

C01G

COMPOUNDS CONTAINING METALS NOT COVERED BY SUBCLASSES C01D OR C01F (metal hydrides [N: monoborane, diborane or addition complexes thereof] C01B6/00; salts of oxyacids of halogens C01B11/00; peroxides, salts or peroxyacids C01B15/00; thiosulfates, dithionites, polythionates C01B17/64; compounds containing selenium, or tellurium C01B19/00; binary compounds of nitrogen with metals C01B21/06; azides C01B21/08; [N: compounds containing nitrogen, other non-metals and metal C01B21/082]; metal amides C01B21/092; nitrites C01B21/50; [N: compounds of noble gases C01B23/0005]; phosphides C01B25/08; salts of oxyacids of phosphorus C01B25/16; carbides C01B31/30; compounds containing silicon C01B33/00; compounds containing boron C01B35/00; compounds having molecular sieve properties but not having base-exchange properties C01B37/00; compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites, C01B39/00; cyanides C01C3/08; salts of cyanamide C01C3/16; thiocyanates C01C3/20)

Definition statement

This subclass/group covers:

Inorganic compounds or salts containing metals like Cu,Ag,Au,Zn,Cd,Hg, Ga, In,Tl,Ge,Sn,Pb,Ti,Zr,Hf,As,Bi,Sb,V,Nb,Ta,cr,mo,W,,U,Mn,Re,Fe,Co,Ni,Ru,Rh,Pd,Os,Ir,Pt and the transuranic elements (Np, Pu,Am,Cm,Bk ,Cf,Es,Fm,Md,No,Lr)

References relevant to classification in this subclass

This subclass/group does not cover:

Metal hydrides, monoborane, diborane or addition complexes thereof	C01B 6/00
Salts of oxyacids of halogens	C01B 11/00
Peroxides, salts of peroxyacids	C01B 15/00
Sulfides or polysulfides of magnesium, calcium, strontium, or barium	C01B 17/42
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 other than ammonia or cyanogen containing nitrogen and non-metals and optionally metals	C01B 21/082
Amides or imides of silicon	C01B 21/087
Metal imides or amides	C01B 21/092 , C01B 21/0923
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 cyanic acid	C01C 3/14
Salts of cyanamide	C01C 3/16
Thiocyanates	C01C 3/20

Double sulfates of magnesium with sodium or potassium	C01D 5/12
With other alkali metals	C01D 15/00 , C01D 17/00
Alloys or intermetallic compounds	C21, C22
Treatment of ores	C22B

Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of specific inorganic materials other than fibrous fillers, for use as filler or pigment	C09C
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Special rules of classification within this subclass

The Physical properties of the specific compounds of metals are indexed according the [C01P](#)-Indexing Code scheme.

In case a group is indicated as indexed, the subgroups thereof are also indexed

The [C01P](#)-indexation scheme deals with Structural and Physical Aspects of Solid Inorganic Compounds classified in subclasses [C01B](#) to [C01G](#) and [C09C](#). These aspects include crystal-structural characteristics, particle morphology and physical properties.

Exception from the last appropriate place rule :

Dopant: A dopant, also called a doping agent, is a trace impurity element that is inserted into a substance (in very low concentrations) in order to alter the physical properties of the substance. For the purpose of classification, a dopant is considered as such, when it's concentration is less than 5% (wt, vol, at.) or when mentioned as such in the patent document to be classified.

In such a case, the compound is classified ignoring the dopant(s) and the last appropriate place rule does not apply in view of the dopant(s). In case of doubts, the document is given the class relating to the last appropriate place rule by taking into account the dopant(s) and in the appropriate class, without taking into account the dopant(s)

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 C25B1/00)

Definition statement

This subclass/group covers:

All methods, i.e. solid state, wet (precipitation, co-precipitation) and gaseous (flame pyrolysis) methods for preparing compounds of metals not classified in the other [C01G 1/02](#)-[C01G 1/14](#) classes (last appropriate place rule has to be applied)

References relevant to classification in this group

This subclass/group does not cover:

Electrolytic production of inorganic compounds	C25B 1/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes see	C01G 3/00 - C01G 99/00
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Special rules of classification within this group

Specific examples are classified also according to the last appropriate rule in the suitable [C01G](#) classes. Physical properties of the specific compounds of metals are indexed according to the [C01P](#)-Indexing Code scheme.

The [C01P](#)-indexation scheme deals with Structural and Physical Aspects of Solid Inorganic Compounds classified in subclasses [C01B](#) to [C01G](#) and [C09C](#). These aspects include crystal-structural characteristics, particle morphology and physical properties.

C01G 1/02

Oxides

Definition statement

This subclass/group covers:

Only general methods of preparing metal oxides or multi metal oxides.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes see	C01G 3/00-C01G 99/00
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

A document is classified in this class, as soon as it is describing a method which is used for preparing several metal oxides. Example : a method for preparing chromium, copper or nickel oxides. In this example the following classes are additionally given : [C01G 37/02](#), [C01G 3/02](#) and [C01G 53/04](#)

C01G 1/04

Carbonyls

Definition statement

This subclass/group covers:

General methods for preparing metal carbonyls or metal carbonyl mixed metal salts

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mn carbonyl	C01G 45/04
Fe carbonyl	C01G 49/16
Co carbonyl	C01G 51/02
Ni carbonyl	C01G 53/02
Ru,Rh,Pd,Os,Ir,Pt carbonyl	C01G 55/008

Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes. The [C01P](#)-Indexation scheme shall be applied.

C01G 1/06

Halides

Definition statement

This subclass/group covers:

General methods for making metal halides or multi metal halides

Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes see	C01G 3/00-C01G 99/00
Cu halides	C01G 3/04-C01G 3/06
Ag halides	C01G 5/02
Zn halides	C01G 9/04
Hg halides	C01G 13/04
Ge halides	C01G 17/04
Sn halides	C01G 19/04
Pb halides	C01G 21/16
Ti halides	C01G 23/02
Zr halides	C01G 25/00
Hf halides	C01G 27/04
As halides	C01G 28/007
Sb halides	C01G 30/006
V halides	C01G 31/04
Ta halides	C01G 35/02
Cr halides	C01G 37/04
Mo halides	C01G 39/04

W halides	C01G 41/04
U halides	C01G 43/04 - C01G 43/12
Mn halides	C01G 45/06
Fe halides	C01G 49/10
Co halides	C01G 51/08
Ni halides	C01G 53/08
Ru, Rh,Pd,Os,Ir,Rh halides	C01G 55/005
Transuranic compounds halides	C01G 56/00
Pu	C01G 56/006

Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes.

The [C01P](#)-Indexation scheme shall be applied.

C01G 1/08

Nitrates

Definition statement

This subclass/group covers:

General methods of making metal or multi metal halides

Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes see	C01G 3/00-C01G 99/00
Cu nitrates	C01G 3/08
Pb nitrates	C01G 21/18

Mn nitrates	C01G 45/08
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Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes.

The [C01P](#)-Indexation scheme shall be applied.

C01G 1/10

Sulfates

Definition statement

This subclass/group covers:

General methods of making metal sulfates or multi metal sulfates.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes	C01G 3/00-C01G 99/00
Cu sulfates	C01G 3/10
Zn sulfates	C01G 9/06
Pb sulfates	C01G 21/20
Ti sulfates	C01G 23/008
Zr sulfates	C01G 25/06
Hf sulfates	C01G 27/06
Cr sulfates	C01G 37/08
Mn sulfates	C01G 45/10
Fe sulfates	C01G 49/14
Co sulfates	C01G 51/10
Ni sulfates	C01G 53/10

Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes. The [C01P](#)-Indexation scheme shall be applied.

C01G 1/12

Sulfides

Definition statement

This subclass/group covers:

General methods for preparing metal or multi metal sulfides, i.e. compounds comprising an anion like S²⁻-(sulfide), or [Sn]²⁻ (polysulfide).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cd Sulfides	C01G 11/02 ,
Pb Sulfides	C01G 21/21
Ti Sulfides	C01G 23/007
As Sulfides	C01G 28/008
Other relevant classes	C01G 3/00-C01G 99/00
Cu Sulfides	C01G 3/12
Sb Sulfides	C01G 30/008
Mo Sulfides	C01G 39/06
Fe	C01G 49/12
Ni sulfides	C01G 53/11
Zn Sulfides	C01G 9/08

Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes. The [C01P](#)-Indexation scheme shall be applied.

C01G 1/14

Sulfites

Definition statement

This subclass/group covers:

General methods for preparing metal or multi metal sulfites, i.e. compounds comprising an anion like SO₃²⁻ (Sulfite), S₂O₅²⁻-(disulfite).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Other relevant classes	C01G 3/00-C01G 99/00
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Special rules of classification within this group

Specific examples shall be classified in the appropriate [C01G 3/00-C01G 99/00](#) classes[CpcRefSymbol=.] The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Sulfite, secondary sulfite	compound comprises the anion SO ₃ ²⁻
Hydrogen sulfite, Bisulfite, primary sulfite, acidic sulfite	compound comprises the anion HSO ₃ ¹⁻
Disulfite	compound comprises the anion S ₂ O ₅ ²⁻

C01G 3/00

Compounds of copper

Definition statement

This subclass/group covers:
Inorganic compounds of copper.

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Metallic Copper or Copper alloys fillers or pigments	C09C 1/627 , C09C 1/66
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

Definition statement

This subclass/group covers:
Use of ion exchange techniques, extraction techniques

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/006

[N: Compounds containing, besides copper, two or more other elements, with the exception of oxygen or hydrogen]

Definition statement

This subclass/group covers:

This group has been completely indexed according to the [C01P](#)-indexation scheme.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Supraconductors	H01L 39/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/02

Oxides; Hydroxides

Definition statement

This subclass/group covers:

Oxides, hydroxides, hydrous oxides, oxide-hydroxides of Copper

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme; The [C01P](#)-Indexation scheme shall be applied.

C01G 3/04

Halides

Definition statement

This subclass/group covers:

Halides of copper

References relevant to classification in this group

This subclass/group does not cover:

Chlorides, Oxychlorides	C01G 3/05 , C01G 3/06
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/05

Chlorides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/06

Oxychlorides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/08

Nitrates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/10

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Copper(II) sulfate	Blue vitriol, bluestone, Salzburg vitriol
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C01G 3/12

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 3/14

Complexes with ammonia

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 5/00

Compounds of silver

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Metallic silver or silver alloys fillers or pigments	C09C , C09D
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 5/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 5/006

[N: Compounds containing, besides silver, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 5/02

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 7/00

Compounds of gold

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 7/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 7/006

[N: Compounds containing, besides gold, two or more other elements, with the exception of oxygen or hydrogen]

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/00

Compounds of zinc

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of Zn-compounds for use as a pigment or filler	C09C 1/00
Use in Light Emitting Devices (LED)Luminescent Materials	C09K 11/00
Use in Cosmetics	H01L 33/00 , H01L 31/00

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/006

[N: Compounds containing, besides zinc, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/02

Oxides; Hydroxides

Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of ZnO, use as pigment or filler	C09C 1/043
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/03

Processes of production using dry methods, e.g. vapour phase processes

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/06

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 9/08

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻-(sulfide), or [Sn]₂⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

ZnS	zinc blende or sphalerite (stable cubic form), Wurtzite (hexagonal form)
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C01G 11/00

Compounds of cadmium

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of CdS for use as filler or pigment	C09C 1/10
Luminescent materials	C09K 11/00

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Copper(II) sulfate	Blue vitriol, bluestone, Salzburg vitriol
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C01G 11/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 11/006

[N: Compounds containing, besides cadmium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 11/02

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of CdS for use as filler or pigment	C09C 1/10
Luminescent materials	C09K 11/00

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

CdS	Greenockite, Hawleyite
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C01G 13/00

Compounds of mercury

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of compounds of mercury	C09C 1/38
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

HgS	Cinnabar, Vermillion
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C01G 13/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 13/006

[N: Compounds containing, besides mercury, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 13/02

Oxides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Mercury oxide HgO	Mercuric oxide, Montroydite
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C01G 13/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Mercury(II) chloride (HgCl ₂)	Mercury dichloride, Mercuric chloride, Corrosive sublimate, Mercurous chloride
Dimercury dichloride (Hg ₂ Cl ₂ , HgCl):	Calomel

C01G 15/00

Compounds of gallium, indium or thallium

Informative references

Attention is drawn to the following places, which may be of interest for search:

Semiconductor	H01L 31/00
Luminescent Materials	C09K 11/00
Coatings	C09D 5/00 , C09D 7/00

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following abbreviations are often used:

ITO	Indium Tin oxide (tin-doped indium oxide)
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C01G 15/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 15/006

[N: Compounds containing, besides gallium, indium, or thallium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 17/00

Compounds of germanium

Informative references

Attention is drawn to the following places, which may be of interest for search:

Semiconductor	H01L 31/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 17/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 17/006

[N: Compounds containing, besides germanium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 17/02

Germanium dioxide

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 17/04

Halides of germanium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/00

Compounds of tin

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/006

[N: Compounds containing, besides tin, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/02

Oxides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following words "Tin dioxide", "Cassiterite", "stannic acid", "flowers of tin" and "tin(IV) oxide" are often used as synonyms.

C01G 19/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/06

Stannous chloride

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 19/08

Stannic chloride

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/00

Compounds of lead

References relevant to classification in this group

This subclass/group does not cover:

Alloys or intermetallic compounds	C21, C22
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/006

[N: Compounds containing, besides lead, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/02

Oxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme.

C01G 21/04

Lead suboxide (Pb₂O)

Definition statement

This subclass/group covers:

This group has been completely indexed according to the [C01P](#)-indexation scheme.

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/06

Lead monoxide (PbO)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Glasses	C03C 3/00
Ceramic glazes	C03C 8/00
Pigments and fillers	C09C 1/14-C09C 1/20

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Lead monoxide, Lead(II) oxide	Litharge, Massicot, Plumbous oxide
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C01G 21/08

Lead dioxide (PbO₂)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Elektrode materials	H01M 4/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Lead dioxide, Lead(IV)oxide	Plumbic oxide, Plattnerite
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C01G 21/10

Red lead (Pb₃O₄)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Pigment or Filler	C09C 1/18
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Glasses compositions	C03C 3/00
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme.

Synonyms and Keywords

In patent documents the following expressions/words "Lead(II,IV) oxide (Pb₃O₄, or 2PbO·PbO₂)", "Lead tetroxide", "minium", "red lead or triplumbic tetroxide", "Mennige" and "Minium" are often used as synonyms.

C01G 21/12

Hydroxides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/14

Carbonates

Informative references

Attention is drawn to the following places, which may be of interest for search:

Filler or Pigment	C09C 1/16
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Lead carbonate basic lead carbonate (2PbCO₃·Pb(OH)₂)" and "Cerussite white lead" are often used as synonyms.

C01G 21/16

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 21/18

Nitrates

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rodenticides	A01N 25/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Lead(II) nitrate", "Lead nitrate", "Plumbous nitrate", "Lead dinitrate", and "Plumb dulcis" are often used as synonyms.

C01G 21/20

Sulfates

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrode materials	H01M 4/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Lead(II) sulfate" and "Anglesite" are often used as synonyms.

C01G 21/21

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]₂⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Lead(II) sulfide", "Plumbous sulfide" and , "Galena" are often used as synonyms.

In patent documents the following expressions/words "Lead(IV) sulfide" and "Lead disulfide" are often used as synonyms.

C01G 21/22

Plumbates; Plumbites

Definition statement

This subclass/group covers:

A plumbate is a salt having one of the several lead-containing oxyanions. Although the term plumbate can refer either to plumbate(II) or plumbate(IV), it traditionally refers specifically to plumbate(IV), whereas plumbate(II) is referred to as plumbite.

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/00

Compounds of titanium [N: (preparation of Ti-compounds from ores or scraps C22B34/12)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/001

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/002

[N: Compounds containing, besides titanium, two or more other elements, with the exception of oxygen or hydrogen (C01G23/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/003

[N: Titanates, e.g. titanates of two or more metals other than titanium (C01G23/001 takes precedence)]

Definition statement

This subclass/group covers:

Orthotitanates have the formulae M_2TiO_4 (M=divalent metal), metatitanates have the formula $MTiO_3$ (M=divalent metal); complex titanates are also known, such as bismuth titanate, $Bi_4Ti_3O_{12}$ or Lead zirconate titanate ($Pb[Zr_xTi_{1-x}]O_3$, $0 \leq x \leq 1$) (PZT; PZT is only classified here, as long as Zr is considered as dopant).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ceramic material	C04B 35/00/00	33
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Treatment of, pigments, fillers	C09C 1/36
Semiconductors, Supraconductors	H01L 31/00 , H01L 39/00

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following abbreviations are often used:

PZT	Lead zirconate titanate ($\text{Pb}[\text{Zr}_x\text{Ti}_{1-x}]\text{O}_3$ 0#x#1)
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C01G 23/005

[N: Alkali titanates]

Definition statement

This subclass/group covers:

M=Alkali metal (M=Li, Na, K, Rb, Cs etc.)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ceramic material	C04B 35/00/00
Treatment of, pigments, fillers	C09C 1/36
Semiconductors, Supraconductors	H01L 31/00 , H01L 39/00

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/006

[N: Alkaline earth titanates]

Definition statement

This subclass/group covers:

M=Alkaline Earth metal (M=Mg, Ca, Sr, Ba)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ceramic material	C04B 35/00
Treatment of, pigments, fillers	C09C 1/36
Semiconductors, Supraconductors	H01L 31/00 , H01L 39/00

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/007

[N: Titanium sulfides (C01G23/001 takes precedence)]

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrode materials	H01M 4/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Titanium(II) Sulfide",

"titanium monosulfide" and , "Wassonite" are often used as synonyms.

C01G 23/008

[N: Titanium- and titanyl sulfate (C01G23/001 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/02

Halides of titanium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/022

[N: Titanium tetrachloride]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Titanium(IV) chloride", "Titanium tetrachloride" and "Tetrachlorotitanium" are often used as synonyms.

C01G 23/024

[N: Purification of tetrachloride]

Definition statement

This subclass/group covers:

Aftertreatment of titanium tetrachloride

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/026

[N: Titanium trichloride]

Definition statement

This subclass/group covers:

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Titanium(III) Chloride" and "titanium trichloride" and, "titanous chloride" are often used as synonyms.

C01G 23/028

[N: Titanium fluoride]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 23/04

Oxides; Hydroxides

Informative references

Attention is drawn to the following places, which may be of interest for search:

Catalysis	B01J 35/00 , B01J 21/00
Ceramic Materials	C04B 35/00
Use as filler in Polymers, Coatings etc.	C08K 9/00 , C09D 5/00 , C09D 7/00
Treatment of, for use as pigment and filler	C09C 1/36

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/043

[N: Titanium sub-oxides]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Catalysis	B01J 35/00 , B01J 21/00
Ceramic Materials	C04B 35/00
Use as filler in Polymers, Coatings etc.	C08K 9/00 , C09D 5/00 , C09D 7/00
Treatment of, for use as pigment and filler	C09C 1/36

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Titanium(II) oxide" and "Titanium monoxide" are often used as synonyms.

In patent documents the following expressions/words "Titanium(III) oxide" and "Titanium sesquioxide " are often used as synonyms.

C01G 23/047

Titanium dioxide

Definition statement

This subclass/group covers:

This group has been completely indexed according to the [C01P](#)-indexation scheme.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Catalysis	B01J 35/00 , B01J 21/00
Coatings on glass	C03C 17/00

Filler in Polymers	C08K 9/00
Treatment of, Pigment and filler	C09C 1/36
Dye sensitized solar cells	H01G 9/20

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Synonyms and Keywords

In patent documents the following expressions/words "Titanium(IV) oxide", "Titanium dioxide", "Titania", "Rutile (tetragonal)", "Anatase (tetragonal)" and "Brookite (orthorhombic)" are often used as synonyms.

C01G 23/0475

[N: Purification]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/053

Producing by wet processes, e.g. hydrolysing titanium salts

Definition statement

This subclass/group covers:

Hydrolysis of titanium compounds other than chlorides and sulfates, e.g.. hydrolysis of organo-titanium salts.

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/0532

[N: by hydrolysing sulfate-containing salts]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/0534

[N: in the presence of seeds]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/0536

[N: by hydrolysing chloride-containing salts]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/0538

[N: in the presence of seeds]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/07

Producing by vapour phase processes, e.g. halide oxidation

Definition statement

This subclass/group covers:

Flame pyrolysis, halide oxidation

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/075

[N: Evacuation and cooling of the gaseous suspension containing the oxide; Desacidification and elimination of gases occluded in the separated oxide]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 23/08

Drying; Calcining; [N: After treatment of titanium oxide]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 25/00

Compounds of zirconium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

PZT (when Zr is not considered as dopant)	Lead zirconate titanate ($\text{Pb}[\text{Zr}_x\text{Ti}_{1-x}]\text{O}_3$ 0#x#1)
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C01G 25/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 25/006

[N: Compounds containing, besides zirconium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 25/02

Oxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

YSZ	Yttria-stabilized zirconia
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Synonyms and Keywords

In patent documents the following expressions/words "Zirconium dioxide (ZrO₂)", "Zirconia" and, "Baddeleyite" are often used as synonyms.

C01G 25/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 25/06

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 27/00

Compounds of hafnium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 27/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 27/006

[N: Compounds containing, besides hafnium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 27/02

Oxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation

scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 27/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 27/06

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 28/00

Compounds of arsenic

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 28/001

[N: Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 28/002

[N: Compounds containing, besides arsenic, two or more

other elements, with the exception of oxygen or hydrogen (C01G28/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 28/004

[N: containing halogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 28/005

[N: Oxides; Hydroxides; Oxyacids (C01G28/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 28/007

[N: Halides (C01G28/001 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 28/008

[N: Sulfides (C01G28/001 takes precedence)]

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 28/02

Arsenates; Arsenites [N: (C01G28/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Arsenite	chemical compound containing an arsenic oxoanion where arsenic has oxidation state +3. The different forms of the anion are the next ones: ortho-arsenite http://en.wikipedia.org/wiki/Arsenite - cite_note-Greenwood-0: [AsO ₃] ³⁻ and meta-arsenite: [AsO ₂] ⁻ ; Examples of arsenites include sodium arsenite which contains a polymeric linear anion, [AsO ₂] [#] _n , and silver arsenite, Ag ₃ AsO ₃ , which contains the trigonal, AsO ₃ [#] anion.
Arsenate [AsO ₄] ³⁻	arsenate (compound) is any compound that contains this ion. Arsenates are salts or esters of arsenic acid. The arsenic atom in arsenate has a valency of 5 and is also known as pentavalent arsenic or As[V].

C01G 28/023

[N: of ammonium, alkali or alkaline-earth metals or magnesium]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 28/026

[N: containing at least two metals]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 29/00

Compounds of bismuth

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 29/003

[N: Preparations involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 29/006

[N: Compounds containing, besides bismuth, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/00

Compounds of antimony

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 30/001

[N: Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 30/002

[N: Compounds containing, besides antimony, two or more other elements, with the exception of oxygen or hydrogen (C01G30/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/003

[N: containing halogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/004

[N: Oxides; Hydroxides; Oxyacids (C01G30/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/005

[N: Oxides]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/006

[N: Halides (C01G30/001 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 30/007

[N: 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]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 30/008

[N: Sulfides (C01G30/001 takes precedence)]

Definition statement

This subclass/group covers:

Compounds comprising an anion like S^{2-} -(sulfide), or $[Sn]^{2-}$ -(polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 30/02

Antimonates; Antimonites [N: (C01G30/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

The antimonate ion is $[\text{Sb}(\text{OH})_6]^-$, where antimony is present in its +5 oxidation state. antimonite refers to salts of antimony(III), such as $\text{NaSb}(\text{OH})_4$ and NaSbO_2 (metaantimonite). These are formally salts of antimonous acid (antimonious acid), " $\text{Sb}(\text{OH})_3$ "
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C01G 30/023

[N: of ammonium, alkali or alkaline-earth metals or magnesium]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 30/026

[N: containing at least two metals]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 31/00

Compounds of vanadium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 31/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 31/006

[N: Compounds containing, besides vanadium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 31/02

Oxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 31/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 33/00

Compounds of niobium

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 33/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 33/006

[N: Compounds containing, besides niobium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 35/00

Compounds of tantalum

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 35/003

[N: Preparation involving a liquid-liquid extraction, an

adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 35/006

[N: Compounds containing, besides tantalum, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 35/02

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/00

Compounds of chromium

Informative references

Attention is drawn to the following places, which may be of interest for search:

Aftertreatment of compounds of chromium to enhance their pigmenting and filling properties	C09C 1/34
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/006

[N: Compounds containing, besides chromium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 37/02

Oxides or hydrates thereof

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 37/027

Chromium dioxide

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 37/033

Chromium trioxide; Chromic acid

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 37/04

Chromium halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/06

Chromylhalides

Definition statement

This subclass/group covers:

A Chromylhalide is a chemical compound with the formula $\text{CrO}_2(\text{X})_2$, with X=halogene

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/08

Chromium sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 37/10

Chrome alum

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Chrome alum or Chromium(III) potassium sulfate	the potassium double sulfate of chromium. Its chemical formula is $KCr(SO_4)_2$ and it is commonly found in its dodecahydrate form as $KCr(SO_4)_2 \cdot 12(H_2O)$.
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C01G 37/14

Chromates; Bichromates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Chromate	salts contain the chromate anion, CrO_4^{2-}
Dichromate	salts contain the dichromate anion, $Cr_2O_7^{2-}$. They are oxyanions of chromium in the oxidation state +6.

C01G 39/00

Compounds of molybdenum

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 39/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 39/006

[N: Compounds containing, besides molybdenum, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 39/02

Oxides; Hydroxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 39/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 39/06

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 41/00

Compounds of tungsten

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 41/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 41/006

[N: Compounds containing, besides tungsten, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 41/02

Oxides; Hydroxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 41/04

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/00

Compounds of uranium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/006

[N: Compounds containing, besides uranium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 43/01

Oxides; Hydroxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 43/025

Uranium dioxide

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 43/04

Halides of uranium

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/06

Fluorides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/08

Chlorides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/10

Bromides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 43/12

Iodides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/00

Compounds of manganese

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/006

[N: Compounds containing, besides manganese, two or more other elements, with the exception of oxygen or hydrogen; (manganates, manganites, permanganates C01G45/12)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 45/02

Oxides; Hydroxides

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 45/04

Carbonyls

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/06

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/08

Nitrates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/10

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/12

Manganates [N: manganites or] permanganates

References relevant to classification in this group

This subclass/group does not cover:

Making of electrodes comprising the manganites or manganates for use in galvanic primary cells and batteries, galvanic secondary cells and batteries, fuel cells and batteries.	H01M
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrodematerials comprising the manganates, manganites	H01M
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Manganate	any negatively charged molecular entity with manganese as the central atom : Permanganates ([MnO ₄] ⁻) or manganates ([MnO ₄] ²⁻) However, for the purpose of classification "manganites", which do not contain discrete oxoanions, but are mixed oxides with perovskite (LaMn ^{III} O ₃ , CaMn ^{IV} O ₃), spinel (LiMn ^{III,IV} 2O ₄) or sodium chloride (LiMn ^{III} O ₂ , NaMn ^{III} O ₂) structures are considered as manganates and shall be classified in the specific subgroup of C01G 45/12 .
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C01G 45/1207

[N: Permanganates ([MnO₄]⁻) or manganates ([MnO₄]²⁻)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1214

[N: containing alkali metals]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1221

[N: Manganates or manganites with a manganese oxidation state of Mn(III), Mn(IV) or mixtures thereof]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1228

[N: of the type $[\text{MnO}_2]^-$, e.g. LiMnO_2 , $\text{Li}[\text{M}_x\text{Mn}_{1-x}\text{O}_2]$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1235

[N: of the type $[\text{Mn}_2\text{O}_4]^{2-}$, e.g. $\text{Li}_2\text{Mn}_2\text{O}_4$, $\text{Li}_2[\text{M}_x\text{Mn}_{2-x}\text{O}_4]$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1242

[N: of the type $[\text{Mn}_2\text{O}_4]^-$, e.g. LiMn_2O_4 , $\text{Li}[\text{M}_x\text{Mn}_{2-x}\text{O}_4]$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/125

[N: of the type $[\text{MnO}_3]^{n-}$, e.g. Li_2MnO_3 , $\text{Li}_2[\text{M}_x\text{Mn}_{1-x}\text{O}_3]$, $(\text{La},\text{Sr})\text{MnO}_3$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1257

[N: containing lithium, e.g. Li_2MnO_3 , $\text{Li}_2[\text{M}_x\text{Mn}_{1-x}\text{O}_3]$

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1264

[N: containing rare earth, e.g. $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$, LaMnO_3]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1271

[N: of the type $[\text{Mn}_2\text{O}_8]^{2-}$, e.g. $(\text{LaSr}_3)\text{Mn}_2\text{O}_8$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1278

[N: of the type $[\text{Mn}_2\text{O}_7]^{n-}$, e.g. $(\text{Sr}_{2-x}\text{Nd}_x)\text{Mn}_2\text{O}_7$, $\text{Ti}_2\text{Mn}_2\text{O}_7$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1285

[N: of the type $[\text{Mn}_2\text{O}_5]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 45/1292

[N: of the type $[\text{Mn}_5\text{O}_{12}]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 47/00

Compounds of rhenium

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 47/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 47/006

[N: Compounds containing, besides rhenium, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 49/00

Compounds of iron

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0009

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0018

[N: Mixed oxides or hydroxides, e.g. ferrites (C01G49/0009 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Ceramics	C04B
Magnets	H01F

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Ferrites	chemical compounds consisting of ceramic materials with iron(III) oxide (Fe ₂ O ₃) as their principal component. Many ferrites are spinels with the formula AB ₂ O ₄ , where A and B represent various metal cations,
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	usually including iron. Spinel ferrites usually adopt a crystal motif consisting of cubic close-packed (fcc) oxides (O ₂ #) with A cations occupying one eighth of the tetrahedral holes and B cations occupying half of the octahedral holes—that is, the inverse spinel structure. Some ferrites have hexagonal crystal structure, e.g. barium ferrite BaO:6Fe ₂ O ₃ or BaFe ₁₂ O ₁₉ .
Soft ferrites	Ferrites that contain nickel, zinc, and/or manganese compounds. They have a low coercivity and are called soft ferrites, e.g. Manganese-zinc ferrite (Mn _a Zn _(1-a) Fe ₂ O ₄).

C01G 49/0027

[N: containing one alkali metal]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0036

[N: containing one alkaline earth metal, magnesium or lead]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0045

[N: containing aluminium]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0054

[N: containing one rare earth metal, yttrium or scandium]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0063

[N: containing zinc]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0072

[N: containing manganese]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/0081

[N: containing iron in unusual valence state (IV, V, VI), e.g. ferrates]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Ferrate(VI)	refers either to the anion $[\text{FeO}_4]^{2-}$, in which iron is in the +6 oxidation state, or to a salt containing this anion. The term ferrate is often used to mean ferrate(VI), although according to IUPAC naming conventions, it may also refer to other iron-containing
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	oxyanions, such as ferrate(V) and ferrate(IV)
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C01G 49/009

[N: Compounds containing, besides iron, two or more other elements, with the exception of oxygen or hydrogen]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/02

Oxides; Hydroxides [N: (C01G49/0018 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/04

Ferrous oxide (FeO)

Definition statement

This subclass/group covers:

E.g. Wüstite (FeO)

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme The [C01P](#)-Indexation scheme shall be applied.

C01G 49/06

Ferric oxide (Fe₂O₃)

Definition statement

This subclass/group covers:

E.g. iron(III) oxide (Fe₂O₃), alpha phase, hematite (#-Fe₂O₃, red), beta phase, (#-Fe₂O₃), gamma phase, maghemite (#-Fe₂O₃), epsilon phase,

(#-Fe₂O₃), goethite (#-FeOOH, yellow), akaganéite (#-FeOOH), lepidocrocite (#-FeOOH), feroxyhyte (#-FeOOH),

References relevant to classification in this group

This subclass/group does not cover:

Treatment of iron oxides to enhance their pigmenting and filling properties	C09C 1/22 , C09C 1/24
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 49/08

Ferroso-ferric oxide (Fe₃O₄)

Definition statement

This subclass/group covers:

E.g. iron(II,III) oxide, magnetite (Fe₃O₄, black)

References relevant to classification in this group

This subclass/group does not cover:

Treatment of iron oxides to enhance their pigmenting and filling properties	C09C 1/22 , C09C 1/24
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 49/10

Halides [N: (C01G49/0018 takes precedence)]

Definition statement

This subclass/group covers:

Ferrous halogenides, e.g. FeCl₂; ferric halogenides, e.g. FeCl₃

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 49/12

Sulfides [N: (C01G49/0018 takes precedence)]

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻-(sulfide), or [Sn]²⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Iron sulfide or Iron sulphide	a chemical compound of iron and sulfur with a wide range of stoichiometric formulae and different crystalline structures.e.g. Natural minerals : Iron(II) sulfide, FeS; Troilite, FeS, pyrrhotite; Greigite, Fe ₃ S ₄ , analog to magnetite, Fe ₃ O ₄ ; Pyrrhotite, Fe _{1-x} S (where x = 0 to 0.2), or Fe ₇ S ₈ ; Mackinawite, Fe _{1+x} S (where x = 0 to 0.1);Marcasite, or iron(II) disulfide, FeS ₂ (orthorhombic); Pyrite, or iron(II) disulfide, FeS ₂ (cubic).
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C01G 49/14

Sulfates [N: (C01G49/0018 takes precedence)]

Definition statement

This subclass/group covers:

E.g. ferrous sulphate, Iron(II) sulfate (other names : green vitriol; iron vitriol; copperas; melanterite; szomolnokite), FeSO₄; Ferric sulphate, Iron(III) sulfate, Fe₂(SO₄)₃

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 49/16

Carbonyls [N: (C01G49/0018 takes precedence)]

Definition statement

This subclass/group covers:

E.g. pentacarbonyl iron, iron carbonyl

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/00

Compounds of cobalt

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/006

[N: Compounds containing, besides cobalt, two or more other

elements, with the exception of oxygen or hydrogen (cobaltates C01G51/40)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 51/00S

[N: Sulfides]

Definition statement

This subclass/group covers:

In general, Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻(polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Cobalt sulfide	chemical compounds with a formula Co _x S _y . Well-characterized species include minerals with the formula CoS ₂ (cattierite) and Co ₃ S ₄ , (Linnaeite) and the synthetic material Co ₉ S ₈ .
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C01G 51/02

Carbonyls

Definition statement

This subclass/group covers:

E.g., Octacarbonyldicobalt(Co—Co), Cobalt carbonyl

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/04

Oxides; Hydroxides

Definition statement

This subclass/group covers:

E.g., Cobalt(II) oxide (cobaltous oxide, cobalt monoxide) – CoO, Cobalt(III) oxide (cobaltic oxide) - Co₂O₃, Cobalt(II,III) oxide (cobaltosic oxide, tricobalt tetroxide) - Co₃O₄

References relevant to classification in this group

This subclass/group does not cover:

Use as pigment in ceramics, enamels	C09C 1/0009
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 51/06

Carbonates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/08

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/085

[N: Chlorides]

Definition statement

This subclass/group covers:

E.g., Cobalt(II) chloride (Other names : Cobaltous chloride, Cobalt dichloride)

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/10

Sulfates

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/12

Complexes with ammonia

Definition statement

This subclass/group covers:

E.g. hexaamminecobalt(III) chloride (Other names cobalt hexamine chloride, hexaamminecobalt(III) chloride): $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$.

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/40

[N: Cobaltates]

Definition statement

This subclass/group covers:

Cobaltates are compounds comprising $\text{CoO}_n(x-)$ anions

References relevant to classification in this group

This subclass/group does not cover:

Making of electrodes comprising the manganites or mangantes for use in galvanic primary cells and batteries, galvanic secondary cells and batteries, fuel cells and batteries.	H01M
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/42

[N: containing alkali metals, e.g. LiCoO₂]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/44

[N: containing manganese]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/50

[N: of the type [MnO₂]-, e.g. Li(Co_xMn_{1-x})O₂,
Li(MyCo_xMn_{1-x-y})O₂]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/52

[N: of the type [Mn₂O₄]²⁻, e.g. Li₂(Co_xMn_{2-x})O₄,
Li₂(MyCo_xMn_{2-x-y})O₄]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/54

[N: of the type [Mn₂O₄]-, e.g. Li(Co_xMn_{2-x})O₄,
Li(MyCo_xMn_{2-x-y})O₄]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/56

[N: of the type $[\text{MnO}_3]^{2-}$, e.g. $\text{Li}_2[\text{Co}_x\text{Mn}_{1-x}\text{O}_3]$, $\text{Li}_2[\text{MyCo}_x\text{Mn}_{1-x-y}\text{O}_3]$

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/58

[N: of the type $[\text{Mn}_2\text{O}_8]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/60

[N: of the type $[\text{Mn}_2\text{O}_7]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/62

[N: of the type $[\text{Mn}_2\text{O}_5]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/64

[N: of the type $[\text{Mn}_5\text{O}_{12}]^{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/66

[N: containing alkaline earth metals, e.g. SrCoO_3]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/68

[N: containing rare earth, e.g. $\text{La}_{0.3}\text{Sr}_{0.7}\text{CoO}_3$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 51/70

[N: containing rare earth, e.g. LaCoO_3 (C01G51/68 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/00

Compounds of nickel

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/006

[N: Compounds containing, besides nickel, two or more other

**elements, with the exception of oxygen or hydrogen
(nickelates C01G53/40)]**

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 53/02

Carbonyls

Definition statement

This subclass/group covers:

E.g. nickel carbonyl (IUPAC name: tetracarbonylnickel) is the organonickel compound with the formula $\text{Ni}(\text{CO})_4$. This pale-yellow liquid is the principal carbonyl of nickel.

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/04

Oxides; Hydroxides

Definition statement

This subclass/group covers:

E.g. Nickel(II) oxide (Nickel monoxide, Oxonickel) is the chemical compound with the formula NiO . It is notable as being the only well characterized oxide of nickel (although nickel(III) oxide, Ni_2O_3 and NiO_2 have been claimed). The mineralogical form of NiO , bunsenite, is very rare.

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 53/06

Carbonates

Definition statement

This subclass/group covers:

E.g. Nickel(II) carbonate (nickelous carbonate) : $\text{Ni}_4\text{CO}_3(\text{OH})_6(\text{H}_2\text{O})_4$,

$\text{Ni}_4\text{CO}_3(\text{OH})_6(\text{H}_2\text{O})_4$.

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/08

Halides

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/09

Chlorides

Definition statement

This subclass/group covers:

E.g. Nickel(II) chloride (nickel chloride, nickelous chloride, nickel(II) salt of hydrochloric acid), is the chemical compound NiCl_2 . (hydrate : $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$; mineral nickelbischofite).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/10

Sulfates

Definition statement

This subclass/group covers:

E.g. Nickel(II) sulphate (nickel sulfate, nickelous sulphate) usually refers to the formula $\text{NiSO}_4(\text{H}_2\text{O})_6$.

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/11

Sulfides

Definition statement

This subclass/group covers:

Compounds comprising an anion like S²⁻(sulfide), or [Sn]²⁻ (polysulfide).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/12

Complexes with ammonia

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/40

[N: Nickelates]

Definition statement

This subclass/group covers:

Nickelates are compounds comprising NiO_n(x-) anions

References relevant to classification in this group

This subclass/group does not cover:

Making of electrodes comprising the manganites or mangantes for use in galvanic primary cells and batteries, galvanic secondary cells and batteries, fuel cells and batteries.	H01M
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/42

[N: containing alkali metals, e.g. LiNiO₂]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/44

[N: containing manganese]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/50

**[N: of the type $[\text{MnO}_2]^-$, e.g. $\text{Li}(\text{NixMn}_{1-x})\text{O}_2$,
 $\text{Li}(\text{MyNixMn}_{1-x-y})\text{O}_2$]**

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/52

**[N: of the type $[\text{Mn}_2\text{O}_4]^{2-}$, e.g. $\text{Li}_2(\text{NixMn}_{2-x})\text{O}_4$,
 $\text{Li}_2(\text{MyNixMn}_{2-x-y})\text{O}_4$]**

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/54

**[N: of the type $[\text{Mn}_2\text{O}_4]^-$, e.g. $\text{Li}(\text{NixMn}_{2-x})\text{O}_4$,
 $\text{Li}(\text{MyNixMn}_{2-x-y})\text{O}_4$]**

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/56

**[N: of the type $[\text{MnO}_3]^{2-}$, e.g. $\text{Li}_2[\text{NixMn}_{1-x}\text{O}_3]$,
 $\text{Li}_2[\text{MyNixMn}_{1-x-y}\text{O}_3]$]**

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/58

[N: of the type $[\text{Mn}_2\text{O}_8]_{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/60

[N: of the type $[\text{Mn}_2\text{O}_7]_{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/62

[N: of the type $[\text{Mn}_2\text{O}_5]_{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/64

[N: of the type $[\text{Mn}_5\text{O}_{12}]_{n-}$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/66

[N: containing alkaline earth metals, e.g. SrNiO_3 , SrNiO_2]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/68

[N: containing rare earth, e.g. $\text{La}_{1.62}\text{Sr}_{0.38}\text{NiO}_4$]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 53/70

[N: containing rare earth, e.g. LaNiO₃ (C01G53/68 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 55/00

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

References relevant to classification in this group

This subclass/group does not cover:

Organometallic compounds, Salts of organic acids	C07C , C07E
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 55/001

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 55/002

[N: Compounds containing, besides ruthenium, rhodium, palladium, osmium, iridium, or platinum, two or more other elements, with the exception of oxygen or hydrogen (C01G55/007 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Organometallic compounds, Salts of organic acids	C07C , C07E
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Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 55/004

[N: Oxides; Hydroxides]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 55/005

[N: Halides]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 55/007

[N: Compounds containing at least one carbonyl group]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 56/00

Compounds of transuranic elements

Definition statement

This subclass/group covers:

In chemistry, transuranium elements (also known as transuranic elements) are the chemical elements with atomic numbers greater than 92 (the atomic number of uranium) and comprise two chemical series :

Actinides : 93. neptunium, Np, 94. plutonium, Pu, 95. americium, Am, 96. curium, Cm, 97. berkelium, Bk, 98. californium, Cf, 99. einsteinium, Es, 100. fermium, Fm, 101. mendelevium, Md, 102. nobelium, No, 103. lawrencium, Lr,

Transactinide elements : 104. rutherfordium, Rf, 105. dubnium, Db, 106. seaborgium, Sg, 107. bohrium, Bh, 108. hassium, Hs, 109. meitnerium, Mt, 110. darmstadtium, Ds, 111. roentgenium, Rg, 112. copernicium, Cn, 113. Ununtrium, temporary name, (2003), 114. Ununquadium, temporary name, (1998), 115. Ununpentium, temporary name, (2004), 116. Ununhexium, temporary name, (2000), 117. Ununseptium, temporary name, (2010), 118. Ununoctium, temporary name, (2002).

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 56/001

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 56/003

[N: Compounds comprising, besides transuranic elements, two or more other elements, with the exception of oxygen or hydrogen (C01G56/001 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 56/004

[N: Compounds of plutonium (C01G56/001 takes precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 56/007

[N: Compounds of transuranic elements (C01G56/001 and C01G56/004 take precedence)]

Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 99/00

Subject matter not provided for in other groups of this subclass

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.

C01G 99/003

[N: Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange]

References relevant to classification in this group

This subclass/group does not cover:

Extraction of metal compounds from ores or concentrates by wet processes	C22B 3/00
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Special rules of classification within this group

The [C01P](#)-Indexation scheme shall be applied.

C01G 99/006

[N: Compounds containing, besides a metal not provided for elsewhere in this subclass, two or more other elements other than oxygen or hydrogen (C01G99/003 takes precedence)]

Special rules of classification within this group

This group has been completely indexed according to the [C01P](#)-indexation scheme. The [C01P](#)-Indexation scheme shall be applied.