incomplete pending reclassification of documents from groups [C25B 3/00](#), [C25B 3/23](#), [C25B 3/25](#), [C25B 3/27](#), [C25B 3/28](#), [C25B 3/29](#) and [C25B 3/295](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 3/03 . . Acyclic or carbocyclic hydrocarbons  
 3/05 . . Heterocyclic compounds  
 3/07 . . Oxygen containing compounds  
 3/09 . . Nitrogen containing compounds  
 3/11 . . Halogen containing compounds  
 3/13 . . Organo-metallic compounds  
 3/20 . Processes

#### **WARNING**

Group [C25B 3/20](#) is incomplete pending reclassification of documents from group [C25B 3/00](#).

Groups [C25B 3/00](#) and [C25B 3/20](#) should be considered in order to perform a complete search.

- 3/21 . . Photoelectrolysis

#### **WARNING**

Group [C25B 3/21](#) is incomplete pending reclassification of documents from groups [C25B 3/00](#), [C25B 3/23](#), [C25B 3/25](#), [C25B 3/27](#), [C25B 3/28](#), [C25B 3/29](#), and [C25B 3/295](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 3/23 . . Oxidation (halogenation [C25B 3/27](#))

#### **WARNING**

Group [C25B 3/23](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 3/25 . . Reduction

#### **WARNING**

Group [C25B 3/25](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#), [C25B 3/21](#) and [C25B 3/26](#).

All groups listed in this Warning should be considered in order to perform a complete search.

3/26 . . . of carbon dioxide

#### **WARNING**

Group [C25B 3/26](#) is impacted by reclassification of documents from groups [C25B 3/00](#) and [C25B 3/25](#).

Groups [C25B 3/00](#), [C25B 3/25](#), and [C25B 3/26](#) should be considered in order to perform a complete search.

3/27 . . Halogenation

#### **WARNING**

Group [C25B 3/27](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#).

All groups listed in this Warning should be considered in order to perform a complete search.

3/28 . . . Fluorination

#### **WARNING**

Group [C25B 3/28](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#).

All groups listed in this Warning should be considered in order to perform a complete search.

3/29 . . Coupling reactions

#### **WARNING**

Group [C25B 3/29](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#).

All groups listed in this Warning should be considered in order to perform a complete search.

3/295 . . . {[hydrodimerisation](#)}

#### **WARNING**

Group [C25B 3/295](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#).

All groups listed in this Warning should be considered in order to perform a complete search.

**5/00 Electrogenative processes, i.e. processes for producing compounds in which electricity is generated simultaneously**

**7/00 Electrophoretic production of compounds or non-metals (separation or purification of peptides, e.g. of proteins, by electrophoresis [C07K 1/26](#))**

**9/00**

**Cells or assemblies of cells; Constructional parts of cells; Assemblies of constructional parts, e.g. electrode-diaphragm assemblies; Process-related cell features**

#### **WARNING**

Group [C25B 9/00](#) is impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/50](#), [C25B 9/60](#) and [C25B 9/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

9/005 . {[Amalgam decomposition cells](#)}

#### **WARNING**

Group [C25B 9/005](#) is incomplete pending reclassification of documents from group [C25B 9/70](#).

Groups [C25B 9/70](#) and [C25B 9/005](#) should be considered in order to perform a complete search.

9/01 . Electrolytic cells characterised by shape or form

#### **WARNING**

Groups [C25B 9/01](#) and [C25B 9/015](#) are incomplete pending reclassification of documents from groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/30](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).

All groups listed in this Warning should be considered in order to perform a complete search.

9/015 . . Cylindrical cells

9/05 . Pressure cells

#### **WARNING**

Group [C25B 9/05](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#), [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).

All groups listed in this Warning should be considered in order to perform a complete search.

9/07 . Common duct cells

#### **WARNING**

Group [C25B 9/07](#) is incomplete pending reclassification of documents from groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/30](#), [C25B 9/70](#), [C25B 9/73](#) and [C25B 9/75](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/09 . Fused bath cells
- WARNING**
- Group [C25B 9/09](#) is incomplete pending reclassification of documents from groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/13 . Single electrolytic cells with circulation of an electrolyte
- WARNING**
- Groups [C25B 9/13](#) and [C25B 9/15](#) are incomplete pending reclassification of documents from groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/30](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/15 . . Flow-through cells
- 9/17 . Cells comprising dimensionally-stable non-movable electrodes; Assemblies of constructional parts thereof
- WARNING**
- Group [C25B 9/17](#) is impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#) and [C25B 9/50](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/19 . . with diaphragms
- WARNING**
- Group [C25B 9/19](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#) and [C25B 9/73](#).
- Group [C25B 9/19](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/21](#), [C25B 9/50](#), [C25B 9/75](#), [C25B 9/77](#) and [C25B 11/036](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/21 . . . two or more diaphragms
- WARNING**
- Group [C25B 9/21](#) is incomplete pending reclassification of documents from group [C25B 9/19](#).
- Groups [C25B 9/19](#) and [C25B 9/21](#) should be considered in order to perform a complete search.
- 9/23 . . . comprising ion-exchange membranes in or on which electrode material is embedded
- WARNING**
- Group [C25B 9/23](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#) and [C25B 9/73](#).
- Group [C25B 9/23](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#) and [C25B 9/50](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/30 . Cells comprising movable electrodes, e.g. rotary electrodes; Assemblies of constructional parts thereof
- WARNING**
- Group [C25B 9/30](#) is impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/07](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 11/00](#), [C25B 11/02](#), [C25B 11/033](#) and [C25B 11/034](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/303 . . {comprising horizontal-type liquid electrode}
- 9/305 . . {comprising vertical-type liquid electrode}
- 9/40 . Cells or assemblies of cells comprising electrodes made of particles; Assemblies of constructional parts thereof
- WARNING**
- Group [C25B 9/40](#) is impacted by reclassification into groups [C25B 9/43](#), [C25B 9/47](#), [C25B 11/02](#) and [C25B 11/037](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 9/43 . . {comprising fluidised bed electrodes}
- WARNING**
- Group [C25B 9/43](#) is incomplete pending reclassification of documents from group [C25B 9/40](#).
- Groups [C25B 9/40](#) and [C25B 9/43](#) should be considered in order to perform a complete search.
- 9/47 . . {comprising static bed electrodes}
- WARNING**
- Group [C25B 9/47](#) is incomplete pending reclassification of documents from group [C25B 9/40](#).
- Groups [C25B 9/40](#) and [C25B 9/47](#) should be considered in order to perform a complete search.

- 9/50 . Cells or assemblies of cells comprising photoelectrodes; Assemblies of constructional parts thereof

**WARNING**

Group [C25B 9/50](#) is incomplete pending reclassification of documents from groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/60 . Constructional parts of cells

**WARNING**

Group [C25B 9/60](#) is incomplete pending reclassification of documents from group [C25B 9/00](#).

Groups [C25B 9/00](#) and [C25B 9/60](#) should be considered in order to perform a complete search.

- 9/63 . . Holders for electrodes; Positioning of the electrodes
- 9/65 . . Means for supplying current; Electrode connections; Electric inter-cell connections
- 9/66 . . . {Electric inter-cell connections including jumper switches}
- 9/67 . . Heating or cooling means

**WARNING**

Group [C25B 9/67](#) is incomplete pending reclassification of documents from group [C25B 9/00](#).

Groups [C25B 9/00](#) and [C25B 9/67](#) should be considered in order to perform a complete search.

- 9/70 . Assemblies comprising two or more cells

**WARNING**

Group [C25B 9/70](#) is impacted by reclassification into groups [C25B 1/04](#), [C25B 9/005](#), [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/50](#), [C25B 11/00](#) and [C25B 11/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/73 . . of the filter-press type

**WARNING**

Group [C25B 9/73](#) is incomplete pending reclassification of documents from group [C25B 1/04](#).

Group [C25B 9/73](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/50](#), [C25B 9/75](#) and [C25B 9/77](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/75 . . . having bipolar electrodes

**WARNING**

Group [C25B 9/75](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#), [C25B 9/19](#), [C25B 9/73](#), [C25B 9/77](#) and [C25B 11/036](#).

Group [C25B 9/75](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#) and [C25B 9/50](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 9/77 . . . having diaphragms

**WARNING**

Group [C25B 9/77](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#), [C25B 9/19](#), [C25B 9/73](#) and [C25B 11/036](#).

Group [C25B 9/77](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/50](#) and [C25B 9/75](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 11/00 **Electrodes; Manufacture thereof not otherwise provided for**

**WARNING**

Group [C25B 11/00](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#), [C25B 9/30](#), and [C25B 9/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 11/02 . characterised by shape or form

**WARNING**

Group [C25B 11/02](#) is incomplete pending reclassification of documents from groups [C25B 1/04](#), [C25B 9/30](#), [C25B 9/40](#), and [C25B 9/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 11/03 . . perforated or foraminous

- 11/031 . . . Porous electrodes

**WARNING**

Group [C25B 11/031](#) is impacted by reclassification into group [C25B 11/032](#).

Groups [C25B 11/031](#) and [C25B 11/032](#) should be considered in order to perform a complete search.

- 11/032 . . . . Gas diffusion electrodes

**WARNING**

Group [C25B 11/032](#) is incomplete pending reclassification of documents from group [C25B 11/031](#).

Groups [C25B 11/031](#) and [C25B 11/032](#) should be considered in order to perform a complete search.

- 11/033 . . Liquid electrodes

**WARNING**

Group [C25B 11/033](#) is incomplete pending reclassification of documents from group [C25B 9/30](#).

Groups [C25B 9/30](#) and [C25B 11/033](#) should be considered in order to perform a complete search.

- 11/034 . . Rotary electrodes

**WARNING**

Group [C25B 11/034](#) is incomplete pending reclassification of documents from group [C25B 9/30](#).

Groups [C25B 9/30](#) and [C25B 11/034](#) should be considered in order to perform a complete search.

- 11/036 . . Bipolar electrodes

**WARNING**

Group [C25B 11/036](#) is incomplete pending reclassification of documents from group [C25B 9/19](#).

Group [C25B 11/036](#) is also impacted by reclassification into groups [C25B 9/75](#) and [C25B 9/77](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 11/037 . . Electrodes made of particles

**WARNING**

Group [C25B 11/037](#) is incomplete pending reclassification of documents from group [C25B 9/40](#).

Groups [C25B 9/40](#) and [C25B 11/037](#) should be considered in order to perform a complete search.

- 11/04 . characterised by the material

**WARNING**

Group [C25B 11/04](#) is impacted by reclassification into groups [C25B 11/042](#), [C25B 11/046](#), [C25B 11/047](#), [C25B 11/048](#), [C25B 11/049](#) and [C25B 11/051](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 11/042 . . Electrodes formed of a single material

**WARNING**

Group [C25B 11/042](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Groups [C25B 11/042](#) and [C25B 11/04](#) should be considered in order to perform a complete search.

- 11/043 . . . Carbon, e.g. diamond or graphene

**WARNING**

Group [C25B 11/043](#) is impacted by reclassification into group [C25B 11/044](#).

Groups [C25B 11/043](#) and [C25B 11/044](#) should be considered in order to perform a complete search.

- 11/044 . . . . Impregnation of carbon

**WARNING**

Group [C25B 11/044](#) is incomplete pending reclassification of documents from group [C25B 11/043](#).

Groups [C25B 11/043](#) and [C25B 11/044](#) should be considered in order to perform a complete search.

- 11/045 . . . Mercury or amalgam

- 11/046 . . . Alloys

**WARNING**

Group [C25B 11/046](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Groups [C25B 11/046](#) and [C25B 11/04](#) should be considered in order to perform a complete search.



11/047 . . . Ceramics

**WARNING**

Group [C25B 11/047](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Groups [C25B 11/047](#) and [C25B 11/04](#) should be considered in order to perform a complete search.

11/048 . . . Organic compounds

**WARNING**

Group [C25B 11/048](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Groups [C25B 11/048](#) and [C25B 11/04](#) should be considered in order to perform a complete search.

11/049 . . . Photocatalysts

**WARNING**

Group [C25B 11/049](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Groups [C25B 11/049](#) and [C25B 11/04](#) should be considered in order to perform a complete search.

11/051 . . Electrodes formed of electrocatalysts on a substrate or carrier

**WARNING**

Group [C25B 11/051](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).

Group [C25B 11/051](#) is also impacted by reclassification into groups [C25B 11/052](#), [C25B 11/053](#), [C25B 11/054](#), [C25B 11/055](#), [C25B 11/056](#), [C25B 11/057](#), [C25B 11/065](#), [C25B 11/067](#), [C25B 11/069](#), [C25B 11/073](#), [C25B 11/075](#), [C25B 11/077](#), [C25B 11/079](#), [C25B 11/083](#), [C25B 11/085](#), [C25B 11/087](#), [C25B 11/089](#) and [C25B 11/097](#).

All groups listed in this Warning should be considered in order to perform a complete search.

11/052 . . . Electrodes comprising one or more electrocatalytic coatings on a substrate

**WARNING**

Groups [C25B 11/052](#) and [C25B 11/053](#) are incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#), [C25B 11/052](#), and [C25B 11/053](#) should be considered in order to perform a complete search.

11/053 . . . characterised by multilayer electrocatalytic coatings

11/054 . . . Electrodes comprising electrocatalysts supported on a carrier

**WARNING**

Group [C25B 11/054](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/054](#) should be considered in order to perform a complete search.

11/055 . . . characterised by the substrate or carrier material

**WARNING**

Group [C25B 11/055](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Group [C25B 11/055](#) is also impacted by reclassification into group [C25B 11/056](#).

Groups [C25B 11/051](#), [C25B 11/055](#) and [C25B 11/056](#) should be considered in order to perform a complete search.

11/056 . . . . consisting of textile or non-woven fabric

**WARNING**

Group [C25B 11/056](#) is incomplete pending reclassification of documents from groups [C25B 11/051](#) and [C25B 11/055](#).

Groups [C25B 11/051](#), [C25B 11/055](#) and [C25B 11/056](#) should be considered in order to perform a complete search.

11/057 . . . . consisting of a single element or compound

**WARNING**

Group [C25B 11/057](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Group [C25B 11/057](#) is also impacted by reclassification into groups [C25B 11/063](#), [C25B 11/065](#) and [C25B 11/067](#).

All groups listed in this Warning should be considered in order to perform a complete search.

11/059 . . . . . Silicon

11/061 . . . . . Metal or alloy

**WARNING**

Group [C25B 11/061](#) is impacted by reclassification into group [C25B 11/063](#).

Groups [C25B 11/061](#) and [C25B 11/063](#) should be considered in order to perform a complete search.

11/063 . . . . . Valve metal, e.g. titanium

**WARNING**

Group [C25B 11/063](#) is incomplete pending reclassification of documents from groups [C25B 11/057](#) and [C25B 11/061](#).

Groups [C25B 11/057](#), [C25B 11/061](#) and [C25B 11/063](#) should be considered in order to perform a complete search.

11/065 . . . . . Carbon

**WARNING**

Group [C25B 11/065](#) is incomplete pending reclassification of documents from groups [C25B 11/051](#) and [C25B 11/057](#).

Groups [C25B 11/051](#), [C25B 11/057](#) and [C25B 11/065](#) should be considered in order to perform a complete search.

11/067 . . . . . Inorganic compound e.g. ITO, silica or titania

**WARNING**

Group [C25B 11/067](#) is incomplete pending reclassification of documents from groups [C25B 11/051](#) and [C25B 11/057](#).

Groups [C25B 11/051](#), [C25B 11/057](#) and [C25B 11/067](#) should be considered in order to perform a complete search.

11/069 . . . . . consisting of at least one single element and at least one compound; consisting of two or more compounds

**WARNING**

Group [C25B 11/069](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/069](#) should be considered in order to perform a complete search.

11/071 . . . . . comprising metal or alloy powder and non-metallic binders

11/073 . . . characterised by the electrocatalyst material

**WARNING**

Group [C25B 11/073](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/073](#) should be considered in order to perform a complete search.

11/075 . . . . . consisting of a single catalytic element or catalytic compound

**WARNING**

Group [C25B 11/075](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/075](#) should be considered in order to perform a complete search.

11/077 . . . . . the compound being a non-noble metal oxide

**WARNING**

Group [C25B 11/077](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/077](#) should be considered in order to perform a complete search.

11/0771 . . . . . {of the spinel type}

11/0773 . . . . . {of the perovskite type}

11/0775 . . . . . {of the rutile type}

11/079 . . . . . Manganese dioxide; Lead dioxide

**WARNING**

Group [C25B 11/079](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/079](#) should be considered in order to perform a complete search.

11/081 . . . . . the element being a noble metal

11/083 . . . . . Diamond

**WARNING**

Group [C25B 11/083](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/083](#) should be considered in order to perform a complete search.

11/085 . . . . . Organic compound

**WARNING**

Group [C25B 11/085](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/085](#) should be considered in order to perform a complete search.

11/087 . . . . . Photocatalytic compound

**WARNING**

Group [C25B 11/087](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/087](#) should be considered in order to perform a complete search.



11/089 . . . . . Alloys

**WARNING**

Group [C25B 11/089](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/089](#) should be considered in order to perform a complete search.

11/091 . . . . . consisting of at least one catalytic element and at least one catalytic compound; consisting of two or more catalytic elements or catalytic compounds

11/093 . . . . . at least one noble metal or noble metal oxide and at least one non-noble metal oxide

11/095 . . . . . at least one of the compounds being organic

11/097 . . . . . comprising two or more noble metals or noble metal alloys

**WARNING**

Group [C25B 11/097](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

Groups [C25B 11/051](#) and [C25B 11/097](#) should be considered in order to perform a complete search.

**13/00 Diaphragms; Spacing elements**

13/02 . characterised by shape or form

13/04 . characterised by the material

**WARNING**

Group [C25B 13/04](#) is impacted by reclassification into groups [C25B 13/05](#) and [C25B 13/07](#).

Groups [C25B 13/04](#), [C25B 13/05](#), and [C25B 13/07](#) should be considered in order to perform a complete search.

13/05 . . based on inorganic materials

**WARNING**

Group [C25B 13/05](#) is incomplete pending reclassification of documents from group [C25B 13/04](#).

Groups [C25B 13/04](#) and [C25B 13/05](#) should be considered in order to perform a complete search.

13/06 . . . based on asbestos

13/07 . . . based on ceramics

**WARNING**

Group [C25B 13/07](#) is incomplete pending reclassification of documents from group [C25B 13/04](#).

Groups [C25B 13/04](#) and [C25B 13/07](#) should be considered in order to perform a complete search.

13/08 . . based on organic materials

**15/00 Operating or servicing cells**

15/02 . Process control or regulation

**WARNING**

Group [C25B 15/02](#) is impacted by reclassification into groups [C25B 15/021](#), [C25B 15/023](#), [C25B 15/025](#), [C25B 15/027](#), [C25B 15/029](#), [C25B 15/031](#), and [C25B 15/033](#).

All groups listed in this Warning should be considered in order to perform a complete search.

15/021 . . of heating or cooling

**WARNING**

Group [C25B 15/021](#) is incomplete pending reclassification of documents from group [C25B 15/02](#).

Groups [C25B 15/02](#) and [C25B 15/021](#) should be considered in order to perform a complete search.

15/023 . . Measuring, analysing or testing during electrolytic production

**WARNING**

Groups [C25B 15/023](#) - [C25B 15/033](#) are incomplete pending reclassification of documents from group [C25B 15/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

15/025 . . . of electrolyte parameters

15/027 . . . . Temperature

15/029 . . . . Concentration

15/031 . . . . . pH

15/033 . . . . Conductivity

15/04 . Regulation of the inter-electrode distance

15/06 . Detection or inhibition of short circuits in the cell

15/08 . Supplying or removing reactants or electrolytes; Regeneration of electrolytes

**WARNING**

Group [C25B 15/08](#) is impacted by reclassification into groups [C25B 15/081](#), [C25B 15/083](#), [C25B 15/085](#), and [C25B 15/087](#).

All groups listed in this Warning should be considered in order to perform a complete search.

15/081 . . {Supplying products to non-electrochemical reactors that are combined with the electrochemical cell, e.g. Sabatier reactor}

**WARNING**

Group [C25B 15/081](#) is incomplete pending reclassification of documents from group [C25B 15/08](#).

Groups [C25B 15/08](#) and [C25B 15/081](#) should be considered in order to perform a complete search.

15/083 . . {Separating products}

**WARNING**

Group [C25B 15/083](#) is incomplete pending reclassification of documents from group [C25B 15/08](#).

Groups [C25B 15/08](#) and [C25B 15/083](#) should be considered in order to perform a complete search.

15/085 . . {Removing impurities}

**WARNING**

Group [C25B 15/085](#) is incomplete pending reclassification of documents from group [C25B 15/08](#).

Groups [C25B 15/08](#) and [C25B 15/085](#) should be considered in order to perform a complete search.

15/087 . . {Recycling of electrolyte to electrochemical cell}

**WARNING**

Group [C25B 15/087](#) is incomplete pending reclassification of documents from group [C25B 15/08](#).

Groups [C25B 15/08](#) and [C25B 15/087](#) should be considered in order to perform a complete search.