

**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](#))

**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

**C01G 5/00****Compounds of silver**

C01G 5/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 5/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides silver, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 5/02	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
<b>C01G 7/00</b>	<b>Compounds of gold</b>
C01G 7/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 7/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides gold, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
<b>C01G 9/00</b>	<b>Compounds of zinc</b>
C01G 9/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 9/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides zinc, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 9/02	<ul style="list-style-type: none"> <li>• Oxides; Hydroxides</li> </ul>
C01G 9/03	<ul style="list-style-type: none"> <li>• . . Processes of production using dry methods, e.g. vapour phase processes</li> </ul>
C01G 9/04	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
C01G 9/06	<ul style="list-style-type: none"> <li>• Sulfates</li> </ul>
C01G 9/08	<ul style="list-style-type: none"> <li>• Sulfides</li> </ul>
<b>C01G 11/00</b>	<b>Compounds of cadmium</b>
C01G 11/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 11/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides cadmium, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 11/02	<ul style="list-style-type: none"> <li>• Sulfides</li> </ul>
<b>C01G 13/00</b>	<b>Compounds of mercury</b>
C01G 13/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 13/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides mercury, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 13/02	<ul style="list-style-type: none"> <li>• Oxides</li> </ul>
C01G 13/04	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
<b>C01G 15/00</b>	<b>Compounds of gallium, indium or thallium</b>
C01G 15/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 15/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides gallium, indium, or thallium, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
<b>C01G 17/00</b>	<b>Compounds of germanium</b>

- 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 ([C01G 28/001 takes precedence](#))}
- C01G 28/007 . {Halides ([C01G 28/001 takes precedence](#))}
- C01G 28/008 . {Sulfides ([C01G 28/001 takes precedence](#))}
- C01G 28/02 . Arsenates; Arsenites {([C01G 28/001 takes precedence](#))}
- C01G 28/023 . . {of ammonium, alkali or alkaline-earth metals or magnesium}
- C01G 28/026 . . {containing at least two metals}

**C01G 29/00****Compounds of bismuth**

- 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}

**C01G 30/00****Compounds of antimony**

- 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 ([C01G 30/001 takes precedence](#))}
- C01G 30/003 . . {containing halogen}
- C01G 30/004 . {Oxides; Hydroxides; Oxyacids ([C01G 30/001 takes precedence](#))}
- C01G 30/005 . . {Oxides}
- C01G 30/006 . {Halides ([C01G 30/001 takes precedence](#))}
- C01G 30/007 . . {of binary type  $SbX_3$  or  $SbX_5$  with X representing a halogen, or mixed of the type  $SbX_3X'_2$  with X,X' representing different halogens}
- C01G 30/008 . {Sulfides ([C01G 30/001 takes precedence](#))}
- C01G 30/02 . Antimonates; Antimonites {([C01G 30/001 takes precedence](#))}
- C01G 30/023 . . {of ammonium, alkali or alkaline-earth metals or magnesium}
- C01G 30/026 . . {containing at least two metals}

**C01G 31/00****Compounds of vanadium**

- 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

**C01G 33/00****Compounda of niobium**

C01G 33/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 33/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides niobium, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
<b>C01G 35/00</b>	<b>Compounds of tantalum</b>
C01G 35/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 35/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides tantalum, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 35/02	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
<b>C01G 37/00</b>	<b>Compounds of chromium</b>
C01G 37/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 37/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides chromium, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 37/02	<ul style="list-style-type: none"> <li>• Oxides or hydrates thereof</li> </ul>
C01G 37/027	<ul style="list-style-type: none"> <li>• . Chromium dioxide</li> </ul>
C01G 37/033	<ul style="list-style-type: none"> <li>• . Chromium trioxide; Chromic acid</li> </ul>
C01G 37/04	<ul style="list-style-type: none"> <li>• Chromium halides</li> </ul>
C01G 37/06	<ul style="list-style-type: none"> <li>• . Chromylhalides</li> </ul>
C01G 37/08	<ul style="list-style-type: none"> <li>• Chromium sulfates</li> </ul>
C01G 37/10	<ul style="list-style-type: none"> <li>• . Chrome alum</li> </ul>
C01G 37/14	<ul style="list-style-type: none"> <li>• Chromates; Bichromates</li> </ul>
<b>C01G 39/00</b>	<b>Compounds of molybdenum</b>
C01G 39/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 39/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides molybdenum, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 39/02	<ul style="list-style-type: none"> <li>• Oxides; Hydroxides</li> </ul>
C01G 39/04	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
C01G 39/06	<ul style="list-style-type: none"> <li>• Sulfides</li> </ul>
<b>C01G 41/00</b>	<b>Compounds of tungsten</b>
C01G 41/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 41/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides tungsten, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 41/02	<ul style="list-style-type: none"> <li>• Oxides; Hydroxides</li> </ul>
C01G 41/04	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
<b>C01G 43/00</b>	<b>Compounds of uranium</b>

- 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><sup>-</sup>) 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>]<sup>n-</sup>, e.g. LiMnO<sub>2</sub>, Li[M<sub>x</sub>Mn<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>[M<sub>x</sub>Mn<sub>2-x</sub>]O<sub>4</sub>}
- C01G 45/1242 . . . {of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>-</sup>, e.g. LiMn<sub>2</sub>O<sub>4</sub>, Li[M<sub>x</sub>Mn<sub>2-x</sub>]O<sub>4</sub>}
- C01G 45/125 . . . {of the type [MnO<sub>3</sub>]<sup>n-</sup>, e.g. Li<sub>2</sub>MnO<sub>3</sub>, Li<sub>2</sub>[M<sub>x</sub>Mn<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>[M<sub>x</sub>Mn<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>]<sup>n-</sup>, 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>]<sup>n-</sup>, 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>]<sup>n-</sup>}
- C01G 45/1292 . . . {of the type [Mn<sub>5</sub>O<sub>12</sub>]<sup>n-</sup>}

### **C01G 47/00**      **Compounds of rhenium**

C01G 47/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 47/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides rhenium, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
<b>C01G 49/00</b>	<b>Compounds of iron</b>
C01G 49/0009	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 49/0018	<ul style="list-style-type: none"> <li>• {Mixed oxides or hydroxides, e.g. ferrites (<a href="#">C01G 49/0009</a> takes precedence)}</li> </ul>
C01G 49/0027	<ul style="list-style-type: none"> <li>• . {containing one alkali metal}</li> </ul>
C01G 49/0036	<ul style="list-style-type: none"> <li>• . {containing one alkaline earth metal, magnesium or lead}</li> </ul>
C01G 49/0045	<ul style="list-style-type: none"> <li>• . {containing aluminium}</li> </ul>
C01G 49/0054	<ul style="list-style-type: none"> <li>• . {containing one rare earth metal, yttrium or scandium}</li> </ul>
C01G 49/0063	<ul style="list-style-type: none"> <li>• . {containing zinc}</li> </ul>
C01G 49/0072	<ul style="list-style-type: none"> <li>• . {containing manganese}</li> </ul>
C01G 49/0081	<ul style="list-style-type: none"> <li>• . {containing iron in unusual valence state (IV, V, VI), e.g. ferrates}</li> </ul>
C01G 49/009	<ul style="list-style-type: none"> <li>• {Compounds containing, besides iron, two or more other elements, with the exception of oxygen or hydrogen}</li> </ul>
C01G 49/02	<ul style="list-style-type: none"> <li>• Oxides; Hydroxides {(<a href="#">C01G 49/0018</a> takes precedence)}</li> </ul>
C01G 49/04	<ul style="list-style-type: none"> <li>• . Ferrous oxide (FeO)</li> </ul>
C01G 49/06	<ul style="list-style-type: none"> <li>• . Ferric oxide (Fe<sub>2</sub>O<sub>3</sub>)</li> </ul>
C01G 49/08	<ul style="list-style-type: none"> <li>• . Ferroso-ferric oxide (Fe<sub>3</sub>O<sub>4</sub>)</li> </ul>
C01G 49/10	<ul style="list-style-type: none"> <li>• Halides {(<a href="#">C01G 49/0018</a> takes precedence)}</li> </ul>
C01G 49/12	<ul style="list-style-type: none"> <li>• Sulfides {(<a href="#">C01G 49/0018</a> takes precedence)}</li> </ul>
C01G 49/14	<ul style="list-style-type: none"> <li>• Sulfates {(<a href="#">C01G 49/0018</a> takes precedence)}</li> </ul>
C01G 49/16	<ul style="list-style-type: none"> <li>• Carbonyls {(<a href="#">C01G 49/0018</a> takes precedence)}</li> </ul>
<b>C01G 51/00</b>	<b>Compounds of cobalt</b>
C01G 51/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 51/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides cobalt, two or more other elements, with the exception of oxygen or hydrogen (<a href="#">cobaltates C01G 51/40</a>)}</li> </ul>
C01G 51/02	<ul style="list-style-type: none"> <li>• Carbonyls</li> </ul>
C01G 51/04	<ul style="list-style-type: none"> <li>• Oxides; Hydroxides</li> </ul>
C01G 51/06	<ul style="list-style-type: none"> <li>• Carbonates</li> </ul>
C01G 51/08	<ul style="list-style-type: none"> <li>• Halides</li> </ul>
C01G 51/085	<ul style="list-style-type: none"> <li>• . {Chlorides}</li> </ul>
C01G 51/10	<ul style="list-style-type: none"> <li>• Sulfates</li> </ul>
C01G 51/12	<ul style="list-style-type: none"> <li>• Complexes with ammonia</li> </ul>
C01G 51/30	<ul style="list-style-type: none"> <li>• {Sulfides}</li> </ul>
C01G 51/40	<ul style="list-style-type: none"> <li>• {Cobaltates}</li> </ul>
C01G 51/42	<ul style="list-style-type: none"> <li>• . {containing alkali metals, e.g. LiCoO<sub>2</sub>}</li> </ul>



- C01G 51/44 . . . {containing manganese}
- C01G 51/50 . . . . {of the type  $[\text{MnO}_2]_n^-$ , e.g.  $\text{Li}(\text{CoxMn}_{1-x})\text{O}_2$ ,  $\text{Li}(\text{MyCoxMn}_{1-x-y})\text{O}_2$ }
- C01G 51/52 . . . . {of the type  $[\text{Mn}_2\text{O}_4]_2^-$ , e.g.  $\text{Li}_2(\text{CoxMn}_{2-x})\text{O}_4$ ,  $\text{Li}_2(\text{MyCoxMn}_{2-x-y})\text{O}_4$ }
- C01G 51/54 . . . . {of the type  $[\text{Mn}_2\text{O}_4]^-$ , e.g.  $\text{Li}(\text{CoxMn}_{2-x})\text{O}_4$ ,  $\text{Li}(\text{MyCoxMn}_{2-x-y})\text{O}_4$ }
- C01G 51/56 . . . . {of the type  $[\text{MnO}_3]_2^-$ , e.g.  $\text{Li}_2[\text{CoxMn}_{1-x}\text{O}_3]$ ,  $\text{Li}_2[\text{MyCoxMn}_{1-x-y}\text{O}_3]$ }
- C01G 51/58 . . . . {of the type  $[\text{Mn}_2\text{O}_8]_n^-$ }
- C01G 51/60 . . . . {of the type  $[\text{Mn}_2\text{O}_7]_n^-$ }
- C01G 51/62 . . . . {of the type  $[\text{Mn}_2\text{O}_5]_n^-$ }
- C01G 51/64 . . . . {of the type  $[\text{Mn}_5\text{O}_{12}]_n^-$ }
- C01G 51/66 . . {containing alkaline earth metals, e.g.  $\text{SrCoO}_3$ }
- C01G 51/68 . . . {containing rare earth, e.g.  $\text{La}_{0.3}\text{Sr}_{0.7}\text{CoO}_3$ }
- C01G 51/70 . . {containing rare earth, e.g.  $\text{LaCoO}_3$  ([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	<ul style="list-style-type: none"> <li>• {containing alkaline earth metals, e.g. <math>\text{SrNiO}_3</math>, <math>\text{SrNiO}_2</math>}</li> </ul>
C01G 53/68	<ul style="list-style-type: none"> <li>• {containing rare earth, e.g. <math>\text{La}_{1.62}\text{Sr}_{0.38}\text{NiO}_4</math>}</li> </ul>
C01G 53/70	<ul style="list-style-type: none"> <li>• {containing rare earth, e.g. <math>\text{LaNiO}_3</math> (<a href="#">C01G 53/68</a> takes precedence)}</li> </ul>
<b>C01G 55/00</b>	<b>Compounds of ruthenium, rhodium, palladium, osmium, iridium, or platinum</b>
C01G 55/001	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 55/002	<ul style="list-style-type: none"> <li>• {Compounds containing, besides ruthenium, rhodium, palladium, osmium, iridium, or platinum, two or more other elements, with the exception of oxygen or hydrogen (<a href="#">C01G 55/007</a> takes precedence)}</li> </ul>
C01G 55/004	<ul style="list-style-type: none"> <li>• {Oxides; Hydroxides}</li> </ul>
C01G 55/005	<ul style="list-style-type: none"> <li>• {Halides}</li> </ul>
C01G 55/007	<ul style="list-style-type: none"> <li>• {Compounds containing at least one carbonyl group}</li> </ul>
C01G 55/008	<ul style="list-style-type: none"> <li>• {Carbonyls}</li> </ul>
<b>C01G 56/00</b>	<b>Compounds of transuranic elements</b>
C01G 56/001	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 56/002	<ul style="list-style-type: none"> <li>• {by adsorption or by ion-exchange on a solid support}</li> </ul>
C01G 56/003	<ul style="list-style-type: none"> <li>• {Compounds comprising, besides transuranic elements, two or more other elements, with the exception of oxygen or hydrogen (<a href="#">C01G 56/001</a> takes precedence)}</li> </ul>
C01G 56/004	<ul style="list-style-type: none"> <li>• {Compounds of plutonium (<a href="#">C01G 56/001</a> takes precedence)}</li> </ul>
C01G 56/005	<ul style="list-style-type: none"> <li>• {Oxides; Hydroxides}</li> </ul>
C01G 56/006	<ul style="list-style-type: none"> <li>• {Halides}</li> </ul>
C01G 56/007	<ul style="list-style-type: none"> <li>• {Compounds of transuranic elements (<a href="#">C01G 56/001</a> and <a href="#">C01G 56/004</a> take precedence)}</li> </ul>
C01G 56/008	<ul style="list-style-type: none"> <li>• {Compounds of neptunium}</li> </ul>
C01G 56/009	<ul style="list-style-type: none"> <li>• {Compounds of americium}</li> </ul>
<b>C01G 99/00</b>	<b>Subject matter not provided for in other groups of this subclass</b>
C01G 99/003	<ul style="list-style-type: none"> <li>• {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}</li> </ul>
C01G 99/006	<ul style="list-style-type: none"> <li>• {Compounds containing, besides a metal not provided for elsewhere in this subclass, two or more other elements other than oxygen or hydrogen (<a href="#">C01G 99/003</a> takes precedence)}</li> </ul>