

### **tetrahedrally bonded ternary and quasi-binary compounds**

general remarks on crystal structure and related properties

general remarks on band structure and dispersion relations

electronic polarizabilities of I-III-VI<sub>2</sub> and II-IV-V<sub>2</sub> compounds

application analysis with respect to nonlinear optical devices

microhardness and bulk modulus of I-III-VI<sub>2</sub> and II-IV-V<sub>2</sub> compounds

### **III<sub>2</sub>-VI<sub>3</sub> compounds**

crystal structure, lattice parameters: comparative table

#### **Ga<sub>2</sub>S<sub>3</sub>**

energy gap, interband transition energies

crystal structure, lattice parameters, further physical properties

#### **Ga<sub>2</sub>Se<sub>3</sub>**

crystal structure, lattice parameters, physical properties

#### **Ga<sub>2</sub>Te<sub>3</sub>**

crystal structure, lattice parameters, physical properties

### **In<sub>2</sub>S<sub>3</sub>**

energy gaps, interband transition energies

transport and optical properties

crystal structure, lattice parameters, thermal expansion, melting point

### **In<sub>2</sub>Se<sub>3</sub>**

band structure, energy gaps

phonon frequencies, dielectric constant, optical properties

impurities and defects, transport properties

crystal structure, phases

thermal expansion, heat capacity, melting point, magnetic susceptibility

### **In<sub>2</sub>Te<sub>3</sub>**

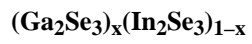
**energy gaps, effective masses**

sound velocity, refractive index, dielectric constant

transport properties

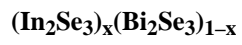
doping, impurities and defects

crystal structure, lattice parameters, thermal expansion, melting point, susceptibility

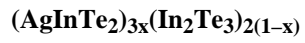


crystal structure, lattice parameters

thermal expansion, melting point

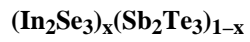


transport properties

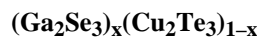


crystal structure, lattice parameters

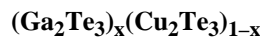
physical properties



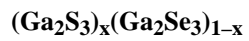
crystal structure, lattice parameters, physical properties



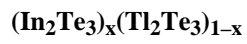
electrical conductivity



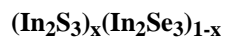
electrical conductivity



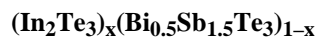
physical properties



electrical conductivity



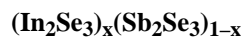
physical properties



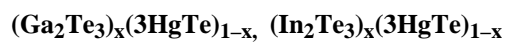
crystal structure, lattice parameters



phase diagram



crystal structure, lattice parameters



physical properties

### **I-III-VI<sub>2</sub> compounds**

crystal structure, lattice parameters, density: comparative tables

high-temperature and high-pressure phases: comparative table

energy gaps: comparative table

impurity, lattice, transport and optical properties: comparative data

### **copper aluminum sulfide (CuAlS<sub>2</sub>)**

crystal structure, lattice parameters, microhardness, melting point

band structure, energy gap, other band energies

impurities and defects

phonon wavenumbers

resistivity, Seebeck coefficient, dielectric constants

### **copper aluminum selenide (CuAlSe<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, melting point

band structure, energy gap, other band energies

impurities and defects

transport and optical properties

**copper aluminum telluride (CuAlTe<sub>2</sub>)**

physical properties

**copper gallium sulfide (CuGaS<sub>2</sub>)**

crystal structure, heat capacity, lattice parameters, thermal expansion and conductivity, Debye

temperature, melting point

band structure, energy gaps

intraband and interband transition energies

band and core state energies, effective masses

impurities and defects, diffusion

phonon wavenumbers, Grüneisen parameters

resonant Raman effect

transport properties

optical properties

dielectric constants

**copper gallium selenide (CuGaSe<sub>2</sub>)**

crystal structure, thermal expansion, Debye temperature, melting point and related parameters

band structure, energy gaps, other band energies

impurities and defects

phonon wavenumbers

transport properties

optical properties, refractive index

**copper gallium telluride (CuGaTe<sub>2</sub>)**

crystal structure, lattice parameters, Debye temperature, melting point, thermal expansion and conductivity

energy gaps, other band energies

impurities and defects

phonon wavenumbers, Grüneisen parameter

transport and optical properties

**copper indium sulfide (roquesite,  $\text{CuInS}_2$ )**

crystal structure, lattice parameters, Debye temperature, melting point, mechanical properties

electronic properties

impurities and defects

phonon wavenumbers

transport properties, photoconductivity

optical properties, refractive index

magnetic properties

**copper indium selenide ( $\text{CuInSe}_2$ )**

thermal expansion, Debye temperature, melting point and other lattice parameters

band structure, energy gaps

intraband and interband transition energies, exciton binding energy

band and core state energies, effective masses, deformation potentials

impurities and defects

lattice properties

transport properties

optical properties, dielectric constants



## **copper indium telluride (CuInTe<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point and related parameters

energy gaps

intraband and interband energies, effective masses, deformation potential

impurities and defects

phonon wavenumbers, Grüneisen parameter

transport properties

optical properties, dielectric constants

**silver gallium sulfide (AgGaS<sub>2</sub>)**

crystal structure, lattice parameters, Debye temperature, melting point and related lattice properties

energy gaps, intraband and interband energies

impurities and defects

phonon wavenumbers, Grüneisen parameter, piezoelectric constant

elastic moduli

transport properties

optical properties, refractive index

dielectric constants

**silver gallium selenide (AgGaSe<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, melting point

energy gaps

intraband and interband energies

impurities and defects

phonon wavenumbers, elastic moduli

transport properties

optical properties, refractive indices

dielectric constants

**silver gallium telluride (AgGaTe<sub>2</sub>)**

crystal structure, lattice parameters, physical properties

**silver indium sulfide (AgInS<sub>2</sub>)**

crystal structure, lattice parameters, melting point, Debye temperature, thermal expansion

electronic properties: chalcopyrite structure

impurities and defects

electronic properties: orthorhombic structure

transport and optical properties

**silver indium selenide (AgInSe<sub>2</sub>)**

crystal structure, lattice parameters, melting point, Debye temperature, thermal expansion

energy gaps, splitting energies

interband transition energies

band and core state energies

impurities and defects

phonon wavenumbers

transport properties

optical properties, refractive indices, dielectric constants

**silver indium teluride (AgInTe<sub>2</sub>)**

crystal structure, lattice parameters, physical properties

**CuTlS<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**CuTlSe<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**CuTlTe<sub>2</sub>**

physical properties

**AgTlSe<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**AlTlTe<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**chalcopyrite (CuFeS<sub>2</sub>)**

crystal structure, lattice parameters, density, melting point

electronic structure

transport and optical properties

phonon wavenumbers, magnetic properties

**CuFeSe<sub>2</sub>**

physical properties

**CuFeTe<sub>2</sub>**

physical properties

**AgFeSe<sub>2</sub>**

physical properties

**AgFeTe<sub>2</sub>**

physical properties

### **solid solutions of I-III-VI<sub>2</sub> compounds**

- crystal structure and lattice parameters: comparative table
- physical properties of cationic intrinsic solutions
- physical properties of anionic intrinsic solutions
- physical properties of cationic/anionic intrinsic solutions
- physical properties of chalcopyrite, zincblende solid solutions

### **II-IV-V<sub>2</sub> compounds**

- crystal structure, lattice parameters, density: comparative table
- high-temperature phases: comparative table
- structure of amorphous phases
- band structure, energy gaps: comparative table
- further comparative data on physical properties

### **magnesium silicon phosphide(MgSiP<sub>2</sub>)**

- energy gap, interband transitions
- resistivities, donor levels

**zinc silicon phosphide( $\text{ZnSiP}_2$ )**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point,  
hardness  
band structure, energy gaps  
other band energies, effective masses  
impurities and defects, diffusion  
phonon wavenumbers  
transport properties  
refractive index, dielectric constants  
luminescence, photoconductivity

**zinc silicon arsenide( $\text{ZnSiAs}_2$ )**

crystal structure, lattice parameters, thermal conductivity, Debye temperature, melting point  
band structure, energy gap  
interband and intraband transitions  
effective masses  
impurities and defects  
phonon wavenumbers  
transport properties  
optical properties, refractive indices  
birefringence, luminescence, nonlinear optics

**zinc germanium nitride (ZnGeN<sub>2</sub>)**

crystal structure, lattice parameters, physical properties

**zinc germanium phosphide (ZnGeP<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point,

thermal conductivity, hardness

band structure, energy gaps, interband transitions

splitting energies, band and core state energies

effective masses

impurities and defects

phonon wavenumbers, elastic moduli

transport properties

luminescence, photoconductivity, refractive indices

birefringence, dielectric constants, linear and nonlinear optical coefficients

**zinc germanium arsenide (ZnGeAs<sub>2</sub>)**

crystal structure, lattice parameters, melting point

energy gaps, intraband and interband transition energies

band and core state energies, effective masses

impurities and defects, transport properties

optical properties



**zinc tin phosphide (ZnSnP<sub>2</sub>)**

crystal structure, lattice parameters, melting point

energy gap, intra- and interband energies

phonon wavenumbers

transport properties

optical properties, dielectric constants

**zinc tin arsenide (ZnSnAs<sub>2</sub>)**

crystal structure, lattice parameters, Debye temperature, melting point, hardness

energy gap, intraband and interband transition energies, effective masses

impurities and defects

transport properties

optical absorption, dielectric constant

**zinc tin antimonide (ZnSnSb<sub>2</sub>)**

crystal structure, lattice parameters, physical properties

**cadmium silicon phosphide (CdSiP<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, melting point

band structure, energy gaps

intra- and interband structure energies, effective masses

impurities and defects

phonon wavenumbers, Grüneisen parameter

transport properties

optical properties

**cadmium silicon arsenide (CdSiAs<sub>2</sub>)**

crystal structure, lattice parameters, melting point

energy gap, intra- and interband energies, effective masses

impurities and defects

transport properties

photoluminescence, photoconductivity

## **cadmium germanium phosphide (CdGeP<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point

energy gaps

intra- and interband energies, effective masses

impurities and defects

phonon wavenumbers

transport properties

refractive indices

nonlinear and electrooptic coefficients, optical activity, dichroism, photovoltaic effect

photoluminescence, photoconductivity

## **cadmium germanium arsenide (CdGeAs<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point, heat

capacity, hardness, internal friction

energy gaps, intra- and interband energies

effective masses, *g*-factor

impurities and defects

phonon wavenumbers, elastic moduli

transport properties

refractive indices, dielectric constant

non-linear dielectric susceptibilities

photoconductivity, photoluminescence

magnetic properties

**cadmium tin phosphide (CdSnP<sub>2</sub>)**

structure, lattice parameters, melting point

band structure, energy gaps

intra- and interband energies, effective masses

impurities and defects

phonon wavenumbers

transport properties

optical properties, dielectric constants, refractive index

magnetic properties

**cadmium tin arsenide (CdSnAs<sub>2</sub>)**

crystal structure, lattice parameters, thermal expansion, Debye temperature, melting point,

compressibility

band structure, energy gaps

intra- and interband transition energies

effective masses

transport properties

optical properties, dielectric constants, luminescence, photoconductivity

magnetic properties

**solid solutions of II-IV-V<sub>2</sub> compounds**

crystal structure and lattice parameters

physical properties

**I<sub>2</sub>-IV-VI<sub>3</sub> compounds**

comparative table on structure, density and lattice parameters

**Cu<sub>2</sub>SiS<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>SiTe<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>GeS<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>GeSe<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>GeTe<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>SnS<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>SnSe<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>2</sub>SnTe<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Ag<sub>2</sub>GeSe<sub>3</sub>**

physical properties

**Ag<sub>2</sub>GeTe<sub>3</sub>**

physical properties

**Ag<sub>2</sub>SnS<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**Ag<sub>2</sub>SnSe<sub>3</sub>**

crystal structure, physical properties

**Ag<sub>2</sub>SnTe<sub>3</sub>**

crystal structure, physical properties

**I<sub>2</sub>-IV-VI<sub>3</sub> solid solutions**

crystal structure, physical properties

**I<sub>3</sub>-V-VI<sub>4</sub> compounds**

general characterization, crystal structure, density, lattice parameters

**copper thiophosphate (Cu<sub>3</sub>PS<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**enargite-luzonite (Cu<sub>3</sub>AsS<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**copper arsenic selenide (Cu<sub>3</sub>AsSe<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**famatinite (Cu<sub>3</sub>SbS<sub>4</sub>)**

crystal structure, lattice parameters, physical properties



**copper antimony selenide ( $\text{Cu}_3\text{SbSe}_4$ )**

energy gap, effective mass, defect states

hole concentrations, mobilities, Seebeck coefficients and Nernst coefficient

crystal structure, further physical properties

**$\text{Cu}_3\text{AsTe}_4$**

physical properties

**$\text{Cu}_3\text{SbTe}_4$**

physical properties

**$\text{Ag}_3\text{PS}_4$**

physical properties

**II-III<sub>2</sub>-VI<sub>4</sub> compounds**

crystal structure, lattice parameters, density: comparative table

comparative remarks on the physical properties

**ZnAl<sub>2</sub>S<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**ZnGa<sub>2</sub>S<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**ZnGa<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**ZnGa<sub>2</sub>Te<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**zinc thioindate (ZnIn<sub>2</sub>S<sub>4</sub>)**

crystal structure, lattice parameters

electronic properties, impurities and defects

phonon frequencies

transport and optical properties

magnetic properties

**zinc indium selenide ( $\text{ZnIn}_2\text{Se}_4$ )**

crystal structure, lattice parameters, physical properties

**zinc indium telluride ( $\text{ZnIn}_2\text{Te}_4$ )**

crystal structure, lattice parameters, physical properties

**cadmium thiogallate ( $\text{CdAl}_2\text{S}_4$ )**

crystal structure, lattice parameters, electronic properties

**cadmium thiogallate ( $\text{CdGa}_2\text{S}_4$ )**

crystal structure, lattice parameters, electronic properties

impurities and defects

heat capacity, Debye temperature

phonon wavenumbers

transport properties

optical properties, dielectric constants

**cadmium gallium selenide (CdGa<sub>2</sub>Se<sub>4</sub>)**

crystal structure, lattice parameters, electronic properties

impurities and defects

thermal expansion, melting point

phonon wavenumbers, force constants

transport and optical properties, dielectric properties

magnetic properties

**cadmium gallium telluride (CdGa<sub>2</sub>Te<sub>4</sub>)**

crystal structure, lattice parameters, energy gap

**cadmium thioindate (CdIn<sub>2</sub>S<sub>4</sub>)**

crystal structure, lattice parameters, density

electronic properties

impurities and defects

phonon wavenumbers and energies

elastic moduli, heat capacity, Debye temperature, melting point

transport properties

optical and magnetic properties, dielectric constants

**cadmium indium selenide (CdIn<sub>2</sub>Se<sub>4</sub>)**

crystal structure, lattice parameters, density

physical properties

**cadmium indium telluride (CdIn<sub>2</sub>Te<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**cadmium thallium selenide (CdTl<sub>2</sub>Se<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**mercury thioaluminate (HgAl<sub>2</sub>S<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**mercury thiogallate (HgGa<sub>2</sub>S<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**mercury gallium selenide (HgGa<sub>2</sub>Se<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**mercury indium telluride (HgIn<sub>2</sub>Te<sub>4</sub>)**

crystal structure, lattice parameters, physical properties

**mercury indium selenides and tellurides ( $\text{HgIn}_2\text{Se}_4$ ,  $\text{HgIn}_2\text{Te}_4$ ,  $\text{Hg}_3\text{In}_2\text{Te}_6$ ,  $\text{Hg}_5\text{In}_2\text{Te}_8$ )**

physical properties

**further II-III<sub>2</sub>-VI<sub>4</sub> compounds with II = Mg, Ca, Mn, Pb**

physical properties

**solid solutions of II-III<sub>2</sub>-VI<sub>4</sub> compounds**

physical properties

**ordered vacancy compounds of the series II<sub>3</sub>VI<sub>3</sub>-III<sub>2</sub>VI<sub>3</sub>**

crystal structure, lattice parameters: comparative table

**zinc indium sulfide ( $\text{Zn}_2\text{In}_2\text{S}_5$ )**

crystal structure, lattice parameters, physical properties

**zinc indium sulfide ( $\text{Zn}_3\text{In}_2\text{S}_6$ )**

crystal structure, lattice parameters, physical properties

**mercury gallium telluride ( $\text{Hg}_3\text{Ga}_2\text{Te}_6$ )**

crystal structure, lattice parameters, physical properties

**mercury gallium telluride ( $\text{Hg}_5\text{Ga}_2\text{Te}_8$ )**

crystal structure, lattice parameters, physical properties

**mercury indium telluride ( $\text{Hg}_3\text{In}_2\text{Te}_6$ )**

crystal structure, lattice parameters, physical properties

**mercury indium telluride ( $\text{Hg}_5\text{In}_2\text{Te}_8$ )**

crystal structure, lattice parameters, physical properties

**$\text{I}_2\text{-II-IV-VI}_4$  compounds**

crystal structure, lattice parameters

energy gaps and resistivities

**$\text{I}_2\text{-IV-VI}_4\text{-VII}$  compounds**

crystal structure, lattice parameters

**$\text{I}_2\text{-IV-VI}_4\text{-VIII}$  compounds**

crystal structure, lattice parameters

physical properties

**$\text{I-III-IV-Se}_4$  compounds**

crystal structure, energy gaps

**MnIn<sub>2</sub>S<sub>4</sub>**

physical properties

**FeIn<sub>2</sub>S<sub>4</sub>**

physical properties

**CoIn<sub>2</sub>S<sub>4</sub>**

physical properties

**NiIn<sub>2</sub>S<sub>4</sub>**

physical properties

**MnIn<sub>2</sub>S<sub>4-x</sub>Se<sub>x</sub>**

physical properties

**FeIn<sub>2</sub>S<sub>4-x</sub>Se<sub>x</sub>**

physical properties

**NiIn<sub>2</sub>S<sub>3.5</sub>Se<sub>0.5</sub>**

physical properties



**MnGa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**MnSb<sub>2</sub>S<sub>4</sub>**

physical properties

**CoRh<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**Fe(FeRh)S<sub>4</sub>**

physical properties

**Cd<sub>1-x</sub>Fe<sub>x</sub>(FeSn)S<sub>4</sub>**

physical properties

## **CdCr<sub>2</sub>S<sub>4</sub>**

crystal structure, lattice parameters

energy gap

phonon wavenumbers

thermal expansion, Grüneisen constant, compressibility

transport properties

optical absorption

refractive index, dielectric constants

figures and further references to optical properties

density, Curie temperature, Debye temperature, heat capacity

## **FeCr<sub>2</sub>S<sub>4</sub>**

crystal structure, lattice parameters

transport properties

density, Curie temperature, heat capacity

**CoCr<sub>2</sub>S<sub>4</sub>**

crystal structure, lattice parameters

transport and optical properties

density, Curie temperature, Debye temperature,

**CuCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**Fe<sub>1-x</sub>Cu<sub>x</sub>Cr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**HgCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**ZnCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**MnCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**V<sub>x</sub>Cr<sub>3-x</sub>S<sub>4</sub>**

crystal structure, physical properties

**BaCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters

energy gap

phonon wavenumbers

transport properties

optical properties, dielectric constants

density, Curie temperature, Debye temperature, heat capacity

**CuCr<sub>2</sub>Se<sub>4</sub>**

physical properties

**CuCr<sub>2</sub>(S,Se,Te)<sub>3</sub>(I,Br,Cl)**

physical properties

**CuCr<sub>2</sub>S<sub>4-x</sub>Se<sub>x</sub>**

lattice parameters, physical properties

**HgCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters

energy gap

transport properties

optical properties

Curie and Debye temperatures

**ZnCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters

energy gap

transport properties

optical properties, dielectric constant

density, Néel temperature

**FeCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, density

transport properties

**NiCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**VCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**BaCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**CoCr<sub>2</sub>Te<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**FeCr<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**BaTiO<sub>3</sub>**

crystal structure, lattice parameters

band gap, interband transition energies

phonon dispersion, phonon wavenumbers

transport properties

optical properties, dielectric constant

melting point, density, heat capacity

**PbTiO<sub>3</sub>**

crystal structure, lattice parameters  
phonon dispersion, elastic constants  
transport properties  
optical properties, dielectric constants  
melting point, density, heat capacity

**NaNbO<sub>3</sub>**

crystal structure, lattice parameters  
physical properties

**KNbO<sub>3</sub>**

crystal structure, lattice parameters, melting point, density  
physical properties

**KTaO<sub>3</sub>**

crystal structure, lattice parameters, thermal expansion  
band structure, energy gap, interband transition energies  
phonon dispersion, elastic properties  
transport properties  
optical properties, dielectric constants  
melting point, density

**SrTiO<sub>3</sub>**

crystal structure, lattice parameters  
band structure, energy gap, interband transition energies  
phonon dispersion  
transport properties  
optical properties, dielectric constant  
heat capacity, melting point, density

**PbZrO<sub>3</sub>**

crystal structure, lattice parameters  
physical properties



**CaTiO<sub>3</sub>**

crystal structure, lattice parameters

physical properties

**LiVO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**LaVO<sub>3</sub>**

crystal structure, physical properties

**Cs<sub>x</sub>V<sub>3</sub>O<sub>7</sub>**

crystal structure, physical properties

**Co<sub>3</sub>V<sub>2</sub>O<sub>8</sub>**

crystal structure, lattice parameters, physical properties

**MV<sub>2</sub>O<sub>4</sub> (M = Co, Fe, Mg, Mn, Zn)**

physical properties

**MnVO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**CuNbO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**SbNbO<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**Sr<sub>2</sub>MNbO<sub>6</sub> (M = Ti, Zr, Hf)**

crystal structure, physical properties

**CuTaO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**CuTa<sub>2</sub>O<sub>6</sub>**

crystal structure, lattice parameters, physical properties

**K<sub>2</sub>CrO<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**PbCrO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**PbMoO<sub>4</sub>**

crystal structure, lattice parameters, thermal expansion  
phonon wavenumbers, sound velocity,  
elastic moduli, bulk modulus, compressibility, elastooptic constants  
transport and optical properties  
density, Debye temperature, heat capacity

**PbWO<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**KMnO<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**LaMnO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**LiFe<sub>5</sub>O<sub>8</sub>**

crystal structure, lattice parameters, physical properties

**BaFe<sub>12</sub>O<sub>19</sub>**

crystal structure, lattice parameters, physical properties

**SrFe<sub>12</sub>O<sub>19</sub>**

crystal structure, lattice parameters, physical properties

**PbFe<sub>12</sub>O<sub>19</sub>**

physical properties

**LaCoO<sub>3</sub>**

crystal structure, physical properties

**Ba<sub>0.5</sub>OsO<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**NiFe<sub>2</sub>O<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**CuFe<sub>2</sub>O<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**CoAl<sub>2</sub>O<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**Cd<sub>2</sub>Os<sub>2</sub>O<sub>7</sub>**

crystal structure, lattice parameters, physical properties

**Ca<sub>2</sub>Os<sub>2</sub>O<sub>7</sub>**

crystal structure, lattice parameters, physical properties

**Bi<sub>2</sub>Os<sub>2</sub>O<sub>7</sub>**

crystal structure, lattice parameters, physical properties

**Bi<sub>2</sub>Pt<sub>2</sub>O<sub>7</sub>**

physical properties

**Ca<sub>4</sub>PtO<sub>6</sub>**

physical properties

**Me<sub>x</sub>ZrS<sub>2</sub> (Me = Fe,Co,Ni)**

crystal structure, lattice parameters, physical properties

**CuCrS<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**Mn<sub>x</sub>NbS<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**Me<sub>x</sub>NbS<sub>2</sub> (Me = Fe,Co,Ni)**

crystal structure, lattice parameters, physical properties

**Tl<sub>3</sub>VS<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**Cu<sub>3</sub>VS<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**Na<sub>x</sub>VS<sub>2</sub>, Na<sub>x</sub>VSe<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**CsZrCl<sub>6</sub>**

crystal structure, lattice parameters, physical properties

**VFe<sub>2</sub>Se<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**LaTiO<sub>3</sub>**

crystal structure, physical properties

**CeTiO<sub>3</sub>**

crystal structure, physical properties

**PrTiO<sub>3</sub>**

crystal structure, physical properties

**NdTiO<sub>3</sub>**

crystal structure, physical properties

**SmTiO<sub>3</sub>**

crystal structure, physical properties

**EuTiO<sub>3</sub>**

crystal structure

**GdTiO<sub>3</sub>**

crystal structure, physical properties

**TbTiO<sub>3</sub>**

crystal structure, physical properties

**DyTiO<sub>3</sub>**

crystal structure, physical properties

**HoTiO<sub>3</sub>**

crystal structure, physical properties

**ErTiO<sub>3</sub>**

crystal structure, physical properties

**TmTiO<sub>3</sub>**

crystal structure

**YbTiO<sub>3</sub>**

crystal structure, physical properties

**LuTiO<sub>3</sub>**

crystal structure

**La<sub>1-x</sub>Sr<sub>x</sub>VO<sub>3</sub>**

physical properties

**CeVO<sub>3</sub>**

crystal structure, physical properties



**PrVO<sub>3</sub>**

crystal structure, physical properties

**NdVO<sub>3</sub>**

crystal structure, physical properties

**SmVO<sub>3</sub>**

crystal structure, physical properties

**EuVO<sub>3</sub>**

crystal structure, physical properties

**GdVO<sub>3</sub>**

crystal structure, physical properties

**TbVO<sub>3</sub>**

crystal structure, physical properties

**DyVO<sub>3</sub>**

crystal structure, physical properties

**HoVO<sub>3</sub>**

crystal structure, physical properties

**ErVO<sub>3</sub>**

crystal structure, physical properties

**TmVO<sub>3</sub>**

crystal structure, physical properties

**YbVO<sub>3</sub>**

crystal structure, physical properties

**LuVO<sub>3</sub>**

crystal structure, physical properties

**LaCrO<sub>3</sub>**

crystal structure, physical properties

**La<sub>0.8</sub>Mg<sub>0.2</sub>CrO<sub>3</sub>**

physical properties

**La<sub>1-x</sub>Sr<sub>x</sub>CrO<sub>3</sub>**

physical properties

**CeCrO<sub>3</sub>**

crystal structure

**PrCrO<sub>3</sub>**

crystal structure

**NdCrO<sub>3</sub>**

crystal structure, physical properties

**SmCrO<sub>3</sub>**

crystal structure, physical properties

**EuCrO<sub>3</sub>**

crystal structure

**GdCrO<sub>3</sub>**

crystal structure, physical properties

**TbCrO<sub>3</sub>**

crystal structure

**DyCrO<sub>3</sub>**

crystal structure, physical properties

**HoCrO<sub>3</sub>**

crystal structure, physical properties

**ErCrO<sub>3</sub>**

crystal structure, physical properties

**TmCrO<sub>3</sub>**

crystal structure

**YbCrO<sub>3</sub>**

crystal structure, physical properties

**LuCrO<sub>3</sub>**

crystal structure, physical properties

**LaCo<sub>1-x</sub>Mn<sub>x</sub>O<sub>3</sub>**

physical properties

**LaMn<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**La<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3</sub>**

physical properties

**La<sub>0.85</sub>Ba<sub>0.15</sub>Mn<sub>1-x</sub>Cr<sub>x</sub>O<sub>3</sub>**

physical properties

**La<sub>0.85</sub>Y<sub>0.15</sub>Mn<sub>1-x</sub>Co<sub>x</sub>O<sub>3</sub>**

physical properties

**CeMnO<sub>3</sub>**

crystal structure

**PrMnO<sub>3</sub>**

crystal structure

**NdMnO<sub>3</sub>**

crystal structure

**SmMnO<sub>3</sub>**

crystal structure

**EuMnO<sub>3</sub>**

crystal structure

**GdMnO<sub>3</sub>**

crystal structure

**TbMnO<sub>3</sub>**

crystal structure

**DyMnO<sub>3</sub>**

crystal structure

**HoMnO<sub>3</sub>**

crystal structure, physical properties

**ErMnO<sub>3</sub>**

crystal structure, physical properties

**TmMnO<sub>3</sub>**

crystal structure

**YbMnO<sub>3</sub>**

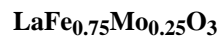
crystal structure, physical properties

**LuMnO<sub>3</sub>**

crystal structure, physical properties

**LaFeO<sub>3</sub>**

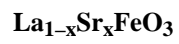
crystal structure, physical properties



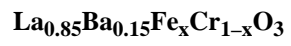
crystal structure, physical properties



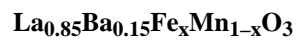
crystal structure, physical properties



physical properties



physical properties



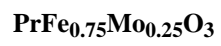
physical properties



crystal structure



crystal structure, physical properties



crystal structure, physical properties

**NdFeO<sub>3</sub>**

crystal structure, physical properties

**NdFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**SmFeO<sub>3</sub>**

crystal structure, physical properties

**SmFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**EuFeO<sub>3</sub>**

crystal structure, physical properties

**EuFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**GdFeO<sub>3</sub>**

crystal structure, physical properties

**GdFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties



**TbFeO<sub>3</sub>**

crystal structure, physical properties

**TbFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**DyFeO<sub>3</sub>**

crystal structure, physical properties

**DyFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**HoFeO<sub>3</sub>**

crystal structure, physical properties

**HoFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**ErFeO<sub>3</sub>**

crystal structure, physical properties

**ErFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**TmFeO<sub>3</sub>**

crystal structure, physical properties

**TmFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**YbFeO<sub>3</sub>**

crystal structure, physical properties

**YbFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

crystal structure, physical properties

**LuFeO<sub>3</sub>**

crystal structure, physical properties

**LuFe<sub>0.75</sub>Mo<sub>0.25</sub>O<sub>3</sub>**

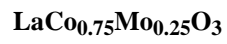
crystal structure, physical properties

**La<sub>1-x</sub>Sr<sub>x</sub>CoO<sub>3</sub>**

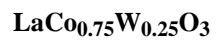
physical properties

**La<sub>1-x</sub>Th<sub>x</sub>CoO<sub>3</sub>**

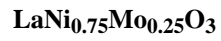
physical properties



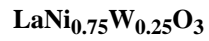
crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



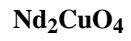
crystal structure, physical properties



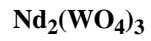
crystal structure, physical properties



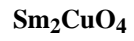
crystal structure, physical properties



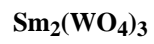
crystal structure, physical properties



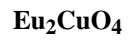
crystal structure, physical properties



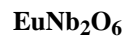
crystal structure, physical properties



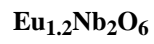
crystal structure, physical properties



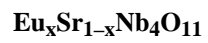
crystal structure, physical properties



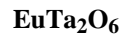
crystal structure, physical properties



crystal structure, physical properties



crystal structure



crystal structure, physical properties



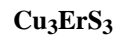
crystal structure, physical properties



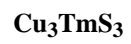
crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties

**Gd<sub>2</sub>CuO<sub>4</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

crystal structure, physical properties

**Tb<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Dy<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Ho<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Er<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Tm<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Yb<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>**

physical properties

**Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Tb<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Dy<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Ho<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Er<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Tm<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**Yb<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>**

physical properties

**La<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Nd<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

physical properties

**Sm<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Eu<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Tb<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

physical properties

**Dy<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Ho<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

physical properties

**Er<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties



**Tm<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

physical properties

**Yb<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>**

physical properties

**Pr<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Nd<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Sm<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Eu<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Gd<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Tb<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Dy<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Ho<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Er<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Tm<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Yb<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**Lu<sub>2</sub>Te<sub>3</sub>O<sub>9</sub>**

physical properties

**La<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Ce<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Pr<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Sm<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**Dy<sub>2</sub>Mo<sub>3</sub>O<sub>9</sub>**

crystal structure, physical properties

**GdCrS<sub>3</sub>**

crystal structure, physical properties

**TbCrS<sub>3</sub>**

crystal structure, physical properties

**DyCrS<sub>3</sub>**

crystal structure, physical properties

**HoCrS<sub>3</sub>**

crystal structure, physical properties

**ErCrS<sub>3</sub>**

crystal structure, physical properties

**TmCrS<sub>3</sub>**

crystal structure, physical properties

**YbCrS<sub>3</sub>**

crystal structure, physical properties

**LuCrS<sub>3</sub>**

crystal structure, physical properties

**YCrS<sub>3</sub>**

physical properties

**GdCrSe<sub>3</sub>**

crystal structure, physical properties

**TbCrSe<sub>3</sub>**

physical properties

**DyCrSe<sub>3</sub>**

physical properties

**HoCrSe<sub>3</sub>**

physical properties

**ErCrSe<sub>3</sub>**

physical properties

**TmCrSe<sub>3</sub>**

physical properties

**YbCrSe<sub>3</sub>**

physical properties

**LuCrSe<sub>3</sub>**

physical properties

**YCrSe<sub>3</sub>**

physical properties

**YCrTe<sub>3</sub>**

physical properties

**GdCrTe<sub>3</sub>**

physical properties

**Pr<sub>2</sub>CrS<sub>4</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>CrS<sub>4</sub>**

physical properties

**Sm<sub>2</sub>CrS<sub>4</sub>**

physical properties

**Y<sub>2</sub>CrS<sub>4</sub>**

crystal structure, physical properties

**La<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Pr<sub>2</sub>CrSe<sub>4</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Sm<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Gd<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Tb<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Dy<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Ho<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Er<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Yb<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Lu<sub>2</sub>CrSe<sub>4</sub>**

physical properties

**Y<sub>2</sub>CrSe<sub>4</sub>**

crystal structure, physical properties

**EuCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**EuCr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**EuCr<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**YbCr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**YbCr<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

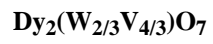
**Gd<sub>2</sub>(W<sub>2/3</sub>V<sub>4/3</sub>)O<sub>7</sub>**

crystal structure, physical properties

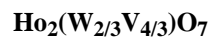
**Tb<sub>2</sub>(W<sub>2/3</sub>V<sub>4/3</sub>)O<sub>7</sub>**

crystal structure, physical properties

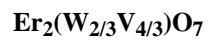




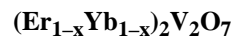
crystal structure, physical properties



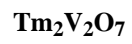
crystal structure, physical properties



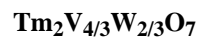
crystal structure, physical properties



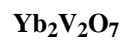
crystal structure, physical properties



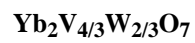
crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties

**Lu<sub>2</sub>V<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**La<sub>2</sub>Pb<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Tb<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

physical properties

**Dy<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Ho<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Er<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Tm<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Yb<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Lu<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Y<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Pr<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Eu<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Yb<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Y<sub>2</sub>Ru<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Sm<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Eu<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Dy<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Y<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Os<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Nd<sub>2</sub>Pt<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**Gd<sub>2</sub>Pt<sub>2</sub>O<sub>7</sub>**

crystal structure, physical properties

**EuO<sub>1-x</sub>N<sub>x</sub>**

crystal structure, physical properties

**Eu<sub>1-x</sub>Nd<sub>x</sub>O<sub>1-x</sub>N<sub>x</sub>**

crystal structure, physical properties

**Eu<sub>1-x</sub>Gd<sub>x</sub>O<sub>1-x</sub>N<sub>x</sub>**

crystal structure, physical properties

**LaBiS<sub>3</sub>**

crystal structure

**CeBiS<sub>3</sub>**

crystal structure, physical properties

**PrBiS<sub>3</sub>**

crystal structure

**GdBiS<sub>3</sub>**

crystal structure

**LaBiSe<sub>3</sub>**

crystal structure

**CeBiSe<sub>3</sub>**

crystal structure

**PrBiSe<sub>3</sub>**

crystal structure

**NdBiSe<sub>3</sub>**

crystal structure

**GdBiSe<sub>3</sub>**

crystal structure

**LaSbSe<sub>3</sub>**

crystal structure

**CeSbSe<sub>3</sub>**

crystal structure, physical properties

**PrSbSe<sub>3</sub>**

crystal structure, physical properties

**NdSbSe<sub>3</sub>**

crystal structure, physical properties

**SmSbSe<sub>3</sub>**

crystal structure, physical properties

**GdSbSe<sub>3</sub>**

crystal structure, physical properties

**LaSbTe<sub>3</sub>**

crystal structure

**CeSbTe<sub>3</sub>**

physical properties

**NdSbTe<sub>3</sub>**

crystal structure

**SmSbTe<sub>3</sub>**

crystal structure

**EuSbTe<sub>3</sub>**

crystal structure, physical properties

**GdSbTe<sub>3</sub>**

crystal structure, physical properties

**DySbTe<sub>3</sub>**

crystal structure

**YSbTe<sub>3</sub>**

crystal structure

**LaBiTe<sub>3</sub>**

crystal structure

**CeBiTe<sub>3</sub>**

crystal structure, physical properties

**PrBiTe<sub>3</sub>**

crystal structure

**NdBiTe<sub>3</sub>**

crystal structure

**SmBiTe<sub>3</sub>**

crystal structure, physical properties



**GdBiTe<sub>3</sub>**

crystal structure

**TbBiTe<sub>3</sub>**

crystal structure, physical properties

**DyBiTe<sub>3</sub>**

crystal structure

**HoBiTe<sub>3</sub>**

crystal structure

**ErBiTe<sub>3</sub>**

crystal structure

**TmBiTe<sub>3</sub>**

crystal structure, physical properties

**LuBiTe<sub>3</sub>**

crystal structure, physical properties

**YBiTe<sub>3</sub>**

crystal structure, physical properties

**EuSb<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**EuSb<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**EuSb<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**EuBi<sub>2</sub>S<sub>4</sub>**

crystal structure

**EuBi<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**EuBi<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**LiHoS<sub>2</sub>**

crystal structure

**LiErS<sub>2</sub>**

crystal structure

**LiYbS<sub>2</sub>**

crystal structure

**NaLaS<sub>2</sub>**

crystal structure

**NaCeS<sub>2</sub>**

crystal structure

**NaPrS<sub>2</sub>**

crystal structure

**NaNdS<sub>2</sub>**

crystal structure

**NaSmS<sub>2</sub>**

crystal structure

**NaEuS<sub>2</sub>**

crystal structure

**NaGdS<sub>2</sub>**

crystal structure

**NaTbS<sub>2</sub>**

crystal structure

**NaDyS<sub>2</sub>**

crystal structure

**NaHoS<sub>2</sub>**

crystal structure

**NaErS<sub>2</sub>**

crystal structure

**NaYS<sub>2</sub>**

crystal structure

**NaLaSe<sub>2</sub>**

crystal structure

**NaCeSe<sub>2</sub>**

crystal structure

**NaPrSe<sub>2</sub>**

crystal structure

**NaNdSe<sub>2</sub>**

crystal structure

**NaSmSe<sub>2</sub>**

crystal structure

**NaEuSe<sub>2</sub>**

crystal structure

**NaGdSe<sub>2</sub>**

crystal structure

**NaTbSe<sub>2</sub>**

crystal structure

**NaDySe<sub>2</sub>**

crystal structure

**NaHoSe<sub>2</sub>**

crystal structure

**NaErSe<sub>2</sub>**

crystal structure

**NaYSe<sub>2</sub>**

crystal structure

**KLaS<sub>2</sub>**

crystal structure

**KCeS<sub>2</sub>**

crystal structure

**KPrS<sub>2</sub>**

crystal structure

**KNdS<sub>2</sub>**

crystal structure

**KSmS<sub>2</sub>**

crystal structure

**KEuS<sub>2</sub>**

crystal structure

**KGdS<sub>2</sub>**

crystal structure

**KTbS<sub>2</sub>**

crystal structure

**KDyS<sub>2</sub>**

crystal structure

**KYS<sub>2</sub>**

crystal structure

**KHoS<sub>2</sub>**

crystal structure

**KErS<sub>2</sub>**

crystal structure

**KYbS<sub>2</sub>**

crystal structure

**RbLaS<sub>2</sub>**

crystal structure

**RbCeS<sub>2</sub>**

crystal structure

**RbPrS<sub>2</sub>**

crystal structure

**RbNdS<sub>2</sub>**

crystal structure

**RbSmS<sub>2</sub>**

crystal structure

**RbEuS<sub>2</sub>**

crystal structure

**RbGdS<sub>2</sub>**

crystal structure

**RbTbS<sub>2</sub>**

crystal structure

**CsLaS<sub>2</sub>**

crystal structure

**CsCeS<sub>2</sub>**

crystal structure



**CaLa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaCe<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaPr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaNd<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaSm<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaGd<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaTb<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaDy<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaHo<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaEr<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaTm<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaYb<sub>2</sub>S<sub>4</sub>**

crystal structure

**CaLu<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CaY<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaHo<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaEr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaTm<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaYb<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaLu<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CaDy<sub>2</sub>Te<sub>4</sub>**

crystal structure

**CaHo<sub>2</sub>Te<sub>4</sub>**

crystal structure

**CaEr<sub>2</sub>Te<sub>4</sub>**

crystal structure

**CaTm<sub>2</sub>Te<sub>4</sub>**

crystal structure

**CaLu<sub>2</sub>Te<sub>4</sub>**

crystal structure

**CaY<sub>2</sub>Te<sub>4</sub>**

crystal structure

**SrLa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**SrCe<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrPr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**SrNd<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**SrSm<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**SrGd<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrTb<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrDy<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrHo<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrEr<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrTm<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrYb<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrLu<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrY<sub>2</sub>S<sub>4</sub>**

crystal structure

**SrLa<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrCe<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrPr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrNd<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrSm<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrGd<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrTb<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrDy<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrEr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrYb<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrLu<sub>2</sub>Se<sub>4</sub>**

crystal structure

**SrY<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaLa<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaCe<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaPr<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaNd<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaSm<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaGd<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaTb<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaDy<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaHo<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaEr<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaTm<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaYb<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaLu<sub>2</sub>S<sub>4</sub>**

crystal structure



**BaY<sub>2</sub>S<sub>4</sub>**

crystal structure

**BaLa<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaCe<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaPr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaNd<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaSm<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaGd<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaDy<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaEr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaYb<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaLu<sub>2</sub>Se<sub>4</sub>**

crystal structure

**BaY<sub>2</sub>Se<sub>4</sub>**

crystal structure

**ZrLa<sub>2</sub>S<sub>5</sub>**

crystal structure, physical properties

**ZrSm<sub>2</sub>S<sub>5</sub>**

crystal structure

**ZrHo<sub>2</sub>S<sub>5</sub>**

crystal structure

**ZrEr<sub>2</sub>S<sub>5</sub>**

crystal structure

**ZrLa<sub>2</sub>Se<sub>5</sub>**

crystal structure

**ZrSm<sub>2</sub>Se<sub>5</sub>**

crystal structure

**ZrGd<sub>2</sub>Se<sub>5</sub>**

crystal structure

**ZrTb<sub>2</sub>Se<sub>5</sub>**

crystal structure

**HfCe<sub>2</sub>S<sub>5</sub>**

crystal structure, physical properties

**HfSm<sub>2</sub>S<sub>5</sub>**

crystal structure, physical properties

**HfHo<sub>2</sub>S<sub>5</sub>**

crystal structure

**HfEr<sub>2</sub>S<sub>5</sub>**

crystal structure

**HfLa<sub>2</sub>Se<sub>5</sub>**

crystal structure

**HfCe<sub>2</sub>Se<sub>5</sub>**

crystal structure

**CuLaS<sub>2</sub>**

crystal structure

**CuCeS<sub>2</sub>**

crystal structure

**CuPrS<sub>2</sub>**

crystal structure

**CuNdS<sub>2</sub>**

crystal structure

**CuSmS<sub>2</sub>**

crystal structure

**CuGdS<sub>2</sub>**

crystal structure

**CuTbS<sub>2</sub>**

crystal structure

**Cu<sub>3</sub>SmS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>GdS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>TbS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>DyS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>YS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>HoS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>YbS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>LuS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>ScS<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>SmSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>GdSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>TbSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>DySe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>YSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>HoSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>YbSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>ScSe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>SmTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>GdTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>TbTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>DyTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>YTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>HoTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>ErTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>TmTe<sub>3</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>GdS<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>TbS<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>DyS<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>HoS<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>LuS<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>ErS<sub>4</sub>**

crystal structure



**Cu<sub>5</sub>YbS<sub>4</sub>**

crystal structure

**Cu<sub>5</sub>GdSe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>TbSe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>YbSe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>LuSe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>DySe<sub>4</sub>**

crystal structure

**Cu<sub>5</sub>HoSe<sub>4</sub>**

crystal structure

**Cu<sub>5</sub>ErSe<sub>4</sub>**

crystal structure

**Cu<sub>5</sub>GdTe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>DyTe<sub>4</sub>**

crystal structure, physical properties

**Cu<sub>5</sub>TbTe<sub>4</sub>**

crystal structure

**GdClH<sub>y</sub>**

crystal structure, physical properties

**GdBrH<sub>y</sub>**

crystal structure, physical properties

**GdBrH<sub>2</sub>**

crystal structure, physical properties

**GdIH<sub>y</sub>**

crystal structure, physical properties

**TbBrD<sub>y</sub>**

crystal structure, physical properties

**TbBrD<sub>2</sub>**

crystal structure, physical properties

**ZnTm<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**ZnYb<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**ZnLu<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**ZnSc<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdLa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdCe<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdPr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdNd<sub>2</sub>S<sub>4</sub>**

crystal structure

**CdSm<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdGd<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdTb<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdDy<sub>2</sub>S<sub>4</sub>**

physical properties

**CdHo<sub>2</sub>S<sub>4</sub>**

crystal structure

**CdEr<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdTm<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdYb<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdLu<sub>2</sub>S<sub>4</sub>**

crystal structure

**CdY<sub>2</sub>S<sub>4</sub>**

crystal structure

**CdSc<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**CdY<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CdDy<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CdHo<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CdEr<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CdYb<sub>2</sub>Se<sub>4</sub>**

crystal structure

**CdLa<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**CdCe<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**CdPr<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**CdNd<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**CdSm<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**CdGd<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**YbYb<sub>4</sub>S<sub>7</sub>**

crystal structure

**CdYb<sub>4</sub>S<sub>7</sub>**

crystal structure

**CdYb<sub>4</sub>Se<sub>7</sub>**

crystal structure

**ZnYb<sub>4</sub>S<sub>7</sub>**

crystal structure

**CdEr<sub>4</sub>S<sub>7</sub>**

crystal structure

**CdEr<sub>4</sub>Se<sub>7</sub>**

crystal structure

**CdHo<sub>4</sub>S<sub>7</sub>**

crystal structure

**CdHo<sub>4</sub>Se<sub>7</sub>**

crystal structure

**CdTm<sub>4</sub>S<sub>7</sub>**

crystal structure

**GaLaS<sub>3</sub>**

crystal structure, physical properties

**Ga<sub>10/3</sub>La<sub>6</sub>S<sub>14</sub>**

crystal structure

**GaCeS<sub>3</sub>**

crystal structure, physical properties

**Ga<sub>10/3</sub>Ce<sub>6</sub>S<sub>14</sub>**

crystal structure

**Ga<sub>2</sub>EuS<sub>4</sub>**

crystal structure, physical properties

**Ga<sub>2</sub>EuSe<sub>4</sub>**

crystal structure, physical properties

**Ga<sub>2</sub>EuTe<sub>4</sub>**

crystal structure, physical properties

**In<sub>2</sub>EuS<sub>4</sub>**

crystal structure, physical properties



**In<sub>2</sub>EuSe<sub>4</sub>**

crystal structure, physical properties

**In<sub>2</sub>EuTe<sub>4</sub>**

crystal structure, physical properties

**PrGaS<sub>3</sub>**

crystal structure, physical properties

**NdGaS<sub>3</sub>**

crystal structure, physical properties

**SmGaS<sub>3</sub>**

crystal structure, physical properties

**GdGaS<sub>3</sub>**

crystal structure, physical properties

**ErGaS<sub>3</sub>**

crystal structure, physical properties

**YbGaS<sub>3</sub>**

crystal structure, physical properties

**LaInS<sub>3</sub>**

crystal structure, physical properties

**CeInS<sub>3</sub>**

crystal structure, physical properties

**PrInS<sub>3</sub>**

crystal structure, physical properties

**NdInS<sub>3</sub>**

crystal structure, physical properties

**SmInS<sub>3</sub>**

crystal structure, physical properties

**LaGaSe<sub>3</sub>**

crystal structure, physical properties

**CeGaSe<sub>3</sub>**

crystal structure, physical properties

**PrGaSe<sub>3</sub>**

crystal structure, physical properties

**NdGaSe<sub>3</sub>**

crystal structure, physical properties

**SmGaSe<sub>3</sub>**

crystal structure, physical properties

**EuGa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**EuGa<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**EuGa<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**EuIn<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**EuIn<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**EuIn<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**YbGa<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**YbGa<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**YbIn<sub>2</sub>S<sub>4</sub>**

crystal structure, physical properties

**YbIn<sub>2</sub>Se<sub>4</sub>**

crystal structure, physical properties

**LaIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**CeIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**PrIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**NdIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**SmIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**GdIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**TbIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**DyIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**YIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**HoIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**ErIn<sub>3</sub>S<sub>6</sub>**

crystal structure, physical properties

**LaTiS<sub>2</sub>**

physical properties

**CeTiS<sub>2</sub>**

physical properties

**PrTiS<sub>2</sub>**

physical properties

**NdTiS<sub>2</sub>**

physical properties

**SmTiS<sub>2</sub>**

crystal structure, physical properties

**EuTiS<sub>2</sub>**

crystal structure, physical properties

**GdTiS<sub>2</sub>**

crystal structure

**TbTiS<sub>2</sub>**

crystal structure

**DyTiS<sub>2</sub>**

crystal structure

**HoTiS<sub>2</sub>**

crystal structure

**ErTiS<sub>2</sub>**

crystal structure

**TmTiS<sub>2</sub>**

crystal structure

**YbTiS<sub>2</sub>**

crystal structure

**LuTiS<sub>2</sub>**

crystal structure

**YTlS<sub>2</sub>**

crystal structure

**LaTiSe<sub>2</sub>**

physical properties

**CeTiSe<sub>2</sub>**

physical properties

**PrTlSe<sub>2</sub>**

crystal structure, physical properties

**NdTlSe<sub>2</sub>**

crystal structure, physical properties

**SmTlSe<sub>2</sub>**

crystal structure, physical properties

**EuTlSe<sub>2</sub>**

physical properties

**GdTlSe<sub>2</sub>**

crystal structure

**TbTlSe<sub>2</sub>**

crystal structure

**DyTlSe<sub>2</sub>**

crystal structure

**HoTlSe<sub>2</sub>**

crystal structure



**ErTlSe<sub>2</sub>**

crystal structure

**TmTlSe<sub>2</sub>**

crystal structure

**YbTlSe<sub>2</sub>**

crystal structure

**LuTlSe<sub>2</sub>**

crystal structure

**YTlSe<sub>2</sub>**

crystal structure

**LaTlTe<sub>2</sub>**

physical properties

**CeTlTe<sub>2</sub>**

physical properties

**PrTlTe<sub>2</sub>**

crystal structure, physical properties

**NdTiTe<sub>2</sub>**

crystal structure, physical properties

**SmTiTe<sub>2</sub>**

crystal structure

**EuTiTe<sub>2</sub>**

crystal structure, physical properties

**GdTiTe<sub>2</sub>**

crystal structure, physical properties

**TbTiTe<sub>2</sub>**

crystal structure, physical properties

**DyTiTe<sub>2</sub>**

crystal structure

**HoTiTe<sub>2</sub>**

crystal structure

**ErTiTe<sub>2</sub>**

crystal structure

**TmTlTe<sub>2</sub>**

physical properties

**YbTlTe<sub>2</sub>**

crystal structure

**LuTlTe<sub>2</sub>**

crystal structure

**YTlTe<sub>2</sub>**

crystal structure

**La<sub>2</sub>GeSe<sub>5</sub>**

physical properties

**La<sub>2</sub>SnSe<sub>5</sub>**

physical properties

**Ce<sub>2</sub>GeSe<sub>5</sub>**

physical properties

**Ce<sub>2</sub>SnSe<sub>5</sub>**

physical properties

**Pr<sub>2</sub>GeSe<sub>5</sub>**

physical properties

**Pr<sub>2</sub>SnSe<sub>5</sub>**

physical properties

**Nd<sub>2</sub>GeSe<sub>5</sub>**

physical properties

**Nd<sub>2</sub>SnSe<sub>5</sub>**

physical properties

**Sm<sub>2</sub>GeSe<sub>5</sub>**

physical properties

**Sm<sub>2</sub>SnSe<sub>5</sub>**

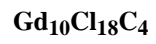
physical properties

**Gd<sub>2</sub>GeSe<sub>5</sub>**

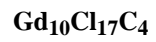
physical properties

**Gd<sub>2</sub>SnSe<sub>5</sub>**

physical properties



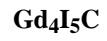
crystal structure, physical properties



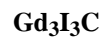
crystal structure, physical properties



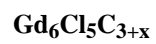
crystal structure, physical properties



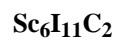
crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties



crystal structure, physical properties

**DyAlB<sub>14</sub>**

crystal structure, physical properties

**HoAlB<sub>14</sub>**

crystal structure, physical properties

**ErAlB<sub>14</sub>**

crystal structure, physical properties

**YbAlB<sub>14</sub>**

crystal structure

**LuAlB<sub>14</sub>**

crystal structure

**R<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

physical properties

**Y<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**La<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure

**Ce<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Pr<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Nd<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Sm<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Gd<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Tb<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Dy<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Ho<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**Er<sub>3</sub>Cu<sub>3</sub>Sb<sub>4</sub>**

crystal structure, physical properties

**I<sub>8</sub>-IV-VI<sub>6</sub> compounds**

crystal structure

**Ag<sub>8</sub>SiS<sub>6</sub>**

crystal structure, melting point, density

**Ag<sub>8</sub>GeS<sub>6</sub>** (argyrodite)

crystal structure, physical properties

**Ag<sub>8</sub>SnS<sub>6</sub>** (canfieldite)

crystal structure, physical properties

**Ag<sub>8</sub>SiSe<sub>6</sub>**

crystal structure, physical properties

**Ag<sub>8</sub>GeSe<sub>6</sub>**

crystal structure, physical properties

**Ag<sub>8</sub>SnSe<sub>6</sub>**

crystal structure, physical properties



**Ag<sub>8</sub>SiTe<sub>6</sub>**

crystal structure, melting point, density

**Ag<sub>8</sub>GeTe<sub>6</sub>**

crystal structure, physical properties

**Cu<sub>8</sub>SiS<sub>6</sub>**

crystal structure, density

**Cu<sub>8</sub>GeS<sub>6</sub>**

crystal structure, physical properties

**Cu<sub>8</sub>SiSe<sub>6</sub>, Cu<sub>8</sub>GeSe<sub>6</sub>**

crystal structure, physical properties

**Cu<sub>4</sub>Ge<sub>3</sub>S<sub>5</sub>, Cu<sub>4</sub>Ge<sub>3</sub>Se<sub>5</sub> and Cu<sub>4</sub>Sn<sub>3</sub>Se<sub>5</sub>**

crystal structure, physical properties

**Cu<sub>4</sub>SnS<sub>4</sub>**

crystal structure, physical properties

**I–V–VI<sub>2</sub> compounds (I = Ag, V = Sb, Bi, VI = S, Se, Te)**

crystal structure, lattice parameters, phase transitions

**AgAsS<sub>2</sub>**

crystal structure, physical properties

**AgAsSe<sub>2</sub>**

physical properties

**AgAsTe<sub>2</sub>**

physical properties

**AgSbS<sub>2</sub>**

crystal structure, physical properties

**AgSbSe<sub>2</sub>**

crystal structure, physical properties

**AgSbTe<sub>2</sub>**

crystal structure, physical properties

**AgBiS<sub>2</sub>**

crystal structure, physical properties

**AgBiSe<sub>2</sub>**

crystal structure, physical properties

**AgBiTe<sub>2</sub>**

crystal structure, physical properties

**CuSbS<sub>2</sub>**

crystal structure, physical properties

**CuSbSe<sub>2</sub>**

crystal structure, physical properties

**CuSbTe<sub>2</sub>**

crystal structure, physical properties

**CuBiSe<sub>2</sub>**

crystal structure, physical properties

**CuBiTe<sub>2</sub>**

crystal structure, physical properties

**NaSbSe<sub>2</sub> and related compounds**

crystal structure, physical properties

**Cu<sub>3</sub>AsS<sub>3</sub>, Cu<sub>3</sub>SbS<sub>3</sub>**

general characterization

**Ag<sub>3</sub>AsS<sub>3</sub>**

general characterization, crystal structure, lattice parameters

physical properties

**Ag<sub>3</sub>SbS<sub>3</sub>**

general characterization, structure, lattice parameters

physical properties

**II-III-VI<sub>2</sub> compounds**

crystal structure, lattice parameters

**CdInS<sub>2</sub>**

crystal structure, physical properties

**CdInSe<sub>2</sub>**

crystal structure, physical properties

**CdInTe<sub>2</sub>**

crystal structure, physical properties

**CdTeS<sub>2</sub>**

crystal structure, physical properties

**CdTlSe<sub>2</sub>**

crystal structure, physical properties

**CdTTe<sub>2</sub>**

crystal structure, physical properties

**HgTlS<sub>2</sub>**

crystal structure, physical properties

**III<sub>x</sub>-V<sub>y</sub>-VI<sub>z</sub> compounds**

crystal structure, general characterization

**TlAsS<sub>2</sub>**

crystal structure, physical properties

**TlSbS<sub>2</sub>**

crystal structure, physical properties

**TlSbSe<sub>2</sub>**

crystal structure, physical properties

**TlSbTe<sub>2</sub>**

crystal structure, physical properties

**TlBiS<sub>2</sub>**

crystal structure, physical properties

**TlBiSe<sub>2</sub>**

crystal structure, physical properties

**TlBiTe<sub>2</sub>**

crystal structure, physical properties

**Ga<sub>6</sub>Sb<sub>5</sub>Te**

crystal structure, physical properties

**In<sub>6</sub>Sb<sub>5</sub>Te**

crystal structure, physical properties

**In<sub>7</sub>SbTe<sub>6</sub>**

crystal structure, physical properties

**Bi<sub>12</sub>SiO<sub>20</sub>**

general characterization ,structure

physical properties

**Bi<sub>12</sub>GeO<sub>20</sub>**

general characterization ,structure

physical properties

**PbSb<sub>2</sub>S<sub>4</sub>, GeSb<sub>2</sub>Te<sub>4</sub>, GeBi<sub>2</sub>Te<sub>4</sub>, SnBi<sub>2</sub>Te<sub>4</sub>**

crystal structure, physical properties

**GeBi<sub>4</sub>Te<sub>7</sub>, SnBi<sub>4</sub>Te<sub>7</sub>, GeSb<sub>4</sub>Te<sub>7</sub>, PbBi<sub>4</sub>Te<sub>7</sub>**

crystal structure, physical properties

**V-VI-VII compounds**

crystal structure, lattice parameters, phase transitions

**AsSBr**

crystal structure, physical properties

**SbSI**

crystal structure, lattice parameters, phase transitions

band structure, energy gap

interband transition energies

phonon dispersion, phonon wavenumbers

elastic moduli

optical spectra, refractive index, dielectric constants

transport properties

heat capacity, melting point, transition heat, entropy

magnetic properties

**SbSBr**

crystal structure, physical properties

**SbSeBr**

crystal structure, physical properties

**SbSeI**

crystal structure, physical properties

**SbTeI**

crystal structure, physical properties



**BiOCl**

crystal structure, physical properties

**BiOBr**

crystal structure, physical properties

**BiOI**

crystal structure, physical properties

**BiSCl**

crystal structure, physical properties

**BiSBr**

crystal structure, physical properties

**BiSI**

crystal structure, physical properties

**BiSeBr**

crystal structure, physical properties

**BiSeI**

crystal structure, physical properties

**BiTeBr**

crystal structure, physical properties

**BiTeI**

crystal structure, physical properties

**pseudobinary systems of the type (I<sub>2</sub>-VI)<sub>m</sub>(III<sub>2</sub>-VI<sub>3</sub>)<sub>n</sub>**

general characterization

**Cu<sub>3</sub>In<sub>5</sub>Se<sub>9</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>In<sub>5</sub>Te<sub>9</sub>**

crystal structure, physical properties

**Cu<sub>3</sub>Ga<sub>5</sub>Se<sub>9</sub>**

crystal structure, physical properties

**Ag<sub>3</sub>In<sub>5</sub>Se<sub>9</sub>**

crystal structure, physical properties

**Ag<sub>3</sub>Ga<sub>5</sub>Se<sub>9</sub>**

crystal structure, physical properties

**Cu<sub>2</sub>Ga<sub>4</sub>Te<sub>7</sub>**

crystal structure, physical properties

**Cu<sub>2</sub>In<sub>4</sub>Te<sub>7</sub>**

crystal structure, physical properties

**CuIn<sub>3</sub>Te<sub>5</sub>**

crystal structure, physical properties

**AgIn<sub>3</sub>Te<sub>5</sub>**

crystal structure, physical properties

**AgIn<sub>5</sub>S<sub>8</sub>**

crystal structure, physical properties

**AgIn<sub>9</sub>Te<sub>14</sub>, Ag<sub>2</sub>Ga<sub>20</sub>S<sub>31</sub>**

crystal structure, physical properties

**Cd<sub>2</sub>SnO<sub>4</sub>**

crystal structure, physical properties

**CdSnO<sub>3</sub>**

crystal structure, physical properties

**Li<sub>3</sub>CuO<sub>3</sub>**

physical properties

**Hg<sub>3</sub>PS<sub>3</sub>, Hg<sub>3</sub>PS<sub>4</sub>**

physical properties

**InOF**

physical properties

**BaCu<sub>4</sub>S<sub>3</sub>**

physical properties

**Cd<sub>4</sub>(P,As)<sub>2</sub>(Cl,Br,I)<sub>3</sub>**

physical properties

**amorphous silicon (a-Si)**

general characterization

structural characterization

figures to structural characterization

tables to structural characterization: correlation distances and related parameters

tables to structural characterization: crystallization temperatures

tables to structural characterization: diffusion coefficients

defect states, characterization

figures to defect states, characterization

vibrational properties

figures to vibrational properties

tables to vibrational properties: wavenumbers of vibrational modes

tables to vibrational properties: elastic properties

density of states

figures to density of states

absorption edge and optical spectra

figures to absorption edge and optical spectra

photoluminescence

figures to photoluminescence

magnetic properties

figures to magnetic properties

transport properties, general

electrical conductivity

figures to electrical conductivity

drift mobility

figures to drift mobility

density of localized gap states

figures to density of localized gap states

Hall mobility and magnetoresistance

figures to Hall mobility and magnetoresistance

photoconductivity

figures to photoconductivity

**amorphous germanium (a-Ge)**

general characterization

structural characterization

figures to structural characterization

tables to structural characterization: structural data for sputtered films

tables to structural characterization: density, electrical conductivity

tables to structural characterization: crystallization temperature

tables to structural characterization: impurity content of sputtered films

defect states, characterization

figures to defect states, characterization

vibrational properties

figures to vibrational properties

tables to vibrational properties; wavenumbers of vibrational modes

density of states

figures to density of states

absorption edge and optical spectra

figures to absorption edge and optical spectra

tables to absorption edge and optical spectra: optical data of sputtered films

photoluminescence

magnetic properties

figures to magnetic properties

electrical conductivity

figures to electrical conductivity

density of localized gap states and drift mobility

Hall mobility and magnetoresistance

photoconductivity

**amorphous III-V compounds (a-GaP, a-GaAs, a-GaSb, a-InP, a-InAs, a-InSb)**

general and structural characterization

table to structural characterization

vibrational properties

table to vibrational properties: local modes

density of states

optical properties

table to optical properties: survey of optical data

transport properties

**organic semiconductors**

symbols, definitions and abbreviations

general remarks

general remarks to wide gap photoconductive organic semiconductors

general remarks to systems with intermediate or high dark conductivity



**anthracene, C<sub>14</sub>H<sub>10</sub>**

crystal structure, lattice parameters and related properties

elastic moduli, density, melting point

enthalpies of fusion and sublimation; vapor pressure

energy levels and lifetimes of excitons

absorption coefficient, reflectivity

vibron wavenumbers

parameters of radical ion states

polarization energies

position of the valence and of the conduction band relative to vacuum level, band gap

charge transfer exciton states

charge carrier mobilities

charge carrier generation and recombination processes

dielectric and optical tensor

carrier trapping levels

**anthracene: PMDA,  $C_{14}H_{10}:C_{10}H_2O_6$**

crystal structure, lattice parameters, density, melting point

exciton properties, radical ion states

mobilities of charge carriers

charge carrier generation and recombination processes

**benzene,  $C_6H_6$**

crystal structure, lattice parameters

elastic moduli, melting point, vapor pressure

exciton parameters, radical ion states

charge carrier mobilities and generation processes

**biphenyl,  $C_{12}H_{10}$**

crystal structure, lattice parameters, phase transitions

elastic moduli, sound velocity, density, melting point

exciton and vibron parameters, radical ion states

charge carrier mobilities

**dibenzothiophene, C<sub>12</sub>H<sub>8</sub>S**

crystal structure, lattice parameters, melting point, related parameters

exciton parameters

photoelectron and Raman spectra

charge carrier mobilities

optical tensor

**1,4-dibromonaphthalene, C<sub>10</sub>H<sub>6</sub>Br<sub>2</sub>**

crystal structure, lattice parameters, melting point, density

exciton and vibron parameters

charge carrier mobilities

**9,10-dichloroanthracene, C<sub>14</sub>H<sub>8</sub>Cl<sub>2</sub>,  $\alpha$ -form**

crystal structure, lattice parameters, melting point, density

exciton parameters, radical ion states

charge carrier mobilities

**1,4-diiodobenzene, C<sub>6</sub>H<sub>4</sub>I<sub>2</sub>**

crystal structure, lattice parameters, phase transitions

melting point, density

charge carrier mobilities

**durene, C<sub>10</sub>H<sub>14</sub>**

crystal structure, lattice parameters, density, melting point  
physical properties

**iodoform, CHI<sub>3</sub>**

crystal structure, lattice parameters, density, melting point  
charge carrier mobilities

**9-methylanthracene, C<sub>15</sub>H<sub>12</sub>**

crystal structure, lattice parameters, melting point  
exciton parameters, radical ion states  
charge carrier mobilities

**naphthalene, C<sub>10</sub>H<sub>8</sub>**

crystal structure, lattice parameters, density, melting point  
elastic constants, enthalpies of fusion and sublimation  
exciton parameters, radical ion states, polarization energies  
wavenumbers of vibrons  
phonon parameters, sound velocities  
charge carrier mobilities  
charge carrier generation and recombination, injection, carrier trapping  
dielectric and optical tensor

**perylene, C<sub>20</sub>H<sub>12</sub>,  $\alpha$ -form**

crystal structure, lattice parameters, density, melting point  
enthalpies of fusion and sublimation, vapor pressure  
exciton parameters, radical ion states, polarization energies  
vibrons  
charge carrier mobilities  
photoelectrical and optical properties

**phenazine, C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>,  $\alpha$ -form**

crystal structure, lattice parameters, melting point, density

exciton parameters, radical ion states, electron mobilities

vibrons, Raman spectra, optical tensor

**phenothiazine, C<sub>12</sub>H<sub>9</sub>NS**

crystal structure, lattice parameters, phase transitions, melting point, density

radical ion states

charge carrier mobilities

vibrons, optical tensor

**phthalocyanine, C<sub>32</sub>H<sub>18</sub>N<sub>8</sub>,  $\beta$ -form**

crystal structure, lattice parameters, density

radical ion states

charge carrier mobilities

further properties: dark conduction, absorption

**pyrene, C<sub>16</sub>H<sub>10</sub>**

crystal structure, lattice parameters, phase transitions, density, melting point

enthalpy of sublimation, vapor pressure

exciton parameters, radical ion states

vibrons, phonons, polarization energies

charge carrier mobilities, generation and recombination

dielectric and optical tensor

***trans*-stilbene, C<sub>14</sub>H<sub>12</sub>**

crystal structure, lattice parameters, melting point

physical properties

***p*-terphenyl, C<sub>18</sub>H<sub>14</sub>**

crystal structure, lattice parameters, melting point, density

exciton properties, radical ion states

vibrons, phonons, polarization energies

charge carrier mobilities, generation and recombination

**tetracene, C<sub>18</sub>H<sub>12</sub>**

crystal structure, lattice parameters, melting point, density  
enthalpy of sublimation, vapor pressure  
exciton parameters, radical ion states, band gap  
vibrons, polarization energies, hole mobilities, luminescence

**tetracyanoethylene, TCNE, C<sub>6</sub>N<sub>4</sub>**

crystal structure, lattice parameters, melting point, density  
vibrons, phonons, molecular electron affinity, hole mobilities

**7,7,8,8-tetracyanoquinodimethane, TCNQ, C<sub>12</sub>H<sub>4</sub>N<sub>4</sub>**

crystal structure, lattice parameters, melting point, density  
radical ion states, charge carrier mobilities

**(TMTSF)<sub>2</sub>:PF<sub>6</sub>, (tetramethyltetraselenafulvalene)<sub>2</sub>:hexafluorophosphate, (C<sub>10</sub>H<sub>12</sub>Se<sub>4</sub>)<sub>2</sub>:PF<sub>6</sub>**

crystal structure, lattice parameters  
electrical conductivity, charge carrier mobilities, Hall effect

**(TMTSF)<sub>2</sub>-radical-cation salts:anion**

properties of (TMTSF)<sub>2</sub> with other anions



**(perylene)<sub>2</sub>:(PF<sub>6</sub>)<sub>1.1</sub>×0.8(CH<sub>2</sub>Cl<sub>2</sub>), C<sub>40</sub>H<sub>24</sub>:(PF<sub>6</sub>)<sub>1.1</sub>×0.8(CH<sub>2</sub>Cl<sub>2</sub>)**

crystal structure, lattice parameters, physical properties

**(TTT)<sub>2</sub>:I<sub>3</sub>, (tetrathiatetracene)<sub>2</sub>:I<sub>3</sub>, (C<sub>18</sub>H<sub>8</sub>S<sub>4</sub>)<sub>2</sub>:I<sub>3</sub>**

crystal structure, lattice parameters, physical properties

**TTF:Br<sub>0.7</sub>, Tetrathiafulvalene:bromine, C<sub>6</sub>H<sub>4</sub>S<sub>4</sub>:Br<sub>0.7</sub>**

crystal structure, lattice parameters, physical properties

**K:TCNQ, potassium:tetracyanoquinodimethane, K:C<sub>12</sub>H<sub>4</sub>N<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**TTF:TCNQ, tetrathiafulvalene:tetracyanoquinodimethane, C<sub>6</sub>H<sub>4</sub>S<sub>4</sub>:C<sub>12</sub>H<sub>4</sub>N<sub>4</sub>**

crystal structure, lattice parameters, physical properties

**charge transfer complexes with TTF and TCNQ**

general properties

**TTF:chloranil, tetrathiafulvalene:tetrachloro-*p*-benzoquinone, C<sub>6</sub>H<sub>4</sub>S<sub>4</sub>:C<sub>6</sub>Cl<sub>4</sub>O<sub>2</sub>**

crystal structure, lattice parameters, physical properties

**low molecular weight photo- and semicond. polycryst. and amorphous organic solids,**

**photo- and semiconducting and polymers**

general characterization

**organic semiconductors, comparative tables**

comparative table on molecular photoelectron spectra

comparative table on electronic radical ion transitions

comparative table on solid state photoelectron emission yield curves

comparative table on solid state photoelectron spectra

energetic comparison of gas phase and solid state photoelectron spectra;

polarization energies

comparative table on molecular electron affinities

comparative table on crystal electron affinity

band energy scheme of the acene class of organic photoconductors

excitonic absorption spectra