

**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](#) - 51/70 : [C01G 51/00](#) - [C01G 53/40](#) - 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

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

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

### **C01G 7/00      Compounds of gold**

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 }

### **C01G 9/00      Compounds of zinc**

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

### **C01G 11/00      Compounds of cadmium**

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

**C01G 13/00      Compounds of mercury**

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

**C01G 15/00      Compounds of gallium, indium or thallium**

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 ([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 . {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 }

### **C01G 35/00      Compounds of tantalum**

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>]<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  $[\text{MnO}_2]_n^-$ , e.g.  $\text{LiMnO}_2$ ,  $\text{Li}[\text{MxMn}_{1-x}\text{O}_2]$  }
- C01G 45/1235 . . . { of the type  $[\text{Mn}_2\text{O}_4]^{2-}$ , e.g.  $\text{Li}_2\text{Mn}_2\text{O}_4$ ,  $\text{Li}_2[\text{MxMn}_{2-x}\text{O}_4]$  }
- C01G 45/1242 . . . { of the type  $[\text{Mn}_2\text{O}_4]^-$ , e.g.  $\text{LiMn}_2\text{O}_4$ ,  $\text{Li}[\text{MxMn}_{2-x}\text{O}_4]$  }
- C01G 45/125 . . . { of the type  $[\text{MnO}_3]_n^-$ , e.g.  $\text{Li}_2\text{MnO}_3$ ,  $\text{Li}_2[\text{MxMn}_{1-x}\text{O}_3]$ ,  $(\text{La}, \text{Sr})\text{MnO}_3$  }
- C01G 45/1257 . . . . { containing lithium, e.g.  $\text{Li}_2\text{MnO}_3$ ,  $\text{Li}_2[\text{MxMn}_{1-x}\text{O}_3]$  }
- C01G 45/1264 . . . . { containing rare earth, e.g.  $\text{La}_{1-x}\text{CaxMnO}_3$ ,  $\text{LaMnO}_3$  }
- C01G 45/1271 . . . { of the type  $[\text{Mn}_2\text{O}_8]_n^-$ , e.g.  $(\text{LaSr}_3)\text{Mn}_2\text{O}_8$  }
- C01G 45/1278 . . . { of the type  $[\text{Mn}_2\text{O}_7]_n^-$ , e.g.  $(\text{Sr}_{2-x}\text{Ndx})\text{Mn}_2\text{O}_7$ ,  $\text{Ti}_2\text{Mn}_2\text{O}_7$  }
- C01G 45/1285 . . . { of the type  $[\text{Mn}_2\text{O}_5]_n^-$  }
- C01G 45/1292 . . . { of the type  $[\text{Mn}_5\text{O}_{12}]_n^-$  }

## **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 ( $\text{FeO}$ )
- C01G 49/06 . . Ferric oxide ( $\text{Fe}_2\text{O}_3$ )
- C01G 49/08 . . Ferroso-ferric oxide ( $\text{Fe}_3\text{O}_4$ )
- 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.  $\text{LiCoO}_2$  }

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 . . { 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) }