

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](#)

Guidance heading:**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 ore 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 (Pb_2O)
 - C01G 21/06 . . Lead monoxide (PbO)
 - C01G 21/08 . . Lead dioxide (PbO_2)
 - C01G 21/10 . . Red lead (Pb_3O_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 $\text{SbX}_3\text{X}'_2$ 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 (UF₆) }

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 ([MnO₄]⁻) or manganates ([MnO₄]²⁻)
- 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 [MnO₂]ⁿ⁻, e.g. LiMnO₂, Li[M_xMn_{1-x}]O₂ }
- C01G 45/1235 ... { of the type [Mn₂O₄]²⁻, e.g. Li₂Mn₂O₄, Li₂[M_xMn_{2-x}]O₄ }
- C01G 45/1242 ... { of the type [Mn₂O₄]⁻, e.g. LiMn₂O₄, Li[M_xMn_{2-x}]O₄ }
- C01G 45/125 ... { of the type [MnO₃]ⁿ⁻, e.g. Li₂MnO₃, Li₂[M_xMn_{1-x}]O₃, (La,Sr)MnO₃ }
- C01G 45/1257 { containing lithium, e.g. Li₂MnO₃, Li₂[M_xMn_{1-x}]O₃ }
- C01G 45/1264 { containing rare earth, e.g. La_{1-x}CaxMnO₃, LaMnO₃ }
- C01G 45/1271 ... { of the type [Mn₂O₈]ⁿ⁻, e.g. (LaSr₃)Mn₂O₈ }
- C01G 45/1278 ... { of the type [Mn₂O₇]ⁿ⁻, e.g. (Sr_{2-x}Ndx)Mn₂O₇, Ti₂Mn₂O₇ }
- C01G 45/1285 ... { of the type [Mn₂O₅]ⁿ⁻ }
- C01G 45/1292 ... { of the type [Mn₅O₁₂]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 (FeO)
- C01G 49/06 .. Ferric oxide (Fe₂O₃)
- C01G 49/08 .. Ferroso-ferric oxide (Fe₃O₄)

- 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_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. 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. 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. 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. SrNiO_3 , 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. 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) }