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Cs$_3$Sb

crystal structure, chemical bond
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- crystal structure, chemical bond
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crystal structure and chemical bond of II$_3$-V$_2$ arsenides

crystal structure and chemical bond of II-V$_2$ phosphides

crystal structure and chemical bond of II-V$_2$ arsenides

crystal structure and chemical bond of CdP$_4$

crystal structure and chemical bond of MgP$_4$

crystal structure and chemical bond of II-V compounds

structural data of the Mg - P system

structural data of the Mg - As system

structural data of the Zn - P system

structural data of the Zn - As system

structural data of the Zn - Sb system

structural data of the Cd - P system

structural data of the Cd - As system

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- transport properties
- optical properties, dielectric constant
- chemical binding energies and shift
- Schottky barrier height, work function
- magnetic properties
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- parameters of vaporization, formation, dissociation
zinc arsenide (Zn₃As₂)

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- spin orbit and crystal field splitting, effective masses
- impurities and defects
- crystal structure, chemical bond, lattice parameter, thermal expansion
- Debye temperature, heat capacity, density, melting point
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crystal structure and chemical bond, lattice parameters, thermal expansion
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thermal conductivity, Lorenz number
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- physical properties of $\text{Cd}_{3-\delta}\text{Zn}_\delta \text{P}_2$
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- reflectivity, photoconductivity spectra
- impurities and defects
- crystal structure, chemical bond, lattice parameter, further lattice properties
- Debye temperature, heat capacity, density, melting point
- resistivity, carrier concentration and mobility, thermoelectric power and thermal conductivity
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- parameters of vaporization, sublimation, formation, dissociation, fusion, free energy
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- exciton and interband transition energies, β-modification
- crystal structure and chemical bond, lattice parameters and properties, β-modification
- optical properties, photoconductivity, β-modification
- nonlinear optical parameters, β-modification
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- crystal structure and chemical bond, lattice parameters, thermal expansion
- compressibility, Grüneisen coefficient
- Debye temperature, heat capacity, density, melting point
- electrical and thermal transport properties
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- physical properties of amorphous phase
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physical properties
MgP$_4$

crystal structure, physical properties
MgAs$_4$

crystal structure, physical properties
ZnP₄, CdP₄

crystal structure, lattice parameters, density
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parameters of formation, dissociation and vaporization, entropy of CdP₄
CdAs$_4$

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CdP$_4$ - CdAs$_4$ solid solutions

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ZnAs, CdAs

crystal structure, physical properties of ZnAs

crystal structure, physical properties of CdAs
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band structure, energy gap, interband transitions, Fermi surface

effective masses

crystal structure and chemical bond, lattice parameters

melting point, density, Debye temperature

electronic and thermal transport properties

refractive index
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- interband energies, effective masses, Fermi surface
- crystal structure and chemical bond, lattice parameters
- Debye temperature, density, melting point
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ZnSb - CdSb solid solutions (Zn$_x$Cd$_{1-x}$Sb)
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- physical parameters of β-Zn₄Sb₃
- lattice parameters and density of Cd₄Sb₃
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properties of Zn$_7$P$_{10}$ and Cd$_7$P$_{10}$

properties of Cd$_6$P$_7$
CdCl₂, CdBr₂, CdI₂, HgCl₂, HgBr₂, HgI₂

crystal structure, chemical bond
cadmium dichloride (CdCl₂)
  interband transition energies
  lattice parameters and further lattice properties
  optical properties, dielectric constant
cadmium dibromide (CdBr₂)

- interband transition energies
- lattice parameters and further lattice properties
- optical properties, dielectric constant
cadmium diiodide (CdI₂)

band structure, energy gap
interband transition energies, further band parameters
lattice parameters and related properties
phonon wavenumbers, sound velocity, elastic moduli
optical properties, dielectric constants
mercury dichloride (HgCl₂)

physical properties
mercury dibromide (HgBr₂)

physical properties
mercury diiodide ($\text{HgI}_2$)

- band structure, energy gap
- interband transition energies, further band parameters
- effective masses
- lattice parameters and related properties
- phonon dispersion and wavenumbers
- sound velocities, elastic moduli
- transport properties
- optical properties, dielectric constant
IIIₓ-VIᵧ compounds

crystal structure, chemical bond of III-VI compounds

general characterization of IIIₓ-VIᵧ compounds other than III-VI and IIIₓ₂-VIₓᵧ compounds

general characterization of TlInSe₂ type compounds
gallium sulfide (GaS)

- band structure, direct energy gap
- direct exciton transition energies, exciton binding energy
- indirect energy gap and exciton energies
- interband transition energies, effective masses
- crystal structure, lattice parameters, thermal expansion
- Debye temperature, heat capacity, density, hardness, melting point
- phonon dispersion and wavenumbers
- elastic moduli
- compressibilities, Grüneisen parameters
- electrical and thermal conductivity
- carrier mobilities, relaxation time, diffusion length
- electron trapping levels
- thermoelectric power
- optical properties
- dielectric constants, second order susceptibility
- core level energies, photoelectric threshold
- Schottky barrier heights
- magnetic properties
- heat of formation, entropy, vapor pressure
gallium selenide (GaSe)

crystal structure, chemical bond
band structure
direct energy gap
direct exciton gap
transition energies into excited direct exciton states
direct exciton binding energy and related parameters
exciton masses and g-factor
indirect energy gap
indirect exciton transition and binding energies
interband transition energies
g-factors of electrons and holes
effective masses
crystal structure, lattice parameter, thermal expansion
Debye temperature, heat capacity, density, hardness, melting point
phonon properties, general
phonon dispersion and wavenumbers
sound velocity, elastic moduli
Poisson's ration, compressibility
Grüneisen parameters
transport properties, general
electrical and thermal conductivity
activation energies for the electrical conductivity
carrier mobilities, Hall coefficient and related parameters
carrier lifetimes
trapping levels of charge carriers
thermoelectric power (Seebeck coefficient)
refractive index
absorption coefficient, reflectivity, reststrahlen band
dielectric constant
higher-order susceptibilitites
core level energies, photoelectric threshold energy
Schottky barrier heights
magnetic properties
heat of formation, entropy
gallium telluride (GaTe)
    band structure, energy gap
    direct exciton gap
    exciton binding energy, splitting energy
    interband transition energies
    effective masses
    crystal structure, lattice parameters, thermal expansion
    Debye temperature, heat capacity, density, hardness, melting point
    phonon wavenumbers
    sound velocity, compressibility, Grüneisen parameters
    electrical and thermal conductivity
    carrier mobilities, Hall coefficient
    thermoelectric power (Seebeck coefficient)
    absorption and reflection
    refractive index, dielectric constants, second order susceptibility
    core level energies, photoelectric threshold
    Schottky barrier heights
    heat of formation, entropy
indium sulfide (InS)

- band structure, energy gap
- interband transition energies, effective masses
- crystal structure, lattice parameters, thermal expansion
- heat capacity, density
- phonon wavenumbers
- compressibility
- Grüneisen parameters
- electrical and thermal conductivity, mobility
- optical properties, dielectric constant
- Schottky barrier height
- magnetic properties
- heat of formation, entropy
Indium selenide (InSe)

- Band structure
- Indirect energy gap
- Indirect exciton data
- Direct energy gap
- Direct exciton data
- Interband transition energies
- Effective masses, polaron coupling constant and related parameters
- Crystal structure, lattice parameter, thermal expansion
- Debye temperature, heat capacity, density, melting point
- Phonon wavenumbers
- Elastic moduli
- Compressibility, Grüneisen parameters
- Electrical and thermal conductivity
- Carrier mobilities
- Trapping and acceptor levels
- Thermoelectric power (Seebeck coefficient)
- Optical properties
- Dielectric constant
- Core level energies, Schottky barrier height
- Phase diagram, heat of formation, entropy
- Magnetic susceptibility
indium telluride (InTe)

- Energy gap, effective masses
- Crystal structure, lattice parameters, thermal expansion
- Heat capacity, density, hardness, melting point
- Phonon wavenumbers
- Compressibility, bulk modulus, Grüneisen parameter
- Electrical and thermal conductivity
- Carrier mobilities, diffusion
- Thermoelectric power (Seebeck coefficient)
- Dielectric constant
- Magnetic properties
- Heat of formation and transformation, entropy
- Work function, electron affinity
thallium sulfide (TIS)

energy gap, effective masses
crystal structure, lattice parameters, density, Debye temperature, heat capacity
phonon wavenumbers, mode Grüneisen parameters
electrical and thermal conductivity, carrier mobilities
optical properties
phase diagram, heat of formation, entropy
thallium selenide (TlSe)

- band structure, energy gap
- interband transition energies
- effective masses
- crystal structure, lattice parameter, thermal expansion
- Debye temperature, heat capacity, density, melting point
- phonon dispersion and wavenumbers
- elastic moduli, compressibility, Youngs modulus, Poisson's ratio
- electrical and thermal conductivity
- mobility, Hall coefficient
- optical properties, dielectric constant
- phase diagram, heat of formation, entropy
thallium telluride (TlTe)
effective masses
crystal structure, lattice parameters, density, heat capacity
electrical and thermal conductivity
Hall coefficient, mobility
thermoelectric power (Seebeck coefficient)
phase diagram, heat of formation, entropy
GaS\textsubscript{x}Se\textsubscript{1-x}

- general characterization
- band structure, direct and indirect exciton gaps
- higher optical transition energies
- lattice properties
- transport properties
- optical properties
GaSe\textsubscript{x}Te\textsubscript{1-x}

general characterization
band structure, direct energy gap
direct exciton transition energies
lattice properties
electrical conductivity
absorption coefficient
GaS$_{1-x}$Te$_x$

phase diagram
Ga$_x$In$_{1-x}$Se

direct exciton gap
lattice properties, phase diagram
electrical conductivity, absorption coefficient
Ga$_x$In$_{1-x}$Te

energy gap, effective masses
lattice properties
mobilities, electrical and thermal conductivity
In$_x$S$_{1-x}$Se

direct energy gap, direct exciton binding energy, reduced exciton effective mass
TlS$_{1-x}$Se$_x$

- indirect energy gap
- lattice properties
- transport properties
Tl$_{2-x}$In$_x$Se$_2$

physical properties
Tl$_x$In$_{1-x}$Te

transport properties
Ga$_x$-VI$_y$ compounds

crystal structure, lattice parameters, density
In$_x$S$_y$ compounds

properties of In$_5$S$_4$
properties of In$_6$S$_7$
properties of In$_3$S$_4$
In$_x$Se$_y$ compounds

properties of In$_2$Se

properties of In$_4$Se$_3$

properties of In$_6$Se$_7$

properties of In$_5$Se$_7$

properties of In$_{60}$Se$_{40}$, In$_{50}$Se$_{50}$ and In$_{40}$Se$_{60}$

properties of In$_4$Se$_3$ and In$_5$Se$_6$
In$_x$Te$_y$ compounds

properties of In$_4$Te$_3$

properties of In$_3$Te$_4$

properties of In$_2$Te$_5$
Tl<sub>x</sub>S<sub>y</sub> compounds

properties of Tl<sub>2</sub>S

properties of Tl<sub>4</sub>S<sub>3</sub>

properties of TlS<sub>2</sub>

properties of Tl<sub>2</sub>S<sub>3</sub>
Tl$_2$Se

physical properties
Tl$_x$-Te$_y$ compounds

properties of Tl$_2$Te

properties of Tl$_5$Te$_3$
TlAlS$_2$
lattice properties
TlAlSe$_2$

lattice properties
TlGaS$_2$

- energy gaps
- lattice properties
- transport properties
- optical properties, dielectric constant
TlGaSe₂

- band structure, energy gaps
- higher optical transition energies, effective masses
- lattice parameters, density, melting point, Debye temperature, heat capacity
- phonon wavenumbers, Grüneisen parameters
- transport properties
- Schottky barrier height
- optical properties, dielectric constant
TlGaTe$_2$

energy gap, effective masses
lattice and thermodynamical properties
transport properties
optical properties, dielectric constants
TlInS$_2$

energy gaps, effective masses
lattice properties
phonon wavenumbers
transport properties
optical properties, dielectric constant
TlInSe$_2$

- energy gaps, effective masses
- lattice properties
- transport properties
- optical properties, dielectric constant
TlInTe$_2$

- energy gap, effective masses
- lattice properties
- transport properties
- optical properties, dielectric constant
TlGaS$_{2x}$Se$_{2(1-x)}$

physical properties
$\text{TlInS}_{2x}\text{Se}_{2(1-x)}$, $\text{TlInS}_{2x}\text{Te}_{2(1-x)}$

physical properties
TlGa$_{1-x}$In$_x$S$_2$, TlGa$_{1-x}$In$_x$Se$_2$, TlGa$_{1-x}$In$_x$Te$_2$, TlIn$_{1-x}$Tl$_x$Se$_2$

physical properties
III-VII compounds, general tables
  general characterization
  crystal structure of TI-compounds
  phase transitions
  chemical bond
thallium fluoride (TIF)

physical properties
thallium chloride (TlCl)

- band structure, energy gaps, TlCl (I) -phase
- interband transition energies, TlCl (I) -phase
- effective masses, TlCl (I) -phase
- band structure, energy gaps, interband transition energies, TlCl (III)-phase
- impurities and defects, TlCl (I)-phase
- crystal structure, chemical bond, lattice parameters, interatomic distances, thermal expansion
- Debye temperature, density, melting point, TlCl(I) phase
- phonon dispersion relations and frequencies, TlCl(I)-phase
- sound velocity, elastic moduli, TlCl(I)-phase
- Grüneisen constant, compressibility, TlCl(I)-phase
- transport properties, TlCl(I)-phase
- optical properties
- dielectric constants
thallium bromide (TlBr)

band structure, energy gaps, TlBr(I)-phase
interband transition energies, TlBr(I)-phase
effective masses, TlBr(I)-phase
band structure, energy gaps, interband transitions, TlBr(III)-phase
impurities and defects, TlBr(I)-phase
crystal structure, chemical bond, lattice parameters, thermal expansion
Debye temperature, density, melting point, TlBr(I)-phase
phonon dispersion relations and frequencies
elastic moduli, Grüneisen constant, compressibility, TlBr(I)-phase
transport properties, TlBr(I)-phase
optical properties
dielectric constants, TlBr(I)-phase
thallium iodide (TlI)

- band structure, energy gaps and related parameters, TlI(I)-phase
- band structure, energy gaps and related parameters, TlI(II)-phase
- band structure, energy gaps and related parameters, TlI(III)-phase
- crystal structure, chemical bond, lattice parameters, thermal expansion
density, melting point
phonon frequencies, TlI(III)-phase
compressibility
optical properties
dielectric constants
TiCl$_x$Br$_{1-x}$
crystal structure, electronic and optical properties
TlBr$_x$I$_{1-x}$

crystal structure, electronic and optical properties
IV-V compounds, general tables

crystal structure, lattice parameters, chemical bond of SiP, GeP, SiAs, GeAs

crystal structure, lattice parameters, chemical bond of SiP$_2$, SiAs$_2$, GeAs$_2$
SiP, GeP

physical properties
SiAs

band structure, energy gaps
interband transition energies
transport parameters
crystal structure, lattice parameters, dielectric constant, melting point
GeAs

physical properties
SiP$_2$, SiAs$_2$

physical properties
GeAs$_2$

physical properties
IV-VI compounds, general tables

- Crystal structure, chemical bond of GeS, GeSe, SnS, SnSe
- Crystal structure, chemical bond and related data of GeTe, SnTe
germanium sulfide (GeS)
- band structure, energy gap
- interband transition energies
- effective mass
- impurities and defects
- crystal structure, lattice parameters, heat capacity, density, melting point
- phonon dispersion curves
- phonon frequencies
- intralayer force constants
- transport properties
- optical properties, dielectric constants
- heat of formation, entropy
germanium selenide (GeSe)

energy gaps

crystal structure, lattice parameters, heat capacity, density, melting point

phonon dispersion relations and frequencies

transport properties

optical properties, dielectric constants

heat of formation
germanium telluride (GeTe)
  band structure
  energy gap, interband transitions
  binding energies of germanium and tellurium levels
  effective masses
  deformation potentials
  structural data
  heat capacity, density, melting point
  phonon wavenumbers
  transport properties
  optical properties, dielectric constant
  magnetic properties
  heats of formation and sublimation, entropy
tin sulfide (SnS)

- band structure, energy gaps
- effective masses
- crystal structure, lattice parameters, thermal expansion
- Debye temperature, heat capacity, density, melting point
- phonon frequencies
- intralayer and interlayer force constants
- transport properties
- optical properties, dielectric constants
- heats of formation and sublimation, entropy
tin selenide (SnSe)

band structure, energy gap, effective masses
impurity levels
crystal structure, lattice parameters, Debye temperature, heat capacity, melting point
phonon frequencies
transport properties
optical properties, dielectric constants
heat of formation
tin telluride (SnTe)
  band structure
  energy gaps, interband transition energies
  effective masses
  deformation potentials
  crystal structure, lattice parameters
  thermal expansion, crystal binding energy
  Debye temperature, heat capacity, density
  phonon dispersion relations and frequencies
  sound velocity, elastic constants
  compressibility, Grüneisen parameter, effective charge
  transport properties
  optical properties, dielectric constant
  magnetic properties
  solidus temperatures, melting curve, heats of sublimation and formation
lead monoxide (PbO)
  energy gaps
  exciton transition energies
  impurities and defects
  crystal structure, lattice parameters
  density, melting point
  phonon frequencies
  transport properties
  optical properties, dielectric constant
lead sulfide (PbS)

- energy gap
- critical point energies
- binding energies of core levels
- pseudopotential form factors
- effective masses, conduction band, Fröhlich coupling parameter, Fermi level
- g-factors of electrons and holes
- deformation potentials
- impurities and defects
- crystal structure, lattice parameters, thermal expansion
- Debye temperature, heat capacities, density, melting point
- phonon dispersion and frequencies
- sound velocity, elastic moduli
- bulk moduli, Debye-Waller factor, Grüneisen constant
- transport properties
- optical properties, dielectric constants
lead selenide (PbSe)

energy gap and band structure
critical point energies
core to conduction level transitions
pseudopotential form factors
effective masses, Fermi level
g-factors of electrons and holes
band parameters, deformation potentials
impurities and defects
crystal structure, lattice parameters, thermal expansion
Debye temperature, density, melting point
phonon frequencies, sound velocities
elastic moduli, Grüneisen constant
transport properties
optical properties, dielectric constant
lead telluride (PbTe)

general characterization, band structure
energy gaps
critical point energies
core to conduction level transitions
effective masses
Fröhlich coupling constant, Fermi level
g-factors of electrons and holes
band parameters, deformation potential
impurities and defects
crystal structure, lattice parameters, thermal expansion
Debye temperature, heat capacities, density, melting point
phonon dispersion, phonon frequencies
sound velocities, elastic moduli
bulk modulus, Grüneisen constant
carrier concentration, mobilities
magnetotransport, carrier lifetimes
thermal conductivity
optical properties, dielectric constants
PbS$_{1-x}$Se$_x$

physical properties
PbSe$_{1-x}$Te$_x$

physical properties
Pb$_{1-x}$Sn$_x$Se

general characterization, energy gap, effective masses
impurities and defects
lattice properties
transport properties
optical properties, dielectric constant, magnetic susceptibility
Pb$_{1-x}$Sn$_x$Te

general characterization
band structure, energy gap and interband parameters
further band parameters, effective masses
impurities and defects
phonon properties, elastic moduli
transport properties
optical properties, dielectric constant
various further properties
GeSe$_x$S$_{1-x}$

physical properties
$\text{SnSe}_x \text{S}_{1-x}$

physical properties
IV-VI$_2$ compounds, general tables

crystal structure, lattice parameters of GeO$_2$, SnO$_2$, PbO$_2$

crystal structure, lattice parameters, chemical bond of SiS$_2$, SiSe$_2$

crystal structure, lattice parameters, chemical bond of GeS$_2$, GeSe$_2$

crystal structure, lattice parameters, chemical bond of SnS$_2$, SnSe$_2$, SnS$_x$Se$_{2-x}$
germanium dioxide (GeO$_2$)

band structure, energy gaps
lattice properties
heat capacity, density, melting point
phonon frequencies
elastic, bulk and torsion moduli
electrical conductivity
optical properties, dielectric constant
entropy, heat of formation
germanium disulphide (GeS₂)

- energy gap, interband transition energies
- crystal structure, lattice parameters, heat capacity, melting point, transformation heat
- phonon frequencies
- dielectric constants
germanium diselenide (GeSe₂)

- energy gaps, interband energies
- crystal structure, lattice parameters, heat capacity, melting point
- phonon frequencies
- resistivity
- optical properties, dielectric constants
- heat of formation, entropy
tin dioxide (SnO$_2$)

band structure, band parameters
impurities and defects
crystal structure, lattice parameters, thermal expansion
Debye temperature, heat capacity, density, melting point
phonon dispersion and frequencies
sound velocities, elastic moduli
bulk and torsional moduli, mode Grüneisen parameters
transport properties
thermal conductivity
optical properties, dielectric constants
entropy, heat of formation
tin disulfide (SnS₂)

- band structure, energy gaps
- interband transitions of higher energy
- crystal structure, lattice parameters
- phonon dispersion, phonon frequencies
- transport properties
- optical properties, dielectric constants
- heat capacity, density, melting point
- heat of formation, entropy
tin diselenide (SnSe₂)

- band structure, energy gaps
- interband transitions of higher energy
- effective masses
- impurities and defects
- crystal structure, lattice parameters, density, melting point
- phonon dispersion, phonon frequencies
- elastic moduli, interlayer force constants
- electrical and thermal transport properties
- optical properties, dielectric constants
- heat of formation, entropy
lead dioxide (PbO₂)

physical properties
SnS$_x$Se$_{2-x}$

physical properties
Si₂Te₃

band structure, energy gap
effective masses
crystal structure, chemical bond of Si₂Te₃ and SiTe₂
electrical and thermal transport properties
optical properties
heat capacity, density, melting point
heat of formation, entropy
Sn₂S₃, PbSnS₃, SnGeS₃, PbGeS₃

- energy gaps
- crystal structure, chemical bond of Sn₂S₃, PbSnS₃
- crystal structure, chemical bond of SnGeS₃, PbGeS₃
- heat capacity, density, heat of formation
- phonon frequencies
- transport properties
- optical properties, dielectric constants
lead difluoride (PbF$_2$)

energy gap, interband and core transition energies
crystal structure, lattice parameters, thermal expansion, phase transitions
Debye temperature, heat capacity, density, melting point
phonon dispersion relations and wavenumbers
elastic moduli and compliances
compressibility, bulk modulus and other lattice properties
optical properties
dielectric constants
lead dichloride (PbCl₂)

energy gaps
exciton parameters, interband transition energies
crystal structure, chemical bond, lattice parameters
density, melting point
optical properties, dielectric constants
lead dibromide (PbBr$_2$)

energy gap, further band structure parameters

crystal structure, lattice parameters

density, melting point

optical properties, dielectric constants
lead diiodide (PbI$_2$)

- band structure
- energy gaps, band edge transition energies
- free exciton parameters
- diamagnetic shift, bound excitons
- interband transition and spin orbit splitting energies
- core transition energies, core and valence band peak levels
- effective masses, $g$-factors
- crystal structure, lattice parameters, thermal expansion
- density, melting point
- phonon dispersion and wavenumbers
- sound velocities, elastic moduli
- Grüneisen parameters, effective charge, force constants
- carrier mobilities
- optical properties, dielectric constants
- luminescence, stimulated emission
arsenic oxide (As₂O₃)
crystal structure, chemical bond, lattice parameters
physical properties
arsenic sulfide (As$_2$S$_3$)

- band structure, energy gaps
- interband transition energies, work function
- crystal structure, chemical bond, lattice parameters
- heat capacity, melting point
- phonon properties (general), phonon frequencies
- mobility, resistivity
- optical properties, dielectric constant
- photoconductivity, luminescence
arsenic selenide (As$_2$Se$_3$)

- band structure
- energy gaps
- spin splitting and interband transition energies
- peaks and shoulders in the $\varepsilon_2$ spectra
- core level energies
- impurities and defects
- crystal structure, chemical bond, lattice parameters
- heat capacity, melting point
- phonon properties, general
- phonon frequencies and force constants
- resistivity, mobility
- optical properties, dielectric constant, photoluminescence
arsenic telluride (As₂Te₃)
crystal structure, chemical bond, lattice parameters
physical properties
antimony oxide (Sb₂O₃)

crystal structure, chemical bond
IR absorption bands
electron energy loss, photoemission, Auger spectroscopy
dielectric constant
Raman frequencies
thermal conductivity, thermoelectric power
heat capacity, density, melting point
antimony sulfide (Sb₂S₃)

- general characterization, band structure
- energy gap
- impurities and defects
- crystal structure, chemical bond, lattice parameters (including data for Sb₂Se₃, Bi₂S₃)
- phonon frequencies
- microwave vibration, surface phonon-polariton frequencies
- sound velocity
- electrical conductivity, pyrocurrent, thermoelectric power
- optical properties, photoconductivity
- dielectric constants
- magnetic properties
- Debye temperature, heat capacity
- density, melting point
- phase transitions
antimony selenide (Sb$_2$Se$_3$)

- band structure, energy gap
- positions of density-of-states maxima
- interband transition energies
- impurities and defects
- crystal structure, chemical bond, lattice parameters (including data for Sb$_2$S$_3$, Bi$_2$S$_3$)
- Debye temperature, heat capacity, melting point, thermodynamical data
- phonon frequencies
- electrical conductivity
- mobility, Seebeck effect
- optical properties
- dielectric constants
- magnetic properties
antimony telluride (Sb$_2$Te$_3$)

- band structure, energy gap
- effective masses
- impurities and defects
- crystal structure, chemical bond, lattice parameters (including data for Bi$_2$Se$_3$, Bi$_2$Te$_3$)
- thermal expansion
- density, melting point
- Debye temperature, heat capacity
- phonon dispersion, phonon frequencies
- transport properties
- optical properties
- dielectric constants
- thermal conductivity, thermodynamical data
- magnetic properties
bismuth oxide (Bi₂O₃)

energy gaps
optical spectra
crystal structure, chemical bond, lattice parameters
IR absorption bands, Raman spectra
transport properties
thermal conductivity
magnetic properties
heat capacity, density, melting point
bismuth sulfide (Bi₂S₃)

energy gaps
crystal structure, chemical bond, lattice parameter (including data for Sb₂S₃, Sb₂Se₃)
phonon frequencies
transport properties
optical properties, dielectric constants
magnetic properties
heat capacity, density, melting point
bismuth selenide (Bi$_2$Se$_3$)

band structure
energy gaps
higher interband transition energies
effective masses
g-factor
impurity and defects
crystal structure, chemical bond, lattice parameter (including data of related compounds)
phonon dispersion, phonon frequencies
elastic moduli
transport properties
optical properties, dielectric constants
thermal conductivity
magnetic properties
Debye temperature, heat capacity
density, melting point
bismuth telluride (Bi$_2$Te$_3$)

- band structure
- energy gaps
- interband transition energies
- work function
- effective masses
- spin-splitting factors
- $g$-factors
- impurity and defect levels
- crystal structure, chemical bond, lattice parameters (including data for related compounds)
- phonon dispersion, phonon frequencies
- elastic moduli
- sound velocity, Grüneisen constant
- transport properties
- optical properties, dielectric constant
- thermal conductivity
- magnetic properties
- Debye temperature, heat capacity
- density, melting point
- thermal expansion, mechano-caloric effect
As$_4$S$_4$ (realgar)

crystal structure, chemical bond, lattice parameters
physical properties
(Bi$_x$Sb$_{1-x}$)$_2$(Se$_y$Te$_{1-y}$)$_3$

crystal structure, chemical bond, lattice parameters of stoichiometric compounds
physical properties
(Bi$_{1-x}$Sb$_x$)$_2$Te$_3$

physical properties
$\text{Bi}_2(\text{Se}_x\text{Te}_{1-x})_3$

physical properties
$\text{Sb}_2(\text{Se}_x\text{Te}_{1-x})_3$

physical properties
(Bi$_{1-x}$Sb$_x$)$_2$Se$_3$, Bi$_2$Te$_{3-x}$S$_x$, Sb$_2$Te$_{3-x}$Se$_x$

physical properties
$\text{Bi}_2\text{TeO}_5$

properties
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crystal structure, chemical bond of AsI₃, SbI₃, BiI₃
arsenic triiodide (AsI₃)

energy gap

crystal structure, chemical bond, thermal expansion

density, melting point

phonon properties

optical properties, photoconductivity

heat and entropy change of fusion

magnetic properties
antisimony triiodide (SbI₃)

energy gap, effective masses

crystal structure, density, melting point

phonon wavenumbers, elastic constants

resistivity

optical properties, dielectric constant

photoconductivity, photoemission

heat and entropy change of fusion

magnetic properties
bismuth triiodide (BiI₃)

- band structure, energy gap, effective masses, excitons
- crystal structure, phase diagram
- density, melting and boiling points
- phonon properties, elastic constants
- resistivity
- optical properties, dielectric constant, non-linear properties
- photoconductivity and photoemission
- vapor pressure, parameters of fusion and vaporization
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