

PHYSDATA

Pdview: view physdata (0.1s)	<div>view Physdata</div> <div>El.chem.pot. Ve</div> <div>Thermo.el.pot. Vt</div> <div>Rel.el.const. E</div> <div>Mol.Magn.susc. X</div> <div>VdWaals const a,b</div> <div>Mon.inertia J</div> <div>Work elec.emiss. We</div> <div>Hall coef. Rh</div>	<div>El.chem.pot. Ve</div> <div>VeF: 2.87_V</div> <div>VeAu1: 1.69_V</div> <div>VeAu3: 1.4_V</div> <div>VeCl: 1.35_V</div> <div>VePt: 1.18_V</div> <div>VeBr: 1.07_V</div> <div>VeHg: .8_V</div> <div>VeAg: .8_V</div>
Pdview: el. chem. potentials	<div>Thermo.el.pot. Vt</div> <div>VtFe: .00049_V/K</div> <div>VtSi: .00044_V/K</div> <div>VtSb: .00004_V/K</div> <div>VtNiCr: .0000145_V/K</div> <div>VtFe: .0000108_V/K</div> <div>VtMo: .0000045_V/K</div> <div>VtCd: .0000015_V/K</div> <div>VtW: .0000005_V/K</div>	<div>Rel.el.const. E</div> <div>EAgBr: 13.2</div> <div>EAgCl: 5.6</div> <div>EAgCl: 11.2</div> <div>EAgCl2: 11.4</div> <div>EAg2H6: 5.9</div> <div>EAgSO4: 11.4</div> <div>EBeryllp: 6.02</div> <div>EBeryllw: 7.02</div>
thermo el. potentials	<div>Thermo.el.pot. Vt</div> <div>VtFe: .00049_V/K</div> <div>VtSi: .00044_V/K</div> <div>VtSb: .00004_V/K</div> <div>VtNiCr: .0000145_V/K</div> <div>VtFe: .0000108_V/K</div> <div>VtMo: .0000045_V/K</div> <div>VtCd: .0000015_V/K</div> <div>VtW: .0000005_V/K</div>	<div>Rel.el.const. E</div> <div>EAgBr: 13.2</div> <div>EAgCl: 5.6</div> <div>EAgCl: 11.2</div> <div>EAgCl2: 11.4</div> <div>EAg2H6: 5.9</div> <div>EAgSO4: 11.4</div> <div>EBeryllp: 6.02</div> <div>EBeryllw: 7.02</div>
relative electric constants	<div>Mol.Magn.susc. X</div> <div>XFe: -.0000000135</div> <div>XAg2CO3: -.0000000309</div> <div>XAg2O: -.000000134</div> <div>XAg3PO4: -.00000012</div> <div>XAgBr: -.0000000597</div> <div>XAgCl: -.000000049</div> <div>XAgNO4: -.000000063</div> <div>XAl: .0000000165</div>	<div>VdWaals const a,b</div> <div>aH2: .0245_Nm^4/mol^2</div> <div>bH2: .0000266_m^3/mol</div> <div>aO2: .132_Nm^4/mol^2</div> <div>bO2: .0000318_m^3/mol</div> <div>aN2: .141_Nm^4/mol^2</div> <div>bN2: .0000392_m^3/mol</div> <div>aH2O: .555_Nm^4/mol^2</div> <div>bH2O: .0000305_m^3/mol</div>
molar magnetic suscept.	<div>Mol.Magn.susc. X</div> <div>XFe: -.0000000135</div> <div>XAg2CO3: -.0000000309</div> <div>XAg2O: -.000000134</div> <div>XAg3PO4: -.00000012</div> <div>XAgBr: -.0000000597</div> <div>XAgCl: -.000000049</div> <div>XAgNO4: -.000000063</div> <div>XAl: .0000000165</div>	<div>VdWaals const a,b</div> <div>aH2: .0245_Nm^4/mol^2</div> <div>bH2: .0000266_m^3/mol</div> <div>aO2: .132_Nm^4/mol^2</div> <div>bO2: .0000318_m^3/mol</div> <div>aN2: .141_Nm^4/mol^2</div> <div>bN2: .0000392_m^3/mol</div> <div>aH2O: .555_Nm^4/mol^2</div> <div>bH2O: .0000305_m^3/mol</div>
Van der Waals constants	<div>Mon.inertia J</div> <div>JSPH: '2/5*m*r^2'</div> <div>JSPC: '2/5*m*(R^5-r^5)</div> <div>JSPt: '2/3*m*r^2'</div> <div>JELL: '1/5*m*(a^2+b^2)</div> <div>JVCYL: '1/12*m*(h^2+3)</div> <div>JPCYL: '1/2*m*r^2'</div> <div>JVCYC: 'h/4*(R^2+r^2+)</div> <div>JPCYC: 'h/2*(R^2+r^2)</div>	<div>Work elec.emiss. We</div> <div>WeAu: 4.26_eV</div> <div>WeAl: 4.22_eV</div> <div>WeAs: 3.75_eV</div> <div>WeAu: 5.1_eV</div> <div>WeB: 4.45_eV</div> <div>WeBa: 2.7_eV</div> <div>WeBe: 4.38_eV</div> <div>WeBi: 4.22_eV</div>
moments of inertia	<div>Mon.inertia J</div> <div>JSPH: '2/5*m*r^2'</div> <div>JSPC: '2/5*m*(R^5-r^5)</div> <div>JSPt: '2/3*m*r^2'</div> <div>JELL: '1/5*m*(a^2+b^2)</div> <div>JVCYL: '1/12*m*(h^2+3)</div> <div>JPCYL: '1/2*m*r^2'</div> <div>JVCYC: 'h/4*(R^2+r^2+)</div> <div>JPCYC: 'h/2*(R^2+r^2)</div>	<div>Work elec.emiss. We</div> <div>WeAu: 4.26_eV</div> <div>WeAl: 4.22_eV</div> <div>WeAs: 3.75_eV</div> <div>WeAu: 5.1_eV</div> <div>WeB: 4.45_eV</div> <div>WeBa: 2.7_eV</div> <div>WeBe: 4.38_eV</div> <div>WeBi: 4.22_eV</div>
work of electron emission	<div>Mon.inertia J</div> <div>JSPH: '2/5*m*r^2'</div> <div>JSPC: '2/5*m*(R^5-r^5)</div> <div>JSPt: '2/3*m*r^2'</div> <div>JELL: '1/5*m*(a^2+b^2)</div> <div>JVCYL: '1/12*m*(h^2+3)</div> <div>JPCYL: '1/2*m*r^2'</div> <div>JVCYC: 'h/4*(R^2+r^2+)</div> <div>JPCYC: 'h/2*(R^2+r^2)</div>	<div>Work elec.emiss. We</div> <div>WeAu: 4.26_eV</div> <div>WeAl: 4.22_eV</div> <div>WeAs: 3.75_eV</div> <div>WeAu: 5.1_eV</div> <div>WeB: 4.45_eV</div> <div>WeBa: 2.7_eV</div> <div>WeBe: 4.38_eV</div> <div>WeBi: 4.22_eV</div>
Cphysdat: electrochemical, thermoelectrical potentials, relative electric constants (0.5s)	<div>8: 'VeF'</div> <div>7: VeF: (2.87_V)</div> <div>6: 'VtSi'</div> <div>5: VtSi: (.00044_V/K)</div> <div>4: 'eAgCl'</div> <div>3: eAgCl: 11.2</div>	<div>4: 'aH2'</div> <div>3: aH2: (.0245_Nm^4/mol^2)</div> <div>2: 'bH2'</div> <div>1: bH2: (.0000266_m^3/mol)</div>
Van der Waals constants	<div>2: 'eAgCl'</div> <div>1: eAgCl: 11.2</div>	<div>2: 'bH2'</div> <div>1: bH2: (.0000266_m^3/mol)</div>
Cphysdat: moments of inertia, JSPH, JELL (0.5s)	<div>5: 'JSPH'</div> <div>4: JSPH: $\frac{2r^2m}{5}$</div> <div>3: 'JELL'</div> <div>2: JELL: $\frac{ma^2+mb^2}{5}$</div> <div>1: JELL: $\frac{ma^2+mb^2}{5}$</div>	<div>4: JVCYL: $\frac{3rh^2+12r^2h}{80}$</div> <div>3: JPCYL: $\frac{3r^2h}{10}$</div> <div>2: $\frac{1}{2}JSPH\omega^2$</div> <div>1: $\frac{\sqrt{2}r^2h}{5}$</div>
JVCON, JPCON, insert in 1/2*JSPH*ω^2 (1s)	<div>5: 'JSPH'</div> <div>4: JSPH: $\frac{2r^2m}{5}$</div> <div>3: 'JELL'</div> <div>2: JELL: $\frac{ma^2+mb^2}{5}$</div> <div>1: JELL: $\frac{ma^2+mb^2}{5}$</div>	<div>4: JVCYL: $\frac{3rh^2+12r^2h}{80}$</div> <div>3: JPCYL: $\frac{3r^2h}{10}$</div> <div>2: $\frac{1}{2}JSPH\omega^2$</div> <div>1: $\frac{\sqrt{2}r^2h}{5}$</div>
Pdview: select magnetic susceptibilities	<div>Select Msus X:1E-9</div> <div>XFe: -19.5</div> <div>XAg2CO3: -80.9</div> <div>XAg2O: -134.</div> <div>XAg3PO4: -120.</div> <div>XAgBr: -59.7</div> <div>XAgCl: -49.</div> <div>XAgNO4: -63.</div> <div>XAl: 16.5</div>	<div>VeF: 2.87_V</div> <div>VeAu1: 1.69_V</div> <div>VeAu3: 1.4_V</div> <div>VeCl: 1.35_V</div> <div>VePt: 1.18_V</div> <div>VeBr: 1.07_V</div> <div>VeHg: .8_V</div> <div>VeAg: .8_V</div> <div>VePo: .76_V</div> <div>VeC: .75_V</div>
Pdedit: edit data (0.1s)	<div>Select Msus X:1E-9</div> <div>XFe: -19.5</div> <div>XAg2CO3: -80.9</div> <div>XAg2O: -134.</div> <div>XAg3PO4: -120.</div> <div>XAgBr: -59.7</div> <div>XAgCl: -49.</div> <div>XAgNO4: -63.</div> <div>XAl: 16.5</div>	<div>VeF: 2.87_V</div> <div>VeAu1: 1.69_V</div> <div>VeAu3: 1.4_V</div> <div>VeCl: 1.35_V</div> <div>VePt: 1.18_V</div> <div>VeBr: 1.07_V</div> <div>VeHg: .8_V</div> <div>VeAg: .8_V</div> <div>VePo: .76_V</div> <div>VeC: .75_V</div>
HelpPHYSDATA: help	<div>PHYSDATA:</div> <div>Pdview - + - view or select physical data from choosebox</div> <div>Cphysdat T + T' insert physical data in term</div> <div>Pdedit - + - edit physical data in list lphysdat</div> <div>El.chem.pot. Ve: ELECTROCHEMICAL POTENTIALS RELATIVE TO HYDROGEN (1-N-SOL.)</div> <div>Ve=Vd0+R*T/(z*F)*LN((CON/cRED)/NERNST-EQ, RED=OX+z*e-</div> <div>Thermo.el.pot. Vt: THERMOELECTRICAL POTENTIALS RELATIVE TO COPPER, at = 100_K</div> <div>Rel.el.const. Er:</div>	<div>El.chem.pot. Ve: ELECTROCHEMICAL POTENTIALS RELATIVE TO HYDROGEN (1-N-SOL.)</div> <div>Ve=Vd0+R*T/(z*F)*LN((CON/cRED)/NERNST-EQ, RED=OX+z*e-</div> <div>Thermo.el.pot. Vt: THERMOELECTRICAL POTENTIALS RELATIVE TO COPPER, at = 100_K</div> <div>Rel.el.const. Er:</div>

help	<p>Rel.el.const. ϵ_r: RELATIVE ELECTRIC CONSTANTS $\epsilon_{tot} = \epsilon_r \times \epsilon_0$ VALID FOR T=293.K</p> <p>Mol.magn.susc. χ: MOLAR MAGNETIC SUSCEPTIBILITY $\chi = \chi_{mol}$, $B = \mu \times H$, $\mu = \mu_0 \times (1 + \chi_{mol})$ $\chi_{mol} = \rho / M \times \chi_{mol}$, $M = mass$, $\rho = density$ $\chi_{mol} = volume\ magn.\ susc.$ χ_{mol} CAN ONLY BE OBTAINED BY Pduich NOT BY Cphysdat!</p> <p>GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK</p>	<p>VdWaals const. a,b: VAN DER WAALS CONSTANTS IN REAL GAS LAW $(P + (a/V)^2 \times b) \times (V - nb) = n \times R \times T$</p> <p>Mom. inertia J: MOMENTS OF INERTIA $J = I \times r^2 dm$, $I = 1/2 \times J \times \omega^2$ kin.energy $L = J \times \omega$ angular momentum JP,V J PARALELL,VERTICAL TO THE MAIN AXIS OF BODY</p> <p>GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK</p>
help	<p>$J = I \times r^2 dm$, $I = 1/2 \times J \times \omega^2$ kin.energy $L = J \times \omega$ angular momentum JP,V J PARALELL,VERTICAL TO THE MAIN AXIS OF BODY</p> <p>SPH: SPHERE SPC: SPHERE CAVE SPT: SPH. THIN ELL: ELLIPSOID CYL: CYLINDER CYC: CYL. CAVE CYT: CYL. THIN TOR: TORUS CON: CONE PAR: PARALLELEPI. ROD: THIN ROD PLA: PLATE CIR: CIRCLE RIN: RING</p> <p>GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK</p>	<p>Work elec.mass. W_e: WORK FOR ELECTRON EMISSION. THERMIC ION., PHOTO, FIELD EM. PHOTOEMISSION: $h\nu = W_e + E_{kin}$</p> <p>Hall coef. R_h: HALL COEFFICIENT $R_h = E_y / (B_z \times j_x) = d \times V_x / (I \times B_z)$ $V_h = I \times B_z / (d \times n \times e)$ Hall voltage $E, B = el., magn. field$ $I, j = current, (density)$ $n = charge\ density$ $d = depth\ of\ plate$</p> <p>GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK</p>