

**CPC****COOPERATIVE PATENT CLASSIFICATION****C01G****COMPOUNDS CONTAINING METALS NOT COVERED BY SUBCLASSES [C01D](#) OR [C01F](#)**

(metal hydrides { monoborane, diborane or addition complexes thereof} [C01B 6/00](#); salts of oxyacids of halogens [C01B 11/00](#); peroxides, salts or peroxyacids [C01B 15/00](#); thiosulfates, dithionites, polythionates [C01B 17/64](#); compounds containing selenium, or tellurium [C01B 19/00](#); binary compounds of nitrogen with metals [C01B 21/06](#); azides [C01B 21/08](#); { compounds containing nitrogen, other non-metals and metal [C01B 21/082](#)}; metal amides [C01B 21/092](#); nitrites [C01B 21/50](#); { compounds of noble gases [C01B 23/0005](#)}; phosphides [C01B 25/08](#); salts of oxyacids of phosphorus [C01B 25/16](#); carbides [C01B 31/30](#); compounds containing silicon [C01B 33/00](#); compounds containing boron [C01B 35/00](#); compounds having molecular sieve properties but not having base-exchange properties [C01B 37/00](#); compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites, [C01B 39/00](#); cyanides [C01C 3/08](#); salts of cyanamide [C01C 3/16](#); thiocyanates [C01C 3/20](#))

**WARNING**

Groups [C01G 51/30](#) to [C01G 51/70](#) and [C01G 53/40](#) to [C01G 53/70](#) do not correspond to former or current IPC-groups. The concordance CPC : IPC is as follows: - [C01G 51/30](#) - [C01G 51/70](#) : [C01G 51/00](#) - [C01G 53/40](#) - [C01G 53/70](#) : [C01G 53/00](#)

**C01G 1/00**

**Methods of preparing compounds of metals not covered by subclasses [C01B](#), [C01C](#), [C01D](#), or [C01F](#), in general** (electrolytic production of inorganic compounds [C25B 1/00](#))

- [C01G 1/02](#) . Oxides
- [C01G 1/04](#) . Carbonyls
- [C01G 1/06](#) . Halides
- [C01G 1/08](#) . Nitrates
- [C01G 1/10](#) . Sulfates
- [C01G 1/12](#) . Sulfides
- [C01G 1/14](#) . Sulfites

**C01G 3/00****Compounds of copper**

- [C01G 3/003](#) . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- [C01G 3/006](#) . {Compounds containing, besides copper, two or more other elements, with the exception of oxygen or hydrogen}
- [C01G 3/02](#) . Oxides; Hydroxides
- [C01G 3/04](#) . Halides
- [C01G 3/05](#) .. Chlorides
- [C01G 3/06](#) .. Oxychlorides

C01G 3/08	. Nitrates
C01G 3/10	. Sulfates
C01G 3/12	. Sulfides
C01G 3/14	. Complexes with ammonia
<b>C01G 5/00</b>	<b>Compounds of silver</b>
C01G 5/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 5/006	. {Compounds containing, besides silver, two or more other elements, with the exception of oxygen or hydrogen}
C01G 5/02	. Halides
<b>C01G 7/00</b>	<b>Compounds of gold</b>
C01G 7/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 7/006	. {Compounds containing, besides gold, two or more other elements, with the exception of oxygen or hydrogen}
<b>C01G 9/00</b>	<b>Compounds of zinc</b>
C01G 9/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 9/006	. {Compounds containing, besides zinc, two or more other elements, with the exception of oxygen or hydrogen}
C01G 9/02	. Oxides; Hydroxides
C01G 9/03	. . Processes of production using dry methods, e.g. vapour phase processes
C01G 9/04	. Halides
C01G 9/06	. Sulfates
C01G 9/08	. Sulfides
<b>C01G 11/00</b>	<b>Compounds of cadmium</b>
C01G 11/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 11/006	. {Compounds containing, besides cadmium, two or more other elements, with the exception of oxygen or hydrogen}
C01G 11/02	. Sulfides
<b>C01G 13/00</b>	<b>Compounds of mercury</b>
C01G 13/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 13/006	. {Compounds containing, besides mercury, two or more other elements, with the exception of oxygen or hydrogen}
C01G 13/02	. Oxides
C01G 13/04	. Halides
<b>C01G 15/00</b>	<b>Compounds of gallium, indium or thallium</b>
C01G 15/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 15/006	. {Compounds containing, besides gallium, indium, or thallium, two or more other elements, with the exception of oxygen or hydrogen}

**C01G 17/00****Compounds of germanium**

C01G 17/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 17/006

. {Compounds containing, besides germanium, two or more other elements, with the exception of oxygen or hydrogen}

C01G 17/02

. Germanium dioxide

C01G 17/04

. Halides of germanium

**C01G 19/00****Compounds of tin**

C01G 19/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 19/006

. {Compounds containing, besides tin, two or more other elements, with the exception of oxygen or hydrogen}

C01G 19/02

. Oxides

C01G 19/04

. Halides

C01G 19/06

.. Stannous chloride

C01G 19/08

.. Stannic chloride

**C01G 21/00****Compounds of lead**

C01G 21/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 21/006

. {Compounds containing, besides lead, two or more other elements, with the exception of oxygen or hydrogen}

C01G 21/02

. Oxides

C01G 21/04

.. Lead suboxide ( $\text{Pb}_2\text{O}$ )

C01G 21/06

.. Lead monoxide ( $\text{PbO}$ )

C01G 21/08

.. Lead dioxide ( $\text{PbO}_2$ )

C01G 21/10

.. Red lead ( $\text{Pb}_3\text{O}_4$ )

C01G 21/12

. Hydroxides

C01G 21/14

. Carbonates

C01G 21/16

. Halides

C01G 21/18

. Nitrates

C01G 21/20

. Sulfates

C01G 21/21

. Sulfides

C01G 21/22

. Plumbates; Plumbites

**C01G 23/00****Compounds of titanium** {(preparation of Ti-compounds from ores or scraps [C22B 34/12](#))}

C01G 23/001

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 23/002

. {Compounds containing, besides titanium, two or more other elements, with the exception of oxygen or hydrogen ([C01G 23/001](#) takes precedence)}

C01G 23/003

. {Titanates, e.g. titanates of two or more metals other than titanium ([C01G 23/001](#) takes precedence)}

C01G 23/005

.. {Alkali titanates}

C01G 23/006

.. {Alkaline earth titanates}

- C01G 23/007 . {Titanium sulfides ([C01G 23/001](#) takes precedence)}
- C01G 23/008 . {Titanium- and titanyl sulfate ([C01G 23/001](#) takes precedence)}
- C01G 23/02 . Halides of titanium
- C01G 23/022 .. {Titanium tetrachloride}
- C01G 23/024 ... {Purification of tetrachloride}
- C01G 23/026 .. {Titanium trichloride}
- C01G 23/028 .. {Titanium fluoride}
- C01G 23/04 . Oxides; Hydroxides
- C01G 23/043 .. {Titanium sub-oxides}
- C01G 23/047 .. Titanium dioxide
- C01G 23/0475 ... {Purification}
- C01G 23/053 ... Producing by wet processes, e.g. hydrolysing titanium salts
- C01G 23/0532 .... {by hydrolysing sulfate-containing salts}
- C01G 23/0534 ..... {in the presence of seeds}
- C01G 23/0536 .... {by hydrolysing chloride-containing salts}
- C01G 23/0538 ..... {in the presence of seeds}
- C01G 23/07 ... Producing by vapour phase processes, e.g. halide oxidation
- C01G 23/075 .... {Evacuation and cooling of the gaseous suspension containing the oxide;  
Desacidification and elimination of gases occluded in the separated oxide}
- C01G 23/08 ... Drying; Calcining; {After treatment of titanium oxide}

**C01G 25/00****Compounds of zirconium**

- C01G 25/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 25/006 . {Compounds containing, besides zirconium, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 25/02 . Oxides
- C01G 25/04 . Halides
- C01G 25/06 . Sulfates

**C01G 27/00****Compounds of hafnium**

- C01G 27/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 27/006 . {Compounds containing, besides hafnium, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 27/02 . Oxides
- C01G 27/04 . Halides
- C01G 27/06 . Sulfates

**C01G 28/00****Compounds of arsenic**

- C01G 28/001 . {Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange}
- C01G 28/002 . {Compounds containing, besides arsenic, two or more other elements, with the exception of oxygen or hydrogen ([C01G 28/001](#) takes precedence)}
- C01G 28/004 .. {containing halogen}

C01G 28/005	. {Oxides; Hydroxides; Oxyacids ( <a href="#">C01G 28/001</a> takes precedence)}
C01G 28/007	. {Halides ( <a href="#">C01G 28/001</a> takes precedence)}
C01G 28/008	. {Sulfides ( <a href="#">C01G 28/001</a> takes precedence)}
C01G 28/02	. Arsenates; Arsenites {( <a href="#">C01G 28/001</a> takes precedence)}
C01G 28/023	.. {of ammonium, alkali or alkaline-earth metals or magnesium}
C01G 28/026	.. {containing at least two metals}
<b>C01G 29/00</b>	<b>Compounds of bismuth</b>
C01G 29/003	. {Preparations involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 29/006	. {Compounds containing, besides bismuth, two or more other elements, with the exception of oxygen or hydrogen}
<b>C01G 30/00</b>	<b>Compounds of antimony</b>
C01G 30/001	. {Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange}
C01G 30/002	. {Compounds containing, besides antimony, two or more other elements, with the exception of oxygen or hydrogen ( <a href="#">C01G 30/001</a> takes precedence)}
C01G 30/003	.. {containing halogen}
C01G 30/004	. {Oxides; Hydroxides; Oxyacids ( <a href="#">C01G 30/001</a> takes precedence)}
C01G 30/005	.. {Oxides}
C01G 30/006	. {Halides ( <a href="#">C01G 30/001</a> takes precedence)}
C01G 30/007	.. {of binary type SbX <sub>3</sub> or SbX <sub>5</sub> with X representing a halogen, or mixed of the type SbX <sub>3</sub> X' <sub>2</sub> with X,X' representing different halogens}
C01G 30/008	. {Sulfides ( <a href="#">C01G 30/001</a> takes precedence)}
C01G 30/02	. Antimonates; Antimonites {( <a href="#">C01G 30/001</a> takes precedence)}
C01G 30/023	.. {of ammonium, alkali or alkaline-earth metals or magnesium}
C01G 30/026	.. {containing at least two metals}
<b>C01G 31/00</b>	<b>Compounds of vanadium</b>
C01G 31/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 31/006	. {Compounds containing, besides vanadium, two or more other elements, with the exception of oxygen or hydrogen}
C01G 31/02	. Oxides
C01G 31/04	. Halides
<b>C01G 33/00</b>	<b>Compounds of niobium</b>
C01G 33/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 33/006	. {Compounds containing, besides niobium, two or more other elements, with the exception of oxygen or hydrogen}
<b>C01G 35/00</b>	<b>Compounds of tantalum</b>
C01G 35/003	. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
C01G 35/006	. {Compounds containing, besides tantalum, two or more other elements, with the exception of oxygen or hydrogen}
C01G 35/02	. Halides

**C01G 37/00****Compounds of chromium**

C01G 37/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 37/006

. {Compounds containing, besides chromium, two or more other elements, with the exception of oxygen or hydrogen}

C01G 37/02

. Oxides or hydrates thereof

C01G 37/027

.. Chromium dioxide

C01G 37/033

.. Chromium trioxide; Chromic acid

C01G 37/04

. Chromium halides

C01G 37/06

.. Chromylhalides

C01G 37/08

. Chromium sulfates

C01G 37/10

.. Chrome alum

C01G 37/14

. Chromates; Bichromates

**C01G 39/00****Compounds of molybdenum**

C01G 39/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 39/006

. {Compounds containing, besides molybdenum, two or more other elements, with the exception of oxygen or hydrogen}

C01G 39/02

. Oxides; Hydroxides

C01G 39/04

. Halides

C01G 39/06

. Sulfides

**C01G 41/00****Compounds of tungsten**

C01G 41/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 41/006

. {Compounds containing, besides tungsten, two or more other elements, with the exception of oxygen or hydrogen}

C01G 41/02

. Oxides; Hydroxides

C01G 41/04

. Halides

**C01G 43/00****Compounds of uranium**

C01G 43/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 43/006

. {Compounds containing, besides uranium, two or more other elements, with the exception of oxygen or hydrogen}

C01G 43/01

. Oxides; Hydroxides

C01G 43/025

.. Uranium dioxide

C01G 43/04

. Halides of uranium

C01G 43/06

.. Fluorides

C01G 43/063

... {Hexafluoride (UF<sub>6</sub>)}

C01G 43/066

.... {Preparation}

C01G 43/08

.. Chlorides

C01G 43/10

.. Bromides

C01G 43/12

.. Iodides

**C01G 45/00****Compounds of manganese**

C01G 45/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 45/006

. {Compounds containing, besides manganese, two or more other elements, with the exception of oxygen or hydrogen ([manganates, manganites or permanganates C01G 45/12](#))}

C01G 45/02

. Oxides; Hydroxides

C01G 45/04

. Carbonyls

C01G 45/06

. Halides

C01G 45/08

. Nitrates

C01G 45/10

. Sulfates

C01G 45/12

. Manganates { [manganites or](#) permanganates

C01G 45/1207

.. { [Permanganates \(\[MnO<sub>4</sub>\]-\)](#) or manganates ([MnO<sub>4</sub>]<sup>2-</sup>)

C01G 45/1214

... { [containing alkali metals](#)}

C01G 45/1221

.. { [Manganates or manganites with a manganese oxidation state of Mn\(III\), Mn\(IV\) or mixtures thereof](#)}

C01G 45/1228

... { [of the type \[MnO<sub>2</sub>\]<sub>n-</sub>](#), e.g. LiMnO<sub>2</sub>, Li[MxMn<sub>1-x</sub>]O<sub>2</sub> }

C01G 45/1235

... { [of the type \[Mn<sub>2</sub>O<sub>4</sub>\]<sup>2-</sup>](#), e.g. Li<sub>2</sub>Mn<sub>2</sub>O<sub>4</sub>, Li<sub>2</sub>[MxMn<sub>2-x</sub>]O<sub>4</sub> }

C01G 45/1242

... { [of the type \[Mn<sub>2</sub>O<sub>4</sub>\]-](#), e.g. LiMn<sub>2</sub>O<sub>4</sub>, Li[MxMn<sub>2-x</sub>]O<sub>4</sub> }

C01G 45/125

... { [of the type \[MnO<sub>3</sub>\]<sub>n-</sub>](#), e.g. Li<sub>2</sub>MnO<sub>3</sub>, Li<sub>2</sub>[MxMn<sub>1-x</sub>]O<sub>3</sub>, (La,Sr)MnO<sub>3</sub>}

C01G 45/1257

.... { [containing lithium](#), e.g. Li<sub>2</sub>MnO<sub>3</sub>, Li<sub>2</sub>[MxMn<sub>1-x</sub>]O<sub>3</sub>}

C01G 45/1264

.... { [containing rare earth](#), e.g. La<sub>1-x</sub>CaxMnO<sub>3</sub>, LaMnO<sub>3</sub>}

C01G 45/1271

... { [of the type \[Mn<sub>2</sub>O<sub>8</sub>\]<sub>n-</sub>](#), e.g. (LaSr<sub>3</sub>)Mn<sub>2</sub>O<sub>8</sub>}

C01G 45/1278

... { [of the type \[Mn<sub>2</sub>O<sub>7</sub>\]<sub>n-</sub>](#), e.g. (Sr<sub>2-x</sub>Ndx)Mn<sub>2</sub>O<sub>7</sub>, Ti<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>}

C01G 45/1285

... { [of the type \[Mn<sub>2</sub>O<sub>5</sub>\]<sub>n-</sub>](#)}

C01G 45/1292

... { [of the type \[Mn<sub>5</sub>O<sub>12</sub>\]<sub>n-</sub>](#)}**C01G 47/00****Compounds of rhenium**

C01G 47/003

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 47/006

. {Compounds containing, besides rhenium, two or more other elements, with the exception of oxygen or hydrogen}

**C01G 49/00****Compounds of iron**

C01G 49/0009

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 49/0018

. {[Mixed oxides or hydroxides](#), e.g. ferrites ([C01G 49/0009 takes precedence](#))}

C01G 49/0027

.. {[containing one alkali metal](#)}

C01G 49/0036

.. {[containing one alkaline earth metal, magnesium or lead](#)}

C01G 49/0045

.. {[containing aluminium](#)}

C01G 49/0054

.. {[containing one rare earth metal, yttrium or scandium](#)}

C01G 49/0063

.. {[containing zinc](#)}

C01G 49/0072

.. {[containing manganese](#)}

C01G 49/0081

.. {[containing iron in unusual valence state \(IV, V, VI\)](#), e.g. ferrates}

- C01G 49/009 . {Compounds containing, besides iron, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 49/02 . Oxides; Hydroxides {(C01G 49/0018 takes precedence)}
- C01G 49/04 . . Ferrous oxide (FeO)
- C01G 49/06 . . Ferric oxide (Fe<sub>2</sub>O<sub>3</sub>)
- C01G 49/08 . . Ferroso-ferric oxide (Fe<sub>3</sub>O<sub>4</sub>)
- C01G 49/10 . Halides {(C01G 49/0018 takes precedence)}
- C01G 49/12 . Sulfides {(C01G 49/0018 takes precedence)}
- C01G 49/14 . Sulfates {(C01G 49/0018 takes precedence)}
- C01G 49/16 . Carbonyls {(C01G 49/0018 takes precedence)}

**C01G 51/00****Compounds of cobalt**

- C01G 51/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 51/006 . {Compounds containing, besides cobalt, two or more other elements, with the exception of oxygen or hydrogen (cobaltates C01G 51/40)}
- C01G 51/02 . Carbonyls
- C01G 51/04 . Oxides; Hydroxides
- C01G 51/06 . Carbonates
- C01G 51/08 . Halides
- C01G 51/085 . . {Chlorides}
- C01G 51/10 . Sulfates
- C01G 51/12 . Complexes with ammonia
- C01G 51/30 . {Sulfides}
- C01G 51/40 . {Cobaltates}
- C01G 51/42 . . {containing alkali metals, e.g. LiCoO<sub>2</sub>}
- C01G 51/44 . . . {containing manganese}
- C01G 51/50 . . . . {of the type [MnO<sub>2</sub>]<sup>n-</sup>, e.g. Li(CoxMn<sub>1-x</sub>)O<sub>2</sub>, Li(MyCoxMn<sub>1-x-y</sub>)O<sub>2</sub>}
- C01G 51/52 . . . . {of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>2-</sup>, e.g. Li<sub>2</sub>(CoxMn<sub>2-x</sub>)O<sub>4</sub>, Li<sub>2</sub>(MyCoxMn<sub>2-x-y</sub>)O<sub>4</sub>}
- C01G 51/54 . . . . {of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>-</sup>, e.g. Li(CoxMn<sub>2-x</sub>)O<sub>4</sub>, Li(MyCoxMn<sub>2-x-y</sub>)O<sub>4</sub>}
- C01G 51/56 . . . . {of the type [MnO<sub>3</sub>]<sup>2-</sup>, e.g. Li<sub>2</sub>[CoxMn<sub>1-x</sub>O<sub>3</sub>], Li<sub>2</sub>[MyCoxMn<sub>1-x-y</sub>O<sub>3</sub>]}
- C01G 51/58 . . . . {of the type [Mn<sub>2</sub>O<sub>8</sub>]<sup>n-</sup>}
- C01G 51/60 . . . . {of the type [Mn<sub>2</sub>O<sub>7</sub>]<sup>n-</sup>}
- C01G 51/62 . . . . {of the type [Mn<sub>2</sub>O<sub>5</sub>]<sup>n-</sup>}
- C01G 51/64 . . . . {of the type [Mn<sub>5</sub>O<sub>12</sub>]<sup>n-</sup>}
- C01G 51/66 . . {containing alkaline earth metals, e.g. SrCoO<sub>3</sub>}
- C01G 51/68 . . . {containing rare earth, e.g. La<sub>0.3</sub>Sr<sub>0.7</sub>CoO<sub>3</sub>}
- C01G 51/70 . . {containing rare earth, e.g. LaCoO<sub>3</sub> (C01G 51/68 takes precedence)}

**C01G 53/00****Compounds of nickel**

- C01G 53/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}



- C01G 53/006 . { Compounds containing, besides nickel, two or more other elements, with the exception of oxygen or hydrogen ([nickelates C01G 53/40](#))}
- C01G 53/02 . Carbonyls
- C01G 53/04 . Oxides; Hydroxides
- C01G 53/06 . Carbonates
- C01G 53/08 . Halides
- C01G 53/09 . . Chlorides
- C01G 53/10 . Sulfates
- C01G 53/11 . Sulfides
- C01G 53/12 . Complexes with ammonia
- C01G 53/40 . { [Nickelates](#)}

### **WARNING**

Groups [C01G 53/40](#) to [C01G 53/70](#) are not complete pending a reorganisation, see also [C01G 53/006](#) and [C01G 53/00](#)

- C01G 53/42 . . { containing alkali metals, e.g.  $\text{LiNiO}_2$ }
- C01G 53/44 . . . { containing manganese}
- C01G 53/50 . . . . { of the type  $[\text{MnO}_2]_{n-}$ , e.g.  $\text{Li}(\text{NixMn}_{1-x})\text{O}_2$ ,  $\text{Li}(\text{MyNixMn}_{1-x-y})\text{O}_2$  }
- C01G 53/52 . . . . { of the type  $[\text{Mn}_2\text{O}_4]_{2-}$ , e.g.  $\text{Li}_2(\text{NixMn}_{2-x})\text{O}_4$ ,  $\text{Li}_2(\text{MyNixMn}_{2-x-y})\text{O}_4$  }
- C01G 53/54 . . . . { of the type  $[\text{Mn}_2\text{O}_4]_{-}$ , e.g.  $\text{Li}(\text{NixMn}_{2-x})\text{O}_4$ ,  $\text{Li}(\text{MyNixMn}_{2-x-y})\text{O}_4$  }
- C01G 53/56 . . . . { of the type  $[\text{MnO}_3]_{2-}$ , e.g.  $\text{Li}_2[\text{NixMn}_{1-x}\text{O}_3]$ ,  $\text{Li}_2[\text{MyNixMn}_{1-x-y}\text{O}_3]$  }
- C01G 53/58 . . . . { of the type  $[\text{Mn}_2\text{O}_8]_{n-}$  }
- C01G 53/60 . . . . { of the type  $[\text{Mn}_2\text{O}_7]_{n-}$  }
- C01G 53/62 . . . . { of the type  $[\text{Mn}_2\text{O}_5]_{n-}$  }
- C01G 53/64 . . . . { of the type  $[\text{Mn}_5\text{O}_{12}]_{n-}$  }
- C01G 53/66 . . { containing alkaline earth metals, e.g.  $\text{SrNiO}_3$ ,  $\text{SrNiO}_2$  }
- C01G 53/68 . . . { containing rare earth, e.g.  $\text{La}_{1.62}\text{Sr}_{0.38}\text{NiO}_4$ }
- C01G 53/70 . . { containing rare earth, e.g.  $\text{LaNiO}_3$  ([C01G 53/68](#) takes precedence)}

### **C01G 55/00**

#### **Compounds of ruthenium, rhodium, palladium, osmium, iridium, or platinum**

- C01G 55/001 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 55/002 . {Compounds containing, besides ruthenium, rhodium, palladium, osmium, iridium, or platinum, two or more other elements, with the exception of oxygen or hydrogen ([C01G 55/007](#) takes precedence)}
- C01G 55/004 . {Oxides; Hydroxides}
- C01G 55/005 . {Halides}
- C01G 55/007 . {Compounds containing at least one carbonyl group}
- C01G 55/008 . . {Carbonyls}

### **C01G 56/00**

#### **Compounds of transuranic elements**

- C01G 56/001 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

- C01G 56/002 . . {by adsorption or by ion-exchange on a solid support}
- C01G 56/003 . {Compounds comprising, besides transuranic elements, two or more other elements, with the exception of oxygen or hydrogen ([C01G 56/001](#) takes precedence)}
- C01G 56/004 . {Compounds of plutonium ([C01G 56/001](#) takes precedence)}
- C01G 56/005 . . {Oxides; Hydroxides}
- C01G 56/006 . . {Halides}
- C01G 56/007 . {Compounds of transuranic elements ([C01G 56/001](#) and [C01G 56/004](#) take precedence)}
- C01G 56/008 . . {Compounds of neptunium}
- C01G 56/009 . . {Compounds of americium}
  
- C01G 99/00** **Subject matter not provided for in other groups of this subclass**
- C01G 99/003 . { Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 99/006 . { Compounds containing, besides a metal not provided for elsewhere in this subclass, two or more other elements other than oxygen or hydrogen ([C01G 99/003](#) takes precedence)}