

Index of Substances, List of Symbols and Abbreviations, Conversion factors

Volume III/44A: New Data and Updates for I-VII, III-V, III-VI and IV-VI Compounds
Occurring data listed by Element System

El. System	Document Title [Author]
Ag-Br	AgBr: heat of sublimation [B. Hönerlage]
	AgBr: lattice constants [B. Hönerlage]
	AgBr: compressibility, bulk modulus [B. Hönerlage]
	AgBr: Debye-Waller factor [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
Ag-Cl	AgCl: heat of sublimation [B. Hönerlage]
	AgCl: lattice constants [B. Hönerlage]
	AgCl: compressibility, bulk modulus [B. Hönerlage]
	AgCl: Debye-Waller factor [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
Ag-F	AgF: heat of sublimation [B. Hönerlage]
	AgF: lattice constants [B. Hönerlage]
Ag-I	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
	AgI, beta modification: Debye-Waller factor, mean square relative displacements [B. Hönerlage]
	AgI: heat of sublimation [B. Hönerlage]
	AgI: lattice constants [B. Hönerlage]
	AgI: phase transitions, p-T phase diagram [B. Hönerlage]
	AgI: compressibility, bulk modulus [B. Hönerlage]
	AgI: Debye-Waller factor [B. Hönerlage]
Al-As	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
	AlAs: band structure, energies at symmetry points [E.C. Fernandes da Silva]
	AlAs: energy gaps [E.C. Fernandes da Silva]
	AlAs: interband transition energies [E.C. Fernandes da Silva]
	AlAs: camel's back parameter [E.C. Fernandes da Silva]
	AlAs: spin-orbit splittings [E.C. Fernandes da Silva]
	AlAs: Dresselhaus spin-splitting parameter [E.C. Fernandes da Silva]
	AlAs: effective Landé g-factors [E.C. Fernandes da Silva]
	AlAs: effective-mass parameters [E.C. Fernandes da Silva]
	AlAs: refractive index [E.C. Fernandes da Silva]
	AlAs: dielectric constants [E.C. Fernandes da Silva]
	AlAs: mobility [E.C. Fernandes da Silva]
Al-As-Ga	Al _x Ga _{1-x} As: band structure [E.C. Fernandes da Silva]
	Al _x Ga _{1-x} As: energy gaps [E.C. Fernandes da Silva]
	Al _x Ga _{1-x} As: critical point energies [E.C. Fernandes da Silva]
	Al _x Ga _{1-x} As: refractive index, absorption coefficient [E.C. Fernandes da Silva]
	Al _x Ga _{1-x} As: mobility [E.C. Fernandes da Silva]
	Al _x Ga _{1-x} As: impact ionization coefficients [E.C. Fernandes da Silva]
Al-N	AlN: energy gaps [B.K. Meyer]
	AlN: critical point energies [B.K. Meyer]
	AlN: spin-orbit splittings, crystal-field splitting [B.K. Meyer]
	AlN: excitonic energy gaps, exciton binding energies and lifetime [B.K. Meyer]
	AlN: absorption, refractive index, dielectric function [B.K. Meyer]

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El. System	Document Title [Author]
As-Ga	GaAs: band structure, energies at symmetry points [E.C. Fernandes da Silva]
	GaAs: interband transition energies [E.C. Fernandes da Silva]
	GaAs: energy gaps [E.C. Fernandes da Silva]
	GaAs: exciton linewidth [E.C. Fernandes da Silva]
	GaAs: spin-orbit splittings [E.C. Fernandes da Silva]
	GaAs: Dresselhaus spin-splitting parameter [E.C. Fernandes da Silva]
	GaAs: effective-mass parameters [E.C. Fernandes da Silva]
	GaAs: effective Landé g-factors [E.C. Fernandes da Silva]
	GaAs: refractive index [E.C. Fernandes da Silva]
	GaAs: dielectric constants [E.C. Fernandes da Silva]
	GaAs: resistivity [E.C. Fernandes da Silva]
	GaAs: mobility, drift velocity [E.C. Fernandes da Silva]
	GaAs: spin transport data [E.C. Fernandes da Silva]
	GaAs: impact ionization coefficients [E.C. Fernandes da Silva]
	GaAs: photoemission data [E.C. Fernandes da Silva]
	GaAs: Auger recombination coefficient and lifetime [E.C. Fernandes da Silva]
	GaAs: radiative recombination coefficient [E.C. Fernandes da Silva]
	GaAs: bound exciton data [E.C. Fernandes da Silva]
	GaAs: exciton fine-structure [E.C. Fernandes da Silva]
Br-Cl-Cu	CuCl _{1-x} Br _x : phonon wavenumbers [B. Hönerlage]
	CuCl _{1-x} Br _x : electron mobility, drift velocity [B. Hönerlage]
Br-Cu	CuBr, gamma modification: exciton energies [B. Hönerlage]
	CuBr, gamma modification: Debye-Waller factor, mean square relative displacements [B. Hönerlage]
	CuBr, gamma modification: spin-orbit splittings [B. Hönerlage]
	CuBr: elastic moduli, mode Grüneisen parameters, effective charges [B. Hönerlage]
	CuBr, gamma modification: electron mobility, drift velocity [B. Hönerlage]
	CuBr: phase transitions, p-T phase diagram [B. Hönerlage]
	CuBr: lattice constants [B. Hönerlage]
	CuBr: bulk modulus [B. Hönerlage]
	CuBr, gamma modification: biexciton and trion data [B. Hönerlage]
	CuBr: phonon frequencies and wavenumbers, related data [B. Hönerlage]
Cl-Cu	CuBr: heat of sublimation [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
	I-VII-compounds: chemical bond [B. Hönerlage]
	CuCl, gamma modification: crystal structure, space group [B. Hönerlage]
	CuCl, gamma modification: band structure [B. Hönerlage]
	CuCl, gamma modification: deformation potentials [B. Hönerlage]
	CuCl, gamma modification: exciton energies, Rabi energies, oscillator strength [B. Hönerlage]
	CuCl, gamma modification: biexciton data [B. Hönerlage]
	CuCl, gamma modification: trion data [B. Hönerlage]
	CuCl, gamma modification: electron-hole plasma [B. Hönerlage]
	CuCl, gamma modification: thermal expansion coefficient [B. Hönerlage]
	CuCl, gamma modification: phonon frequencies, phonon wavenumbers, damping constants [B. Hönerlage]
	CuCl, gamma modification: elastic moduli, effective charge [B. Hönerlage]
	CuCl, gamma modification: Debye-Waller factors, mean square displacements [B. Hönerlage]
	CuCl: bulk modulus [B. Hönerlage]

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El. System	Document Title [Author]
Cl-Cu	CuCl, gamma modification: dielectric constant [B. Hönerlage]
	CuCl, gamma modification: conductivity, resistivity [B. Hönerlage]
	CuCl, gamma modification: sublimation energy [B. Hönerlage]
	CuCl, gamma modification: lattice constants [B. Hönerlage]
	CuCl, gamma modification: mode Grüneisen parameters [B. Hönerlage]
	CuCl, gamma modification: exciton energies [B. Hönerlage]
	CuCl, gamma modification: phonon wavenumbers [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
	I-VII-compounds: chemical bond [B. Hönerlage]
Cu-F	CuF: heat of sublimation [B. Hönerlage]
	CuF: lattice constants [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
Cu-I	CuI, gamma modification: exciton energies [B. Hönerlage]
	CuI: elastic moduli, mode Grüneisen parameters, effective charges [B. Hönerlage]
	CuI: lattice constants [B. Hönerlage]
	CuI: bulk modulus [B. Hönerlage]
	CuI: phase transitions, p-T phase diagram [B. Hönerlage]
	CuI, gamma modification: biexciton and trion data [B. Hönerlage]
	CuI: heat of sublimation [B. Hönerlage]
	CuI, gamma modification: electron mobility, drift velocity [B. Hönerlage]
	CuI, gamma modification: phonon wavenumbers [B. Hönerlage]
	I-VII-compounds: phases and lattice parameter, melting point [B. Hönerlage]
	I-VII-compounds: chemical bond [B. Hönerlage]
Eu-Pb-S	Pb _{1-x} Eu _x S: crystal structure [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x S: photoemission data [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x S: magnetization [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x S: magnetic ion g-factor [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x S: g-factor of magnetic ions [T. Dietl, W. Dobrowolski, T. Story]
Eu-Pb-Se	Pb _{1-x} Eu _x Se: lattice parameter [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: energy gaps [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: band structure parameters [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: refractive index, absorption [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: dielectric constant [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: transmission [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: photoemission data [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: sp-f exchange integrals [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: g-factor of magnetic ions [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Se: g-factor of magnetic ions [T. Dietl, W. Dobrowolski, T. Story]
Eu-Pb-Te	Pb _{1-x} Eu _x Te: band structure parameters [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: energy gaps [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: Debye-Waller factor [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: phonon wavenumbers [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: resistivity [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: mobility [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: phase coherence length [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: transmission [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: Verdet constant [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: photoemission data [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: sp-f exchange integrals [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: f-f exchange integrals [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: Curie temperature [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: magnetization, magnetic specific heat [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Eu _x Te: magnetization, magnetic specific heat [T. Dietl, W. Dobrowolski, T. Story]

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El. System	Document Title [Author]
Eu-Sn-Te	Sn _{1-x} Eu _x Te: crystal structures [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: lattice parameter [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: resistivity [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: mobilities [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: transmission [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: exchange integrals [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: magnetization [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Eu _x Te: g-factor of magnetic ions [T. Dietl, W. Dobrowolski, T. Story]
Fe-Ga-Se	Ga _{1-x} Fe _x Se: magnetization, magnetic anisotropy [T. Dietl, W. Dobrowolski, T. Story]
Ga-Mn-S	Ga _{1-x} Mn _x S: magnetization [T. Dietl, W. Dobrowolski, T. Story]
Ga-Mn-Se	Ga _{1-x} Mn _x Se: magnetization [T. Dietl, W. Dobrowolski, T. Story]
Ga-N	GaN, cubic modification: energy gaps [B.K. Meyer]
	GaN, cubic modification: effective Landé g-factors [B.K. Meyer]
	GaN, cubic modification: dielectric function [B.K. Meyer]
	GaN, hexagonal modification: energy gaps [B.K. Meyer]
	GaN, hexagonal modification: exciton energies, pressure dependence [B.K. Meyer]
	GaN, hexagonal modification: exciton g-factors [B.K. Meyer]
	GaN, hexagonal modification: crystal-field splitting, spin-orbit splittings [B.K. Meyer]
	GaN, hexagonal modification: effective-mass parameters [B.K. Meyer]
	GaN, hexagonal modification: Hall mobility [B.K. Meyer]
	GaN, hexagonal modification: diffusion coefficient, diffusion length [B.K. Meyer]
	GaN, hexagonal modification: carrier lifetimes [B.K. Meyer]
	GaN, hexagonal modification: absorption coefficient, dielectric constant [B.K. Meyer]
Ge-Mn-Te	Ge _{1-x} Mn _x Te: crystal structure [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: magnetoresistance [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: transmittance [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: Curie temperature [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: lattice parameter [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: energy gaps [T. Dietl, W. Dobrowolski, T. Story]
	Ge _{1-x} Mn _x Te: effective-mass parameters [T. Dietl, W. Dobrowolski, T. Story]
In-Mn-S	In _{1-x} Mn _x S: magnetization [T. Dietl, W. Dobrowolski, T. Story]
In-Mn-Se	In _{1-x} Mn _x Se: magnetization, hysteresis [T. Dietl, W. Dobrowolski, T. Story]
In-N	InN, wurtzite modification: band structure [B.K. Meyer]
	InN, wurtzite modification: energy gaps [B.K. Meyer]
	InN, wurtzite modification: critical point energies [B.K. Meyer]
	InN, wurtzite modification: spin-orbit splittings, crystal field splitting [B.K. Meyer]
	InN, wurtzite modification: effective-mass parameters [B.K. Meyer]
	InN, wurtzite modification: mobility, diffusion coefficients [B.K. Meyer]
	InN, wurtzite modification: absorption, reflectance, and photoluminescence [B.K. Meyer]
	InN, cubic modification: band structure, energies at symmetry points [B.K. Meyer]
Mn-Pb-Se	InN, cubic modification: energy gaps [B.K. Meyer]
	InN, cubic modification: effective-mass parameters [B.K. Meyer]
Mn-Pb-Sn-Te	Pb _{1-x} Mn _x Se: energy gap [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Mn _x Se: transmission, dielectric constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-Pb-Te	Pb _{1-x-y} Sn _y Mn _x Te: band structure [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x-y} Sn _y Mn _x Te: Curie temperature [T. Dietl, W. Dobrowolski, T. Story]
Mn-Pb-Te	Pb _{1-x} Mn _x Te: structural phases [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Mn _x Te: specific heat, thermal conductivity [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Mn _x Te: phonon frequencies [T. Dietl, W. Dobrowolski, T. Story]

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El. System	Document Title [Author]
Mn-Pb-Te	Pb _{1-x} Mn _x Te: micro hardness [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Mn _x Te: thermoelectric power [T. Dietl, W. Dobrowolski, T. Story]
	Pb _{1-x} Mn _x Te: magnetoresistance [T. Dietl, W. Dobrowolski, T. Story]
Mn-Sn-Te	Sn _{1-x} Mn _x Te: structural phases, crystal structures [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Mn _x Te: photoemission data [T. Dietl, W. Dobrowolski, T. Story]
	Sn _{1-x} Mn _x Te: phase transition, magnetic anisotropy [T. Dietl, W. Dobrowolski, T. Story]

Volume III/44B: New Data and Updates for II-VI Compounds

Occurring data listed by Element System

El. System	Document Title [Author]
Be-Mn-Te	Be _{1-x} Mn _x Te: hysteresis [T. Dietl, W. Dobrowolski, T. Story]
Be-O-Zn	Be _x Zn _{1-x} O: lattice constant [B.K. Meyer]
	Be _x Zn _{1-x} O: energy gaps [B.K. Meyer]
Cd-Hg-Te	Hg _{1-x} Cd _x Te: phonon frequencies [J. Chu]
	Hg _{1-x} Cd _x Te: reflectance, absorption [J. Chu]
	Hg _{1-x} Cd _x Te: binding energies (impurities and defects) [J. Chu]
Cd-Mg-Se	Cd _x Mg _{1-x} Se: exciton energies [J. Gutowski, K. Sebal, T. Voss]
	Cd _x Mg _{1-x} Se: conductivity, Hall mobility [J. Gutowski, K. Sebal, T. Voss]
	Cd _x Mg _{1-x} Se: refractive index, absorption, dielectric constants [J. Gutowski, K. Sebal, T. Voss]
Cd-Mg-Se-Zn	Mg _x Zn _y Cd _{1-x-y} Se: energy gaps [J. Gutowski, K. Sebal, T. Voss]
Cd-Mg-Te	Cd _x Mg _{1-x} Te: critical point energies [J. Gutowski, K. Sebal, T. Voss]
	Cd _x Mg _{1-x} Te: dielectric constants [J. Gutowski, K. Sebal, T. Voss]
Cd-Mn-S	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Cd-Mn-Se	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Cd-Mn-Te	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Cd-O	CdO: transmission, photoemission data [J. Gutowski, K. Sebal, T. Voss]
	CdO: muonium data (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
	CdO: photoconductivity, resistivity [J. Gutowski, K. Sebal, T. Voss]
	CdO: thermoelectric power [J. Gutowski, K. Sebal, T. Voss]
	CdO: mobility, Hall mobility [J. Gutowski, K. Sebal, T. Voss]
Cd-O-Te	CdO _x Te _{1-x} : composition dependence of energy gap [J. Gutowski, K. Sebal, T. Voss]
Cd-O-Zn	Zn _x Cd _{1-x} O: band offsets [J. Gutowski, K. Sebal, T. Voss]
	Zn _x Cd _{1-x} O: lattice constants [B.K. Meyer]
	Zn _x Cd _{1-x} O: energy gaps [B.K. Meyer]
	Zn _x Cd _{1-x} O: band offsets [B.K. Meyer]
	Zn _x Cd _{1-x} O: reflectance, absorption and photoluminescence [B.K. Meyer]
Cd-S	CdS, zincblende configuration: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss]
	CdS, zincblende configuration: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss]
	CdS: energy gaps [J. Gutowski, K. Sebal, T. Voss]
	CdS: exciton energies, exciton binding energies [J. Gutowski, K. Sebal, T. Voss]
	CdS: muonium data (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
	CdS: donor-acceptor pairs [J. Gutowski, K. Sebal, T. Voss]
	CdS: ionization energies (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]

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El. System	Document Title [Author]
Cd-S	<p>CdS: bound excitons [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: conductivity, resistivity [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: absorption coefficient [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: biexciton data [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: nonlinear optical properties [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: mobility [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdS: defect formation energies [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-S-Se	<p>$\text{CdS}_x\text{Se}_{1-x}$: band structure, bowing parameter [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_x\text{Se}_{1-x}$: absorption, refractive index [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_x\text{Se}_{1-x}$: exciton energy [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_x\text{Se}_{1-x}$: band offsets [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_x\text{Se}_{1-x}$: excitonic energy, dephasing time [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-S-Se-Zn	<p>$\text{Zn}_x\text{Cd}_{1-x}\text{S}_y\text{Se}_{1-y}$: band structure, bowing parameter [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-S-Te	<p>$\text{CdS}_{1-x}\text{Te}_x$: energy gaps, bowing parameter [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_{1-x}\text{Te}_x$: absorption, dielectric constant [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdS}_{1-x}\text{Te}_x$: band offsets [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-S-Zn	<p>$\text{Zn}_x\text{Cd}_{1-x}\text{S}$: energy gaps [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{Zn}_x\text{Cd}_{1-x}\text{S}$: conductivity, resistivity [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{Zn}_x\text{Cd}_{1-x}\text{S}$: refractive index, dielectric constants [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{Zn}_x\text{Cd}_{1-x}\text{S}$: mobility [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-Se	<p>CdSe, zincblende configuration: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe, hexagonal modification: interband transition energies [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe, hexagonal modification: energy gaps [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: exciton energies, exchange splitting [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: muonium data (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: conductivity, resistivity [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: mobilities [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: refractive index [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: dielectric constants [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: nonlinear absorption [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: spin-orbit splitting, crystal-field splitting [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: g values (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdSe: electron and hole traps [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-Se-Te	<p>$\text{CdSe}_x\text{Te}_{1-x}$: energy gaps, bowing parameter, band offsets [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdSe}_x\text{Te}_{1-x}$: resistivity [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdSe}_x\text{Te}_{1-x}$: absorption, refractive index, dielectric constants [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{CdSe}_x\text{Te}_{1-x}$: band offsets [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-Se-Zn	<p>$\text{Zn}_x\text{Cd}_{1-x}\text{Se}$: energy gaps, g factor, splitting of exciton transitions [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{Zn}_x\text{Cd}_{1-x}\text{Se}$: ionization energies, g values (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]</p> <p>$\text{Zn}_x\text{Cd}_{1-x}\text{Se}$: refractive index [J. Gutowski, K. Sebal, T. Voss]</p>
Cd-Te	<p>CdTe, zincblende configuration: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss]</p> <p>CdTe: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss]</p>

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El. System	Document Title [Author]
Cd-Te	CdTe: energy gaps, temperature and pressure dependence [J. Gutowski, K. Sebal, T. Voss]
	CdTe: energies at symmetry points [J. Gutowski, K. Sebal, T. Voss]
	CdTe: critical point energies, temperature dependence [J. Gutowski, K. Sebal, T. Voss]
	CdTe: deformation potentials [J. Gutowski, K. Sebal, T. Voss]
	CdTe: exciton energies [J. Gutowski, K. Sebal, T. Voss]
	CdTe: ionization energies of shallow impurities [J. Gutowski, K. Sebal, T. Voss]
	CdTe: donor-acceptor-pairs [J. Gutowski, K. Sebal, T. Voss]
	CdTe: ionization energies of deep impurities [J. Gutowski, K. Sebal, T. Voss]
	CdTe: impurity complexes [J. Gutowski, K. Sebal, T. Voss]
	CdTe: defect formation energies, entropy of point defects, migration energy [J. Gutowski, K. Sebal, T. Voss]
	CdTe: bound excitons [J. Gutowski, K. Sebal, T. Voss]
	CdTe: conductivity, resistivity [J. Gutowski, K. Sebal, T. Voss]
	CdTe: mobility [J. Gutowski, K. Sebal, T. Voss]
	CdTe: carrier concentration, self-diffusion [J. Gutowski, K. Sebal, T. Voss]
	CdTe: thermoelectric power [J. Gutowski, K. Sebal, T. Voss]
	CdTe: refractive index [J. Gutowski, K. Sebal, T. Voss]
	CdTe: absorption [J. Gutowski, K. Sebal, T. Voss]
	CdTe: density [J. Gutowski, K. Sebal, T. Voss]
	CdTe: enthalpy, entropy [J. Gutowski, K. Sebal, T. Voss]
	CdTe: hardness [J. Gutowski, K. Sebal, T. Voss]
	CdTe: Debye temperature [J. Gutowski, K. Sebal, T. Voss]
	CdTe: effective Landé g factors [J. Gutowski, K. Sebal, T. Voss]
	CdTe: thermal conductivity [J. Gutowski, K. Sebal, T. Voss]
	CdTe: muonium data (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
Cd-Te-Zn	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: energy gaps [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: ionization energies, free-to-bound transitions [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: conductivity, mobilities, diffusion coefficient [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: refractive index, absorption, dielectric constants [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: Gibbs energy, enthalpy [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: exciton energies [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: bound excitons [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: positron annihilation data at vacancy-impurity complexes (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: electron and hole traps [J. Gutowski, K. Sebal, T. Voss]
	$\text{Zn}_x\text{Cd}_{1-x}\text{Te}$: impurity complexes [J. Gutowski, K. Sebal, T. Voss]
Co-O-Zn	$\text{Zn}_{1-x}\text{Co}_x\text{O}$: Curie temperature, magnetization, exchange integral [T. Dietl, W. Dobrowolski, T. Story]
	$\text{Zn}_{1-x}\text{Cr}_x\text{Se}$: Curie temperature [T. Dietl, W. Dobrowolski, T. Story]
Cr-Se-Zn	$\text{Zn}_{1-x}\text{Cr}_x\text{Te}$: Curie temperatures [T. Dietl, W. Dobrowolski, T. Story]
Hg-Mn-S	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Hg-Mn-Se	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]

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El. System	Document Title [Author]
Hg-Mn-Te	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Hg-Se	HgSe: phonon dispersion curves, phonon density of states [J. Chu]
Hg-Te	HgTe: band structure [J. Chu] HgTe: energy gaps [J. Chu] HgTe: deformation potentials [J. Chu] HgTe: phonon dispersion curves, phonon density of states [J. Chu] HgTe: lattice parameter [J. Chu] HgTe: elastic coefficients [J. Chu]
Mg-O-Zn	$\text{Mg}_x\text{Zn}_{1-x}\text{O}$, hexagonal modification: energy gaps [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, hexagonal modification: exciton energies [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, hexagonal modification: effective-mass parameters [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, hexagonal modification: lattice parameters, phonon wavenumbers [B. K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, hexagonal modification: refractive index, dielectric constants [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, cubic modification: energy gaps [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, cubic modification: phonon wavenumbers [B.K. Meyer] $\text{Mg}_x\text{Zn}_{1-x}\text{O}$, cubic modification: refractive index, dielectric constants [B.K. Meyer]
Mg-S-Se-Zn	$\text{Zn}_{1-x}\text{Mg}_x\text{S}_y\text{Se}_{1-y}$: energy gaps [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{S}_y\text{Se}_{1-y}$: g values, impurity concentration [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{S}_y\text{Se}_{1-y}$: refractive index [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{S}_y\text{Se}_{1-y}$: electron and hole traps [J. Gutowski, K. Sebal, T. Voss]
Mg-S-Zn	$\text{Zn}_{1-x}\text{Mg}_x\text{S}$: energy gap, effective-mass parameters [J. Gutowski, K. Sebal, T. Voss]
Mg-Se-Te-Zn	$\text{Mg}_y\text{Zn}_{1-y}\text{Te}_{1-x}\text{Se}_x$: energy gaps [J. Gutowski, K. Sebal, T. Voss] $\text{Mg}_y\text{Zn}_{1-y}\text{Te}_{1-x}\text{Se}_x$: refractive index [J. Gutowski, K. Sebal, T. Voss]
Mg-Se-Zn	$\text{Zn}_{1-x}\text{Mg}_x\text{Se}$: energy gaps, effective-mass parameters [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Se}$: g factors, electron and hole trap data (impurities and defects) [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Se}$: conductivity, mobility [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Se}$: refractive index [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Se}$: nonlinear absorption [J. Gutowski, K. Sebal, T. Voss]
Mg-Te-Zn	$\text{Zn}_{1-x}\text{Mg}_x\text{Te}$: energy gap, bowing parameter [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Te}$: bound exciton data [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Te}$: resistivity [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Te}$: refractive index, dielectric constants [J. Gutowski, K. Sebal, T. Voss] $\text{Zn}_{1-x}\text{Mg}_x\text{Te}$: effective-mass parameters [J. Gutowski, K. Sebal, T. Voss]
Mn-O-Zn	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-O-Zn	$\text{Zn}_{1-x}\text{Mn}_x\text{O}$: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-S-Zn	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-Se-Zn	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-Te	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story]
Mn-Te-Zn	II-VI semimagnetic semiconductors: exchange constants [T. Dietl, W. Dobrowolski, T. Story] $\text{Zn}_{1-x}\text{Mn}_x\text{Te}$: Curie temperature [T. Dietl, W. Dobrowolski, T. Story]

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El. System	Document Title [Author]
O-S-Zn	ZnS _{1-x} O _x : exciton energies [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} O _x : entropy, enthalpy [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} O _x : energy gaps, bowing parameter [B.K. Meyer] ZnS _{1-x} O _x : lattice constant, phonon frequencies [B.K. Meyer] ZnS _{1-x} O _x : absorption coefficient [B.K. Meyer]
O-Se-Zn	ZnSe _{1-x} O _x : energy gaps, bowing parameter [B.K. Meyer]
O-Sn	diluted magnetic oxides: Curie temperature, magnetization [T. Dietl, W. Dobrowolski, T. Story]
O-Ti	diluted magnetic oxides: Curie temperature, magnetization [T. Dietl, W. Dobrowolski, T. Story]
O-Zn	diluted magnetic oxides: Curie temperature, magnetization [T. Dietl, W. Dobrowolski, T. Story]
S-Se-Zn	ZnS _{1-x} Se _x : energy gaps, bowing parameter [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : g values (impurities and defects) [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : dielectric constants [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : entropy, enthalpy [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : ionization energies (impurities and defects) [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : effective-mass parameters [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Se _x : band offsets [J. Gutowski, K. Sebal, T. Voss]
S-Te-Zn	ZnS _{1-x} Te _x : energy gaps, bowing parameter [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Te _x : impurity transitions [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Te _x : dielectric constants [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Te _x : bound exciton data [J. Gutowski, K. Sebal, T. Voss] ZnS _{1-x} Te _x : band offsets [J. Gutowski, K. Sebal, T. Voss]
S-Zn	ZnS, cubic modification: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss] ZnS: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss] ZnS: exciton energy, binding energy, Zeeman splitting [J. Gutowski, K. Sebal, T. Voss] ZnS: biexciton data [J. Gutowski, K. Sebal, T. Voss] ZnS: energy gaps [J. Gutowski, K. Sebal, T. Voss] ZnS: exciton binding energies, absorption strength [J. Gutowski, K. Sebal, T. Voss] ZnS: ionization energies (impurities and defects) [J. Gutowski, K. Sebal, T. Voss] ZnS, cubic modification: heat conductivity [J. Gutowski, K. Sebal, T. Voss] ZnS: refractive index, absorption, dielectric constants [J. Gutowski, K. Sebal, T. Voss] ZnS: entropy and enthalpy [J. Gutowski, K. Sebal, T. Voss] ZnS, cubic modification: resistivity [J. Gutowski, K. Sebal, T. Voss]
Se-Te-Zn	ZnSe _x Te _{1-x} : band gaps, bowing parameter [J. Gutowski, K. Sebal, T. Voss] ZnSe _x Te _{1-x} : bound exciton data [J. Gutowski, K. Sebal, T. Voss] ZnSe _x Te _{1-x} : hardness [J. Gutowski, K. Sebal, T. Voss] ZnSe _x Te _{1-x} : exciton energies [J. Gutowski, K. Sebal, T. Voss] ZnSe _x Te _{1-x} : band offsets [J. Gutowski, K. Sebal, T. Voss]
Se-Zn	ZnSe: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss] ZnSe: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss] ZnSe: energy gaps, temperature and pressure dependence [J. Gutowski, K. Sebal, T. Voss] ZnSe: effective-mass parameters [J. Gutowski, K. Sebal, T. Voss] ZnSe: exciton energies, binding energy [J. Gutowski, K. Sebal, T. Voss] ZnSe: ionization and excitation energies of donors (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]

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El. System	Document Title [Author]
Se-Zn	ZnSe: ionization and excitation energies of acceptors (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: donor-acceptor pairs [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: deep impurities, muonium data [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: electron and hole traps, formation energies, deep impurities [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: bound excitons [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: heat conductivity [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: resistivity [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: mobilities [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: refractive index, dielectric constants [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: nonlinear optical properties [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: heat capacity, enthalpy, entropy [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: hardness [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: shallow donor g values [J. Gutowski, K. Sebal, T. Voss]
	ZnSe: shallow acceptor g values [J. Gutowski, K. Sebal, T. Voss]
Te-Zn	ZnTe: band structure, energies at symmetry points, gap energies [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: Luttinger parameters [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: energy gaps, energies at symmetry points [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: deformation potentials [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: exciton energies, binding energies [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: ionization energies of shallow donors [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: donor-acceptor-pairs [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: ionization energies and impurity transitions of deep donors [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: impurity complexes, positron lifetime [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: bound exciton data [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: resistivity [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: mobilities, diffusion constants [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: refractive index, dielectric constants [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: nonlinear optical properties [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: heat capacity, thermodynamic functions [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: Gibbs free energy [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: hardness [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: Debye temperature [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: density [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: spatial correlation (impurities and defects) [J. Gutowski, K. Sebal, T. Voss]
	ZnTe: melting point [J. Gutowski, K. Sebal, T. Voss]

List of Symbols

(lower indices i, j, k, l = 1,2,3 denote cartesian indices; indices I, J, K, L = 1,...,6 denote Voigt notation)

Symbol	Unit	Property
a		anisotropy factor
a	Å	independent component of Raman tensor
a, b, c, d, d_0, \dots	eV	deformation potentials
$a_c (a_v)$		conduction (valence) band deformation potentials
\bar{a}		screened deformation potential

(continued)

Symbol	Unit	Property
a', b', d'	eV	deformation potentials of acceptors
a, b, c	Å, nm, pm	lattice parameters
a_B	nm	Bohr radius
A	Hz, cm^{-1}	hyperfine splitting parameter
A	eV	electron-hole exchange interaction parameter
A_{IJ}		third-order internal strain parameter
$A, B, C, A_{1,2,\dots}$	$\hbar^2/2m_0$	valence band parameters
b	eV	bowing parameter
b		electron-hole mobility ratio (μ_n/μ_p)
B	T, G	magnetic induction
B	$\text{cm}^3 \text{s}^{-1}$	radiative recombination coefficient
B	eV, cm^{-1}	Racah parameter
B	$\text{cm}^2 \text{K}^{-1} \text{s}^{-1}$	Nernst coefficient
B	Å ² , nm ²	isotropic temperature parameter (Debye-Waller factor)
B_{ij}	Å ²	anisotropic temperature parameter
$B_0 (B_0^S, B_0^T)$	Pa, bar	bulk modulus (adiabatic, isothermal)
c	mol^{-1}	concentration
c		phonon eigenvector modulus
c	eV	bowing parameter of energy gap
c_{IJ}	Pa, dyn cm^{-2} , N m^{-2}	elastic moduli (stiffnesses)
$c_{\text{IJ}}^{D(E)}$		elastic moduli at constant electric displacement (electric field)
$c_{\text{IJ}}^{(0)}$		elastic moduli for clamped crystal
$c_{\text{IJ}}^{(S)}$		elastic moduli at constant entropy
c_{IJK}	Pa	third order elastic moduli
c_{IJKL}	Pa	fourth order elastic moduli
C	F	electrical capacity
C	J $\text{mol}^{-1} \text{K}^{-1}$	heat capacity
C_p		heat capacity at constant pressure
C_V		heat capacity at constant volume
C^{ah}		anharmonic heat capacity
C^{qh}		quasi-harmonic heat capacity
c, c_p, c_V	J $\text{g}^{-1} \text{K}^{-1}$	specific heat capacity
C	$\text{cm}^6 \text{s}^{-1}$	Auger recombination coefficient
C		Faust-Henry coefficient
$C_{1,2,\dots} (C_e, C_h)$	eV	deformation potentials (of conduction and valence band)
$C_{A,B,C}$	nm eV	spin-splitting coefficients
C_m	$\text{G}^{-2} \text{cm}^{-1}$	Cotton-Mouton coefficient
d	g cm^{-3}	density
$d_{s,l,g}$		density of solid, liquid and gaseous phase
d	μm, cm, Å	distance, lattice spacing, interlayer spacing, thickness
d_{opt}		optical density ($\log I_0/I$)
d_{IK}	C N^{-1} , m V^{-1}	piezoelectric strain coefficients (see also g_{IK} ; d_{14} also independent component of this tensor in zincblende lattices)
$d_{\text{ijk}}^{(2)}$	m V^{-1}	second-order nonlinear dielectric susceptibility
$d(\text{SHG}), d_{\gamma}(\text{OR})$	m V^{-1} , cmV^{-1}	SHG susceptibility, second harmonic generation coefficient, optical rectification coefficient (second order nonlinear dielectric susceptibilities)

(continued)

Symbol	Unit	Property
D	cm^{-2}	(electron) irradiation dose (see also Φ)
D	$\text{cm}^2 \text{ s}^{-1}$	diffusion coefficient
$D_{\text{n(p)}}$		diffusion coefficient for electrons (holes)
D_{a}		ambipolar diffusion coefficient
Dq, D_{q}	$\text{eV}, \text{cm}^{-1}$	crystal field splitting parameter
$D, D_{\text{f } 1,2}, D_{\text{g } 1,2},$	eV cm^{-1}	deformation potential (inter-and intravalley coupling constants)
$D_{\text{TL}}, D_{\text{TX}}, D_{\text{LL}}, \dots$		
$D_1, D_{\text{i}}^{\text{k}}$	eV	electron-two phonon deformation potentials
$D_{\text{u}}, D_{\text{u}'}$	eV	deformation potentials for [100] and [111] stress, respectively
e		phonon eigenvector ($e_{\text{L}}, e_{\text{T}}$)
e	C	elementary charge
e_{P}	e	piezoelectric charge
e^*	e	effective charge
e_{S}^*	e	Szigeti effective charge
e_{T}^*	e	Born (transverse) effective ion charge
e_{L}^*	e	Callen (longitudinal) effective charge
e_{iK}	C m^{-2}	piezoelectric stress coefficients (see also h_{iK} ; e_{14} independent component of this tensor in zincblende lattices)
E	$\text{Pa}, \text{dyn cm}^{-2}$	Young's modulus
$E_{[\text{hkl}]}$		Young's modulus measured in [hkl] direction
E	$\text{eV}, \text{J}, \text{Ry}$	energy
E_0, E_{c}		cohesive energy
$E_{0,1,2}, E'_{0, E_{\text{L}}}$		energies of critical points in optical spectra
$E_{\text{a(d)}}$		ionization energies of acceptors (donors), energy of acceptor (donor) state measured from the respective band edge
E_{ax}		exciton absorption threshold
E_{A}		activation energy (of conductivity or other temperature or pressure dependent properties)
E_{b}		binding energy (mostly of excitons)
E_{biex}		energy of biexciton state
E_{bx}		binding energy of exciton to an impurity, localization energy of bound exciton
$E_{\text{b}}^{\text{biex}}$		biexciton binding energy
E_{b}^{eh}		electron-hole plasma binding energy
E_{b}^{mc}		binding energy of multiexcitons
E_{c}		high energy cut-off in $\varepsilon(E)$ spectrum
$E_{\text{c(v)}}$		band edge of conduction (valence) band
E_{D}		activation energy of diffusion
E_{e}		exciton exchange energy
E_{el}		electron energy
E_{F}		Fermi energy
E_{g}		energy gap, band gap
$\Delta E_{\text{g}}^{\text{chem}}$		chemical contribution to E_{g}
$E_{\text{g,dir(ind)}}$		direct (indirect) energy gap
$E_{\text{g,opt}}$		optical energy gap (threshold energy for optical transitions)
$E_{\text{g,pseu}}$		pseudodirect energy gap
$E_{\text{g,th}}$		energy gap extrapolated to 0 K (thermal energy gap)

(continued)

Symbol	Unit	Property
E_{gx}	eV, J, Ry	excitonic energy gap (see also E_{x})
$E_{\text{gx}}^{\text{thr}}$		exciton absorption threshold
E_{i}		incident energy
E_{k}		kinetic energy
E_{L}		energy loss
E_{m}		migration (activation) energy
E_{M}		biexciton transition energy (M band)
$E_{\text{n}}(k)$		band structure function
$E_{\text{na(pa)}}$		apparent ionization energy of electron (hole) traps
$E_{\text{p}}, E_{\text{p}'}$		characteristic energies in Kane's theory
E_{pl}		plasmon energy
$E_{\text{p}}, E_{\text{PL}}$		photoluminescence (photoconductivity) peak energy
E_{r}		relative energy
E_{r}		recombination center energy level
E_{t}		energy of trap level
E_{tot}		total energy (of crystal phase)
E_{vac}		vacuum energy level
E_{x}		exciton energy (see also E_{gx})
$E_{1\text{S},\dots}$		energy of 1S,... exciton
E_{π}, E_{σ}		width of upper, lower valence band in BN, also plasmon peak energies
$E_{\Gamma}, E_{\text{X}},\dots$		energy gap at Γ , X,...
$E(\Gamma_6)$		energy of band edge of type Γ_6
ΔE	eV	width of valence band, energy splitting
$\Delta E_{\text{hh(eh)}}$		hole-hole (electron-hole) splitting energy in acceptor bound exciton complexes
$\Delta E(\text{V}_c)$		crystal field splitting energy in acceptor bound exciton complexes
$\Delta E_{\text{ex}}^{\text{L-T}}$		longitudinal-transverse exciton splitting energy (see also Δ_{LT})
E	$\text{V cm}^{-1}, \text{V m}^{-1}$	electric field strength
E_{c}		coercive field
E_1, E_2		deformation potentials at X or L
f	Hz	frequency
f_{ex}		free exciton oscillator strength
f_{i}		(Phillips) ionicity, electronegativity
f	$\text{dyn \AA}^{-1}, \text{dyn cm}^{-1}$	force constant
F		valence band parameter
$g(E)$	$\text{eV}^{-1} \text{cm}^{-3}$	density of states
g		spectroscopic splitting factor
g_{eff}, g^*		effective g -factor
$g_{\text{c,e}}$		g -factor of conduction electrons
g_{so}		g -factor in spin-orbit split valence band
$g_{\text{v,h}}$		g -factor of conduction holes
g_{μ}		g -factor of muon
g_{ij}		gyration tensor components
g_{iK}	$\text{m}^{-2} \text{C}^{-1}$	piezoelectric strain coefficients (see also d_{iK} ; g_{14} independent component of this tensor in zincblende lattices)
G	Ω^{-1}	electrical conductance

(continued)

Symbol	Unit	Property
$G_{L(T)}$	Pa	longitudinal (transverse) shear moduli
$G_{[hkl]}$		shear modulus in [hkl] direction
ΔG_T^0	J mol ⁻¹	Gibbs free energy
ΔG_f^0	J mol ⁻¹	standard free energy of formation
ΔG_{tr}	J mol ⁻¹	free energy of transition
h		Planck constant
$h\nu$	eV	photon energy, phonon energy
h_{iK}	V m ⁻¹	piezoelectric stress coefficients (see also e_{iK} ; h_{14} independent component of this tensor in zincblende lattices)
H	Oe, A m ⁻¹	magnetic field (strength), also given as $\mu_0 H$ in Tesla (T)
H	Pa, kg mm ⁻²	hardness, microhardness
$H_{B,K,M,V}$		Berkovitch or Brinell, Knoop, Mohs, Vickers hardness
$H^{(0)}$	J mol ⁻¹	(standard) enthalpy
ΔH_{at}	kcal mol ⁻¹	enthalpy (heat) of atomization
ΔH_f	cal mol ⁻¹ , J mol ⁻¹	enthalpy (heat) of formation
ΔH_m	J mol ⁻¹ , cal mol ⁻¹	enthalpy (heat) of fusion or of melting
ΔH_{tr}	J mol ⁻¹	enthalpy (heat) of transformation or of transition
ΔH_v	kcal mol ⁻¹	enthalpy (heat) of vaporization
i	A m ⁻²	current density (see also j)
I	A	electric current
I_{ph}		photo current
I	m ² s ⁻¹	intensity (various units)
I_0		incident intensity
I_{lum}		luminescence intensity
$I_{r(t)}$		reflected (transmitted) intensity
I_{rel}		relative intensity
I_R		Raman intensity
j		index designating the branches of the phonon dispersion curves
j	A m ⁻²	current density (see also i)
J		total orbital angular momentum quantum number
J	eV	exchange interaction energy (J/k_B in K)
$J_{NN(NNN)}$		exchange interaction energies for nearest (next nearest) neighbors
k		extinction coefficient (absorption index)
k_e		absorption index for extraordinary ray
k_o		absorption index for ordinary ray
k	Å ⁻¹ , cm ⁻¹ , nm ⁻¹	wavevector of electrons
$k_{c(v)}$		location of conduction (valence) band
k_0		location of band edge in k -space
k_{xyz}		anharmonicity parameter (of phonon mode)
k_B, k	J K ⁻¹	Boltzmann constant
k_{iK}		electromechanical coupling factor
K	cm ⁻¹	absorption coefficient (see also α)
K		anisotropy constant of ellipsoidal energy surfaces
K	cm ⁻¹	exciton wave vector (see also Q)
K_C	Pa m ^{1/2}	fracture toughness
K_2	cm W ⁻¹	two-photon absorption coefficient

(continued)

Symbol	Unit	Property
l_{dr}	μm	drift length
L, M, N		valence band anisotropy parameters
$L_{(\text{D})}, l_{(\text{D})}$	$\text{cm}, \mu\text{m}, \text{nm}$	length (carrier diffusion length)
$L_{\text{n(p,X)}}$		carrier diffusion length of electrons (holes, excitons)
L		symmetry point of the Brillouin zone
$\Delta L/L$		linear thermal expansion ($\Delta L/L$ vs. T)
m, M	g	isotope mass
m_0	g	electron mass
m_{c}	m_0	conductivity effective mass
$m_{\text{ds}}, m_{\text{dos}}$	m_0	density of states mass
m_{ex}, M	m_0	exciton mass
$m_{\text{n(p)}}$	m_0	effective mass of electrons (holes)
$m_{\text{p,h(l)}}, m_{\text{h(l)h}}$	m_0	effective mass of heavy (light) holes
m_{so}	m_0	effective mass in the spin-orbit split-off valence band
$m_{\omega\text{c}}$	m_0	effective “cyclotron resonance mass”
$m_{\omega\text{p}}$	m_0	effective “plasma frequency mass”
$m_{1,2,3}$	m_0	effective mass in the three valence bands of tetrahedrally bonded lattices (identical with $m_{\text{p,h(l)}}, m_{\text{so}}$)
$m_{\perp(\parallel)}$	m_0	transverse (longitudinal) effective mass
$m(\Gamma_6)$	m_0	effective mass at band edge of type Γ_6
m^*	m_0	effective mass
m_{c}^*	m_0	effective cyclotron resonance mass
m^{**}	m_0	polaronic mass
n		(linear) refractive index
$n_{\text{a,b,c}}$		refractive index in a, b, c direction
n_{e}		refractive index for extraordinary ray
n_{o}		refractive index for ordinary ray
n_2	$\text{cm}^2 \text{W}^{-1}$	nonlinear refractive index
m_{iK}		elastoresistance coefficients
Δn		birefringence $n_{\text{e}} - n_{\text{o}}$
n	cm^{-3}	electron concentration (also carrier concentration in general)
$n_{\text{a(d)}}$		acceptor (donor) concentration
n_{eff}		effective number of electrons contributing to optical properties
n_{i}		intrinsic carrier concentration
n_{imp}		impurity concentration
n_{ion}		ionized impurity concentration (see also N_{I})
$n_{\text{l(h)}}$		concentration of light (heavy) electrons
$n_{\text{t}}, N_{\text{t}}$	cm^{-3}	defect concentration, trap density
N		coordination number
N		count rate
N_{I}		valence band parameter
N_{I}	cm^{-3}	ionized impurity concentration (see also n_{ion})
$N_{\text{C}}, N_{\text{O}}$	cm^{-3}	carbon, oxygen concentration
p	$\text{Pa}, \text{bar}, \text{atm}, \text{Torr}$	hydrostatic pressure
p_{In}		partial pressure (of indium)
p_{tr}		phase transition pressure
p_{w}		working pressure

(continued)

Symbol	Unit	Property
p	μ_B	magnetic moment
p_A		magnetic moment per atom A
p_{eff}		effective (paramagnetic) moment
p_{FU}, p_m		magnetic moment per formula unit
p	cm^{-3}	hole concentration
$p_{\text{l(h)}}$		concentration of light (heavy) holes
p_{IJ}		elasto-optic tensor components (photoelastic coefficients; see also q_{ij})
$P_{(\text{s})}$	C m^{-2}	(spontaneous) dielectric polarization
P	V	Peltier coefficient
P	$\text{K cm}^{-3} \text{ J}^{-1}$	Ettingshausen coefficient
P	W cm^{-2}	excitation density (also I_{exc} and I_0 is used)
P	eV cm	matrix element in Kane's theory
P_T		linear dichroism of optical transmission
q	$\text{\AA}^{-1}, \text{cm}^{-1}, \text{nm}^{-1}$	wavevector of phonons, plasmons
q		Fano parameter
q_{ij}	Pa^{-1}	photoelastic constants ($= \text{d}n/\text{d}X_{ij}$, see also p_{IJ})
q_{IJ}		piezo-optic tensor components (see also π_{ijkl})
Q	cm^{-1}	exciton wave vector (see also K)
Q^{-1}		internal friction
r	$\text{nm}, \text{\AA}$	(ionic) radius, distance
r_{bi}		biexciton radius
r	s^{-2}	coefficient describing splitting of phonon frequency under uniaxial stress
r_{ij}	m V^{-1}	linear electro-optical constants (Pockels constants)
R, R_{H}	eV	Rydberg energy
R		reflectivity, reflectance
R	Ω	resistance
R	$\text{J K}^{-1} \text{ mol}^{-1}$	gas constant
R_0		Hall scattering factor
R_{H}	$\text{m}^3 \text{ C}^{-1}, \text{cm}^3 \text{ C}^{-1}$	normal Hall coefficient
s_{IJ}	Pa^{-1}	elastic compliances
S		spin quantum number
S	$\text{mV K}^{-1}, \mu\text{V K}^{-1}$	Seebeck coefficient (thermoelectric power)
$S_{(\text{A})}$		Seebeck coefficient (of material A)
$S_{\text{n(p)}}$		Seebeck coefficient for n-type (p-type) samples
S_{R}	$\text{cm}^2 \text{ V}^{-1} \text{ s}^{-1}$	Righi-Leduc coefficient
$S^{(0)}$	$\text{J mol}^{-1} \text{ K}^{-1}$	(standard) entropy (at 298.15 K)
ΔS_{at}		entropy of atomization
ΔS_{f}		entropy of formation
ΔS_{f}	$\text{cal mol}^{-1} \text{ K}^{-1}$	entropy of fusion
ΔS_{tr}	$\text{J mol}^{-1} \text{ K}^{-1}$	entropy of transition
t	$\text{s}, \text{min}, \text{h}, \text{d}$	time (annealing, aging, delay,...)
T		transmission
T	$\text{K}, ^\circ\text{C}$	temperature
T_{a}		annealing temperature
T_{b}		break temperature, boiling point
T_{c}		superconductor transition temperature
T_{C}		Curie temperature
T_{cr}		critical temperature

(continued)

Symbol	Unit	Property
T_{dec}	K, °C	decomposition temperature
T_{f}		firing temperature, freezing point
T_{g}		glass transition temperature
T_{m}		melting temperature
T_{N}		Néel temperature
T_{p}		hot pressing temperature
T_{perit}		peritectic (decomposition) temperature
$T_{\text{s}}, T_{\text{sub}}$		substrate temperature
T_{tr}		crystallographic transition temperature
T_0		characteristic temperature in Mott's law of variable range hopping
T_1	s	spin lattice relaxation time, exciton lifetime
T_2	s	dephasing time of polariton, phonon or (bound) exciton, coherence time
u, v, w		internal crystal structural parameters
$\langle u^2 \rangle$	$\text{m}^2, \text{\AA}^2$	mean square displacement
u_{α}		α -component of displacement
U	V	voltage (see also V)
U_{H}		Hall voltage
U_{ph}		photovoltage
U_{ij}	\AA^2	temperature factors (Debye-Waller exponents)
v	$\text{cm s}^{-1}, \text{m s}^{-1}$	sound velocity
$v_{\text{dr}}, v_{\text{D}}$		drift velocity
v_{gr}		group velocity
$v_{\text{l(t)}, L(T)}$		longitudinal (transverse) sound velocity
V	$\text{deg T}^{-1} \text{cm}^{-1}$	Verdet coefficient
V	V	voltage (see also U)
$V_{\text{(m)}}$	$\text{\AA}^3, \text{cm}^3$	(molar) volume
V_{a}		atomic volume
V_0		volume at zero pressure
V_{X}		volume of phase (structure) X (e.g. X = d: diamond phase)
V/V_0		relative volume
V_{c}	eV	crystal field potential
x, y, z		fractional coordinates of atoms in the unit cell (internal crystal structural parameters)
x		concentration
x_{c}		cross over concentration
X		symmetry point in the Brillouin zone
X_{ik}	Pa	stress tensor (3×3) [in literature often labeled T_{ik}]
$X_{[\text{hkl}]}$		stress in [hkl] direction
$Y_{\text{(ph)}}$		quantum (photo) yield
Z	deg dB^{-1}	figure of merit
Z		atomic number number of formula units in unit cell
α	dB cm^{-1}	sound attenuation coefficient
α	cm^{-1}	absorption coefficient (see also K)
α	cm^3	electronic polarizability
α	eV T^{-1}	diamagnetic shift
α	K^{-1}	linear thermal expansion coefficient
$\alpha_{a,b,c}$		linear thermal expansion coefficient in a, b, c direction

(continued)

Symbol	Unit	Property
$\alpha_{AC(BC)}$	K^{-1}	linear thermal expansion coefficient along A-C (B-C) bonds
α^{ah}		anharmonic linear thermal expansion coefficient
α^{qh}		quasiharmonic linear thermal expansion coefficient
$\alpha_{\perp, }$		linear thermal expansion coefficients \perp and \parallel to c -axis
α	deg	eigenvector phase angle
α	cm^{-1}	(impact) ionization coefficient for electrons
α_F		Fröhlich polaron coupling constant
α, β	eV	exchange constants
α, β, γ	deg	unit cell angles
β	K^{-1}	volume thermal expansion coefficient
β		(impact) ionization coefficient for holes
β	$cm^2 V^{-2}$	warm electron coefficient
β	$eV K^{-1}$	exciton phonon coupling constant
$\beta_{2(3)}$	$cm W^{-2}$	two(three)-photon absorption coefficient
	$(cm^3 W^{-2})$	
γ	$J mol^{-1} K^{-2}$	coefficient of electronic heat capacity
γ		Grüneisen parameter
$\gamma_{1,2,3}$		Luttinger parameters
$\gamma_{j(q)}$		mode Grüneisen parameters
γ_{14}		piezoelectric constant ¹⁾
$\gamma_{14}^{(0)}$		piezoelectric constant, clamped crystal
Γ		center of Brillouin zone
Γ	cm^{-1}	damping function
Γ	Hz, cm^{-1}	linewidth (phonon)
Γ	eV	broadening parameter
δ	$mm s^{-1}$	isomer shift
δ	ppm	chemical shift
δ	deg	(loss) angle
δ	eV	short range electron-hole interaction parameter
δ	eV	diamagnetic shift of impurity
Δ		symmetry axis in the Brillouin zone, [100]-axis in k -space
Δ		structural parameter
Δ	Hz, cm^{-1}	frequency shift, phonon shift
Δ	$mm s^{-1}$	quadrupole splitting
Δ	eV	electron-hole exchange energy
Δ_{cf}, Δ_{CF}	eV	crystal field splitting energy (also δ is used)
Δ_{ex}	eV	exciton exchange interaction energy
Δ_{LT}	eV	longitudinal-transverse exciton splitting energy (see also ΔE_{ex}^{L-T})
$\Delta_{so}, \Delta_0, \Delta_0'$	eV	spin-orbit splitting energy at Γ
$\Delta_{1(2)}, \Delta_{1(2)}'$	eV	spin-orbit splitting energy at L (X)
ε	deg	Faraday ellipticity
ε_0	$F cm^{-1}$	permittivity of free space
$\varepsilon = \varepsilon_1 + i\varepsilon_2$		dielectric constant
ε_{eff}		effective long-wavelength part of the dielectric constant
ε_{ij}		components of dielectric constant tensor
ε_L		lattice part of the dielectric constant
$\varepsilon(\infty), \varepsilon_\infty$		high frequency limit of dielectric constant
$\varepsilon(0), \varepsilon_0$		static or low frequency dielectric constant

(continued)

Symbol	Unit	Property
$\varepsilon_1, \varepsilon_2$		real, imaginary part of dielectric constants
$\text{Im } \varepsilon^{-1}$		energy loss function
$\tan \delta$		dielectric loss tangent ($\varepsilon_2/\varepsilon_1$)
ε_{ij}		strain tensor (see also η_{ij} , in literature sometimes S_{ij})
$\Delta\varepsilon/p$	$\text{cm}^2 \text{ dyn}^{-1}$	piezobirefringence
ζ		reduced wavevector coordinate
ζ		internal strain parameter
η		quantum efficiency
η_{ij}		strain tensor (see also ε_{ij} , in literature sometimes S_{ij})
η_{II}	P	(phonon) viscosity tensor elements
θ	deg	(bond) angle
θ		compensation ratio ($= n_d/n_a$)
θ_F	deg cm^{-1}	Faraday rotation
θ_K	deg	Kerr ellipticity
Θ_C	K	Curie temperature
Θ_a		asymptotic Curie temperature
Θ_c		ferroelectric Curie temperature
Θ_p		paramagnetic Curie temperature
Θ_D	K	Debye temperature
κ	$\text{Pa}^{-1}, \text{bar}^{-1}, \text{cm}^2 \text{ dyn}^{-1}$	compressibility ($= 1/\text{bulk modulus}$)
κ_T		compressibility at constant temperature
κ_S		compressibility at constant entropy
κ		valance band parameter
κ	$\text{W m}^{-1} \text{ K}^{-1}$	thermal conductivity
κ_{el}		electronic contribution to κ
κ_L		lattice contribution to κ
λ	nm, μm	wavelength
λ_0, λ_i		optical isotropic wavelength
Λ		symmetry axis in the Brillouin zone
μ	$\text{m}^2 \text{ V}^{-1} \text{ s}^{-1}$	mobility of charge carriers
$\mu_{a, b, c}$		mobility in a, b, c direction
μ_{dr}		drift mobility
μ_{H}		Hall mobility
μ_{imp}		mobility in impurity band
$\mu_{\text{n(p)}}$		electron (hole) mobility
$\mu_{(\text{ex})}$	m_0	reduced (exciton) effective mass
μ_{B}	J T^{-1}	Bohr magneton
ν	Hz	frequency
ν_0		escape frequency
ν_{R}		Raman frequency
$\nu_{\text{TO(LO)}}$		frequency of transverse (longitudinal) optical phonon
ν		Poisson's ratio
ν		number of equivalent ellipsoidal band edges
ν	Hz, s^{-1}	frequency
ν_p		plasma frequency
$h \nu$	eV	photon energy, phonon energy
$\bar{\nu}, \nu/c$	cm^{-1}	wavenumber
$\bar{\nu}_{\text{R}}$		Raman wavenumber
$\bar{\nu}_{\text{p}}$		plasma wavenumber

(continued)

Symbol	Unit	Property
$\Delta\bar{\nu}$	cm^{-1}	wavenumber shift
$\Delta\bar{\nu}_R$		Raman shift
$\Delta\bar{\nu}_B$		Brillouin shift
Ξ	eV	deformation potential
Ξ_d		diagonal component of deformation potential tensor
Ξ_u		deformation potential for pure shear
π_{ik}	$\text{cm}^2 \text{ dyn}^{-1}$	piezoresistance coefficient
π_{ijkl}		piezooptic tensor components (see also q_{IJ})
ρ	$\Omega \text{ cm}, \Omega \text{ m}$	resistivity
$\rho_{a, b, c}$		resistivity in a, b, c direction
$\rho_{d(i)}$		dark resistivity (ρ under illumination)
$\rho_{H,a}$		anomalous Hall resistivity
ρ	deg mm^{-1}	specific rotation of the plane of polarization
$\rho^{(2)}_{ik}$	G^{-1}	magnetoresistance tensor components
$\Delta\rho/\rho_0$		magnetoresistance
σ		anisotropy parameter
σ	cm^2	capture cross section (of traps, impurity transitions,...)
σ	$\Omega^{-1}\text{cm}^{-1}, \Omega^{-1}\text{m}^{-1}$	electrical conductivity
$\sigma_{a, b, c}$		conductivity in a, b, c direction
σ_d		dark conductivity
σ_i		intrinsic conductivity
σ_{ij}		conductivity tensor components
σ_{ion}		ionic conductivity
$\sigma_{n(p)}$		electron (hole) contribution to the conductivity
σ_{ph}		photoconductivity
σ_m	$\text{emu mol}^{-1}, \text{G cm}^3 \text{ mol}^{-1}$	magnetic moment per mole = molar magnetization
σ_{opt}	$\Omega^{-1}\text{cm}^{-1}, \text{s}^{-1}$	optical conductivity
σ_T	Pa	tensile stress
Σ		symmetry axis in the Brillouin zone
τ	s	lifetime of phonons, relaxation time, decay time, rise time, lifetime of carriers, trapping time
τ_D		decay time
τ_p		lifetime of holes
φ_K	deg	Kerr rotation angle
Φ	eV	Schottky barrier height, work function
$\Phi_{n(p)}$		Schottky barrier height for n-type (p-type) samples
$\Phi_{A,B,C}$	eV nm	k -linear spin-splitting coefficient of A,B,C excitons
Φ	electrons cm^{-2}	(electron) irradiation dose (in some cases as D)
χ		magnetic susceptibility
χ_g	$\text{emu g}^{-1}, \text{cm}^3 \text{ g}^{-1}$	magnetic susceptibility per gram
χ_m	$\text{emu mol}^{-1}, \text{cm}^3 \text{ mol}^{-1}$	magnetic susceptibility per mole
χ_v		magnetic volume susceptibility
$\chi^{(2)} = \chi_{ijk}$	esu, m V^{-1}	second order nonlinear dielectric susceptibility (non-linear high-frequency susceptibility, ZnS structure)
$\chi^{(3)}_{ijkl}$	esu	third order nonlinear dielectric susceptibility
$\Delta\chi$		optical electronegativity
ω	$\text{s}^{-1}, \text{rps} (= \text{rad s}^{-1})$	angular (circular) frequency
ω_c		cyclotron resonance frequency

(continued)

Symbol	Unit	Property
ω_D	s^{-1} , rps ($=\text{rad } s^{-1}$)	Debye frequency
ω_k		kink frequency
ω_p		plasma resonance frequency
ω_q		phonon frequency
$\omega_{\text{TO(LO)}}$		frequency of transverse (longitudinal) optical phonon
$\eta\omega$	eV, meV	photon energy
$\eta\omega_{\text{ph}}, \eta\omega_q$	eV, meV	phonon energy
Ω_{IJ}		second order phonoelastic constants [$\Omega_{\text{IJ}} = d(\ln \omega_{\text{I}})/d\eta_{\text{J}}$]
Ω_{IJK}		third order phonoelastic constants [$\Omega_{\text{IJK}} = d^2(\ln \omega_{\text{I}})/d\eta_{\text{J}} d\eta_{\text{K}}$]
Ω_{IJKL}		fourth order phonoelastic constants [$\Omega_{\text{IJK}} = d^3(\ln \omega_{\text{I}})/d\eta_{\text{J}} d\eta_{\text{K}} d\eta_{\text{L}}$]

1) Defintion for III-V compounds (Voigt notation): $\gamma_{14} \equiv \gamma_{xyz} = d\eta_{yz}/dE_x$; $(a^2/e)\gamma_{14} = (a^2/e)\gamma_{14}^{(0)} + (e_T^*/e)\zeta$, with strain component η_{yz} , electric field component E_x , Born effective charge e_T^* , internal-strain parameter ζ , assuming the metal group-III ion at the origin and the group-V ion at $a/4(1,1,1)$. The two terms are the electronic and ionic contributions, respectively.

List of Abbreviations

\perp, \parallel	perpendicular, parallel to a crystallographic axis
a	amorphous
a, A (A^0, A^+)	acceptor (neutral, positively charged)
A^0X (D^0X)	neutral acceptor (donor) bound exciton
AAS	atomic absorption spectroscopy
AC	alternating current
ac	acoustic
ADXRD	angular-resolved X-ray diffraction
AES	atomic emission spectroscopy
A_F	triplet free exciton
AF	antiferromagnetism, antiferromagnetic
ah	anharmonic
A_L	longitudinal free exciton
al, a	alloy (scattering)
ALE	atomic layer epitaxy
APW	augmented plane wave (method)
arb	arbitrary
ARPES	angle resolved photoemission spectroscopy
ARUPS	angle resolved ultraviolet photoemission spectroscopy
ASA	atomic sphere approximation
av	average
bcc	body centered cubic
bct	body centered tetragonal
BE, BX	bound exciton
BEP	beam equivalent pressure
BIS	bremsstrahlung isochromat spectroscopy
BZ	Brillouin zone
c	mostly as subscript: crystal(line), cubic or conduction band
calc	calculated, calculation
CARS	coherent anti-Stokes Raman scattering
CB	conduction band

CBED	convergent-beam electron diffraction
CDW	charge density wave
CEF	crystal electric field
cf	crystal (electric) field
CL	cathodoluminescence
CPA	coherent potential approximation
cr	mostly as subscript: critical
CT	charge transfer
cub, c	cubic
Cu _{Ga...}	Cu ion on Ga... site
CVD	chemical vapor deposition
CVT	chemical vapor transport
d	diamond
d, D	donor
DAG	direct alloy growth
DAP	donor acceptor pair
dc	direct current
DFT	density-functional theory
dhcp	double hexagonal close-packed
dir	direct
DLTS	deep level transient spectroscopy
DOS	density of states
dp	deformation potential (scattering)
DSC	differential scanning calorimeter
DTA	differential thermal analysis
e	electron
EBIC	electron beam induced current
EDC	electron distribution curve
EDX(RD)	energy-dispersive X-ray diffraction
EELS	electron energy loss spectrum
EER	electrolyte electroreflectance
eff	effective
EHD	electron-hole drop
el	electronic
ELNES	electron-energy loss near edge structure
EMF	electromotive force
ENDOR	electron nuclear double resonance
EPR	electron paramagnetic resonance
ESCA	electron spectroscopy for chemical analysis
ESR	electron spin resonance
ex	exciton
ex, exc	excitation, exciton
EXAFS	extended X-ray absorption fine structure
exp	experimental
F	ferromagnetism, ferromagnetic
f.u.	formula unit
fcc	face centered cubic
FE	ferroelectric
fe, fx	free exciton
FIR	far infrared
FP-KKR	full potential Korringa-Kohn-Rostoker (method)
FP-LAPW	full potential linearized augmented plane wave (method)

FP-LCAO	full potential linear combination of atomic orbitals (method)
FP-LMTO	full potential linearized muffin-tin orbital (method)
FT	fast-transverse
FWHM	full width at half maximum
g	gaseous
GGA	generalized gradient approximation
GGA-LCAO	LCAO with GGA
GGA-LMTO	LMTO with GGA
GW	denotes an approximation to the quasi-particle self energy
h	hole
hcp	hexagonal close-packed
hex, h	hexagonal
HF	Hartree-Fock
HF-LCAO	Hartree-Fock linear combination of atomic orbitals (method)
HF-LMTO	Hartree-Fock linearized muffin-tin orbital (method)
hh	heavy hole or hole-hole
HP	hydrostatic pressure
HPHT	high pressure / high temperature
HRCVD	hydrogen radical-enhanced chemical vapor deposition
HREELS	high resolution electron energy loss spectroscopy
HRXD	high resolution X-ray diffraction
HT	high temperature $T > 300$ K
HVPE	halide vapor phase epitaxy
HWE	hot wall epitaxy
i	as subscript: interstitial (e.g. In _i : In on interstitial site), intrinsic, incident
I	insulator
ICDD	International Center of Diffraction Data
ii	ionized impurity (scattering)
ind	indirect
inj	injection
inv	inverse
ion	ionic, ionization
ir	irradiation
IR	infrared
ISOVPE	isothermal vapor phase expitaxy
ITO	Indium-Tin-Oxide
JT	Jahn Teller
KK	Kramers-Kronig (analysis)
KKR	Korringa-Kohn-Rostoker (method)
KM	magnetic dense Kondo state
L, l	mostly as subscript: longitudinal or lattice
L, liq	liquid
LA	longitudinal acoustic
LAO, LOA	longitudinal acoustic and optical
LAPW	linearized augmented plane wave (method)
latt	lattice
LCAO	linear combination of atomic orbitals (method)
LCGO	linear combination of Gaussian orbitals (method)
LDA	local density approximation
LEC	liquid encapsulation Czochralski (growth)
LED	light-emitting diode
LEEBI	low energy electron beam irradiation

lh	light hole
lin	linear
LMTO	linear combination of muffin-tin orbitals (method)
LMTO-ASA	linear combination of muffin-tin orbital with atomic sphere approximation
Ln	lanthanide
LO	longitudinal optical
LPE	liquid phase epitaxy
LPP	longitudinal phonon-plasmon (wavenumber)
LST	Lyddane-Sachs-Teller relation
LT	low temperature, mainly < 10 K
LTA	longitudinal and transverse acoustic
LTMBE	low temperature molecular beam epitaxy
LTO	longitudinal and transverse optical
lum	luminescence
m	as subscript: per mole, per molecule
M, Me	metal; M sometimes also for “molecule”
magn	mostly as subscript: magnetic
MAS	magic-angle spinning
MBE	molecular beam epitaxy
MD	molecular dynamics (calculation)
MOCVD	metal organic chemical vapour deposition
MOMBE	metal organic molecular beam epitaxy
mon	monoclinic (mostly subscript)
MOVPE	metal organic vapor phase epitaxy
MREI	modified random element isodisplacement (model)
n	electron
nat	natural
NDCP	N-dimensional critical point analysis
NEXAFS	near edge X-ray absorption fine structure
NLCC	non-linear core correction
NLDA	non-linear density approximation
NMR	nuclear magnetic resonance
NN(N)	(next) nearest neighbor
norm.	normalized
NP	no phonon
npo, NPO	nonpolar optical (scattering)
oct	octahedral (sometimes o is used as subscript)
ODCR	optically detected cyclotron resonance
ODLTS	optical deep level transient spectroscopy
ODMR	optically detected magnetoresonance
OLCAO	orthogonalized linear combination of atomic orbitals
OMVPE	organometallic vapor phase epitaxy
opt, O	optical
OPW	orthogonalized plane wave (method)
orth	mostly as subscript: orthorhombic
p	hole
p	pseudocubic (subscript of lattice parameters)
P	paramagnetism, paramagnetic
PA	photoacoustic
PAC	perturbed angular correlation
PAW	projector augmented wave (method)
PBN	pyrolytic boron nitride

PDOS	partial density of states
pe	piezoelectric (scattering)
ph	as subscript: photon, phonon, photo-
PHCAP	photocapacitance (measurement)
PL	photoluminescence
PLE	photoluminescence excitation
po, PO	polar optical (scattering)
pol	polaron
PP	pseudopotentials
PPA	piezoelectric photoacoustic (measurement)
PR	photorefectance
QDT	quantum dielectric theory
qh	quasiharmonic
QRS	quasi-regular solution model
R	as subscript: Raman
R, RE	rare earth element
RAS	regular associated solution
RBS	resonant Brillouin scattering
RDF	radial distribution function
rec	recombination
REEL	reflection electron energy loss spectroscopy
rel	relative
RF	radio frequency
rh	rhombohedral
RHEED	reflection high energy electron diffraction
RKKY	Ruderman-Kittel-Kasuya-Yosida
RPA	random phase approximation
RRR	relative residual resistivity
rs	rocksalt
RSG	reentrant spin glass system
RT	room temperature
RTA	rapid thermal annealing
s	surface, sometimes used for scattered
s	as subscript: shear
s.s.	solid solution
sat	mostly as subscript: saturation
sc	simple cubic
SCF	self consistent field
SCF-HF	self consistent field-Hartree Fock
SCL	space-charge-limited (current)
SdH	Shubnikov de Haas (method)
SDW	spin density wave
SE	spectroscopic ellipsometry
SG	space group
SG	spin glass (phase)
sh	simple hexagonal
sh	split-off hole band
SHG	second harmonic generation
SI	semi-insulating
SIC	self-interaction-correction
SIC-PP	self-interaction-corrected pseudopotentials
so	spin-orbit

SSR	solid state recrystallized
ST	slow-transverse
STE	self trapped exciton
STH	self trapped hole
SXES	soft X-ray emission spectrum
SXPS	soft X-ray photoelectron spectroscopy
t	tetrahedral
t	turbostratic (t-BN or BN _t)
t, T	mostly as subscripts or superscripts: transverse
TA	transverse acoustic
TB	tight binding
TB-LMTO	tight binding-linear combination of muffin-tin orbitals (method)
TDR	triplet-doublet resonance
TDS	thermal-diffuse scattering
TEELS	electron energy loss spectrum in transmission geometry
TEL(S)	transmission energy loss (spectrum)
TEM	transmission electron microscope
TES	two-electron satellites
tetr	mostly as subscripts: tetragonal
th, them	thermal, sometimes for theoretical
theor	theoretical
THG	third harmonic generation
THM	travelling heater method
TIP	temperature independent paramagnetism
TL	thermoluminescence
TO	transverse optical
tot	mostly as subscript: total
TPA	two-photon absorption
TPRRS	two-photon resonant Raman scattering
TPY	total photon yield
tr	transition (subscript for phase transition parameters)
trans	transverse
TSC	thermally stimulated current
UD	undoped
uhv, UHV	ultra high vacuum
UP, IP, LP	upper, intermediate, lower polariton
UPS	UV photoemission spectroscopy
uv, UV	ultraviolet
V	vapor
v	mostly as subscript: valence band
vac	vacuum, sometimes for vacancy
VB	valence band, as subscript v is used
VBM	valence band maximum
VCA	virtual crystal approximation
V _{Ga...}	vacancy on Ga... site
VPE	vapor phase epitaxy
w	wurtzite
WDA	weighted-density approximation
WDS	wavelength derivative spectroscopy
WMR	wavelength modulated reflectance
X	anion (e.g.S, Se, Te), sometimes used for exciton or unknown impurity
XANES	X-ray absorption near edge spectroscopy

XAS	X-ray absorption spectroscopy
XES	X-ray emission spectroscopy
XPS, XPE	X-ray photoelectron spectroscopy
XRD	X-ray diffraction
zb	zincblende

Conversion factors

Conversion factors of all occurring quantities from the SIU system into the CGS-esu and the CGS-emu systems can be found in the respective Landolt-Börnstein Volumes III/41A to III/41E.

Experimental errors are frequently given in parentheses referring to the last decimal places. For example, 1.352(12) stands for 1.352 ± 0.012 and 342.5(21) stands for 342.5 ± 2.1 .

Depending on the actual settings, the energy E is represented by different physical quantities:

$$E = e V = h \nu = h c \bar{\nu}, [E] = 1 \text{ J} = 1 \text{ V A s} = 10^7 \text{ erg} = 2.38845 \cdot 10^{-4} \text{ kcal.}$$

Yet, energy and its equivalent quantities are related by the following conversion factors:

	E [J]	V [V]	ν [Hz, s ⁻¹]	$\bar{\nu}$ [cm ⁻¹]
1J	1	$6.2415 \cdot 10^{18}$	$1.50916 \cdot 10^{33}$	$5.03403 \cdot 10^{22}$
1V	$1.60219 \cdot 10^{-19}$	1	$2.41797 \cdot 10^{14}$	$8.06547 \cdot 10^3$
1s ⁻¹ (= 1 Hz)	$6.62619 \cdot 10^{-34}$	$4.13550 \cdot 10^{-15}$	1	$3.33564 \cdot 10^{-11}$
1 cm ⁻¹	$1.98648 \cdot 10^{-23}$	$1.23979 \cdot 10^{-4}$	$2.99792 \cdot 10^{10}$	1

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Compounds

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