Thermodynamische Daten

Formel	ΔH_f^0 kJ/mol	ΔS^0 J/K mol	ΔG_f^0 kJ/mol
Ag (g)	289.2	172.89	250.37
Ag (s)	0	42.7	0
Ag^+ (aq)	105.58	72.68	77.11
AgBr (s)	- 100.37	107.1	- 96.90
AgBr (aq)	- 15.98	155.2	- 26.86
AgCl (s)	- 127.03	96.11	- 109.72
AgCl (aq)	- 61.58	129.30	- 54.12
AgI (s)	- 61.84	115.5	- 66.19
AgI (aq)	50.38	184.10	25.52
$AgNO_2$ (s)	- 44.37	128.11	19.85
$AgNO_3$	- 124.39	140.92	- 33.41
Ag_2O (s)	- 31.05	121.3	- 11.2
Al (g)	313.8	164.44	273.2
Al (s)	0	28.32	0
Al^{3+} (aq)	- 524.7	- 321.7	- 481.2
$AlCl_3$ (s)	- 704.2	110.67	- 628.8
Al_2O_3 (s)	- 1675.7	50.92	- 1582.3
$Al(OH)_3$ (s)	- 1276	-	-
Ar (g)	0	154.72	0
As (g)	253.72	174.1	212.30
As (s)	0	35.14	0
B (g)	406.7	153.34	362.8
B (s)	0	5.86	0
Ba (g)	175.56	170.28	144.77
Ba (s)	0	62.8	0
Ba^{2+}(aq)	- 538.36	9.6	- 560.7
$BaCO_3$ (s)	- 1216.3	112.1	- 1137.6
BaO (s)	- 553.5	70.4	- 525.1
Be (g)	320.62	136.17	282.84
Be (s)	0	9.54	0
Be^{2+} (aq)	- 389	-	- 356.5
Br (g)	111.88	175.02	82.38
Br^- (aq)	- 120.92	80.71	- 102.82
Br_2 (g)	30.91	245.46	3.14
Br_2 (l)	0	152.3	0
C (g)	716.68	158.10	671.26
C (s) Graphit	0	5.74	0
C(s) Diamant	1.89	2.38	2.90
C_2H_2 (g)	226.75	200.82	209.2
C_2H_4 (g)	52.28	219.45	68.12
C_2H_5OH (g)	- 235.43	282.0	- 168.62
C_2H_5OH (l)	- 277.63	160.7	- 174.77
C_2H_6 (g)	- 84.67	229.5	- 32.89

Formel	ΔH_f^0 kJ/mol	ΔS^0 J/K mol	ΔG_f^0 kJ/mol
C_3H_6 (g) Cyclopropan	53.30	237.44	104.39
C_3H_8 (g)	-103.85	269.91	82.38
C_4H_8 (g) Cyclobutan	26.65	265.39	110.4
C_5H_{10} (g) Cyclopentan	- 77.24	292.88	38.62
C_6H_{12} (g) Cyclohexan	-123.14	298.24	31.76
$C_6H_{12}O_6$ (s) Glucose	- 1268	212	- 910
C_6H_6 (g)	82.93	269.20	129.66
C_6H_6 (l) Benzol	49.03	173.3	124.5
$C_{10}H_{22}$Decan	- 249.13	545.07	32.60
Ca (s)	0	41.63	0
Ca^{2+} (aq)	- 542.96	- 55.2	- 533.04
$CaCO_3$ (s) Calcit	- 1206.87	92.9	-1128.76
$CaCO_3$ (s) Aragonit	- 1207.04	88.7	- 1127.7
CCl_4 (l)	-135.44	216.40	- 65.27
CCl_4 (g)	100.42	310.12	58.24
CF_4 (g)	- 933.0	261.5	- 888.4
CH_3CHO (g)	- 166.36	265.7	- 133.72
CH_3COO^- (aq)	- 488.87	-	- 372.46
CH_3COOH (aq)	- 488.45	-	- 399.61
CH_3COOH (l)	- 487.0	159.8	- 392.5
CH_3OCH_3 (g)	- 184.05	276.06	- 112.93
CH_3OH (aq)	- 245.89	132.34	- 175.23
CH_3OH (g)	- 201.25	273.7	- 161.92
CH_3OH (l)	- 238.64	126.8	- 166.31
CH_4 (g)	- 74.85	186.26	- 50.72
Cl (g)	121.68	165.20	105.68
Cl^- (aq)	- 167.16	56.5	- 131.23
Cl_2 (g)	0	223.07	0
CO (g)	- 110.52	197.67	- 131.17
CO_2 (aq)	- 412.92	121.34	- 386.23
CO_2 (g)	- 393.51	213.74	- 394.38
CO_3^{2-} (aq)	- 677.14	- 56.9	- 527.81
Cs (g)	78.78	175.49	51.21
Cs (s)	0	82.8	0
Cu (g)	341.08	116.29	301.42
Cu (s)	0	33.15	0

Formel	ΔH_f^0 kJ/mol	ΔS^0 J/K mol	ΔG_f^0 kJ/mol
Cu^+ (aq)	71.67	40.6	49.98
Cu^{2+} (aq)	64.77	- 99.6	65.49
CuO (s)	- 157.3	42.63	- 129.7
$CuSO_4$ (s)	- 771.36	109	- 661.9
F (g)	76.6	158.64	59.4
F^- (aq)	- 332.63	- 13.8	- 278.79
F_2 (g)	0	202.78	0
Fe (g)	404.51	180.37	358.82
Fe (s)	0	27.28	0
Fe^{2+} (aq)	- 89.1	- 137.7	- 78.90
Fe_2O_3 (s) Hämatit	- 824.2	87.4	- 742.2
Fe^{3+} (aq)	- 48.5	- 315.9	- 4.7
Fe_3O_4 (s) Magnetit	- 1118.4	146.4	- 1015.4
Ge (s)	0	42.43	0
Ge (g)	328.19	167.80	290.79
H (g)	217.97	114.71	203.25
H^+(aq)	0	0	0
H_2 (g)	0	130.68	0
H_2CO_3 (aq)	- 698.7	191.2	- 623.42
H_2O (g)	- 241.82	188.83	- 228.57
H_2O (l)	- 285.83	69.91	- 237.13
H_2O_2 (l)	- 187.78	109.6	- 120.35
H_2S (aq)	- 39.9	122.2	- 27.36
H_2S (g)	- 20.15	205.64	- 33.02
HBr (g)	- 36.23	198.48	- 53.22
HCHO (g)	- 115.9	218.7	- 109.6
HCl (aq)	- 167.46	55.2	- 131.17
HCl (g)	- 92.31	186.68	- 95.27
$HCOO^-$ (aq)	- 410.0	91.6	- 334.7
HCOOH (aq)	- 410.0	163.6	- 356.1
HCOOH (g)	- 362.63	251.04	- 335.72
HCOOH (l)	- 409.2	128.95	- 346.0
He (g)	0	126.06	0
HF (g)	- 268.6	173.51	- 270.7
Hg (g)	61.32	174.96	31.82
Hg (l)	0	76.02	0
Hg_2Cl_2 (s)	-265.22	192.5	- 210.75
$HgCl_2$ (s)	- 230.1	144.3	-185.8
HgO (s)	- 90.83	70.29	- 58.54
HI (g)	26.48	206.59	1.70
HNO_3 (aq)	- 206.56	146.4	- 110.50
HNO_3 (l)	- 173.22	155.60	- 79.91

Formel	ΔH_f^0 kJ/mol	ΔS^0 J/K mol	ΔG_f^0 kJ/mol
I (g)	106.62	180.68	70.15
I^- (aq)	- 55.19	111.3	- 51.57
I_2 (aq)	20.9	-	16.43
I_2 (g)	62.24	260.69	19.33
I_2 (s)	0	116.4	0
IBr (g)	40.79	258.6	3.81
ICl (g)	17.6	247.36	- 5.52
K (g)	89.24	160.34	60.59
K (s)	0	64.18	0
K^+ (aq)	- 252.38	102.5	- 283.27
Kr (g)	0	163.97	0
Li (g)	155.10	138.67	122.13
Li (s)	0	28.03	0
Li^+ (aq)	- 278.46	14.2	- 293.80
LiBr (s)	- 350.28	69	- 339.74
LiCl (s)	- 408.77	55.2	- 383.70
LiF (s)	- 612.10	35.86	- 584.10
Mg (g)	147.7	148.65	113.10
Mg (s)	0	32.68	0
Mg^{2+} (aq)	- 466.85	- 138.10	- 454.8
$MgCl_2$ (s)	- 641.83	89.5	- 592.33
$MgCO_3$ (s)	- 1095.8	65.7	- 1012.1
MgO (s)	- 601.70	26.94	- 569.57
Mn (s)	0	31.76	0
Mn^{2+} (aq)	- 218.8	- 83.7	- 233.4
MnO_2 (s)	- 520.9	53.1	- 466.1
N (g)	472.65	153.19	455.51
n - C_4H_{10} (g)	- 124.73	310.0	- 15.69
n - C_8H_{18} (g)	- 208.45	466.73	16.4
n - C_8H_{18} (l)	- 249.95	360.79	6.49
N_2 (g)	0	191.61	0
NO (g)	90.25	210.76	86.55
N_2O (g)	82.05	219.85	104.20

Formel	ΔH_f^0 kJ/mol	ΔS^0 J/K mol	ΔG_f^0 kJ/mol
NO_2 (g)	33.18	240.06	51.31
N_2O_4 (g)	9.66	304.30	98.29
N_2O_5 (s)	- 41.8	113.4	134
Na (g)	108.70	153.62	78.12
Na (s)	0	51.0	0
Na^+ (aq)	- 239.66	60.2	- 261.87
Na_2CO_3 (s)	- 1130.9	136	- 1047.7
Na_2O (s)	- 415.90	72.8	- 376.50
NaBr (s)	- 359.95	-	- 357.7
NaCl (s)	- 411.0	72.4	- 384.03
NaF (s)	- 569.0	58.6	- 541.0
NaI (s)	- 288.03	-	- 237.2
NaOH(aq)	- 469.60	49.79	- 419.15
Ne (g)	0	144.14	0
$(NH_2)_2CO$ (aq)	- 319.24	173.84	- 203.84
$(NH_2)_2CO$ (s)	- 333.17	104.6	- 197.15
$(NH_4)_2SO_4$ (s)	- 1179.30	220.29	- 900.35
NH_3 (aq)	- 80.29	111.3	- 26.50
NH_3 (g)	- 46.11	192.5	- 16.45
NH_4^+ (aq)	- 132.51	113.4	- 79.31
NH_4Cl (s)	- 314.43	94.6	- 202.87
NH_4NO_3 (s)	-366	-184	-151
Ni (s)	0	30.1	0
Ni^{2+} (s)	- 64	- 159.4	- 46.4
NO (g)	90.37	210.62	86.69
NO^- (aq)	- 206.57	146.4	- 110.58
NO_2 (g)	33.85	240.45	51.84
NO_2^- (aq)	- 106.3	125.1	125.1
NO_3^- (aq)	-207	-111	146
O (g)	247.52	160.95	230.09
O_2 (g)	0	205.03	0

Formel	ΔH_f^0	ΔS^0	ΔG_f^0
O_3 (g)	142.3	237.7	163.43
OH^- (aq)	- 229.94	- 10.54	- 157.30
P (g)	324.55	163.09	279.11
P (s) rot	- 18.4	29.3	- 13.8
P (s) weiss	0	44.4	0
P_4 (g)	54.89	279.91	24.35
Pb (g)	193.89	175.27	160.96
Pb (s)	0	64.89	0
Pb^{2+} (aq)	1.63	21.3	- 24.31
PbO_2 (s)	- 276.65	76.6	- 218.99
$PbSO_4$ (s)	- 918.39	147.3	- 811.24
PCl_3 (g)	- 306.35	311.67	- 286.27
PCl_5 (g)	- 398.94	352.7	- 324.55
Rb (g)	85.81	169.99	55.86
Rb (s)	0	69.5	0
Rb^+ (aq)	- 246.4	124.3	- 282.21
Rn (g)	0	176.15	0
S (g)	222.80	167.72	182.30
S (s)	0	31.88	0
S^{2-} (aq)	41.8	-	83.7
Si (g)	368.36	167.86	323.88
Si (s)	0	18.7	0
SiO_2(s) Quarz	- 859.4	41.84	- 805.0
Sn (g)	301	168.39	268
Sn (s) weiss	0	51.5	0
SO_4^{2-} (aq)	- 907.51	17.2	- 742.0
Sr (g)	164.0	164.54	110.0
Sr (s)	0	54.4	0
Sr^{2+} (aq)	- 545.51	- 39.3	- 557.3
Zn (s)	0	41.63	0
Zn^{2+} (aq)	- 152.42	- 106.48	- 147.19