TABULKA VIII

Závislost standardní reakční Gibbsovy energie na teplotě
(hodnoty konstant *A* a *B* jsou odvozeny z dat uvedených v TABULCE III)

Reakce	$\Delta_r G = A - B.T$ (J)		Obor teplot (K)
	A (J)	B (J/K)	
$4Ag(fcc) + O_2(g) = 2Ag_2O(s)$	-61271	-132,844	298 - 461
$2Ag(s) + O_2(g) + 2NO_2(g) = 2AgNO_3(s1)$	-312193	-479,871	298 - 433
$2Ag(s) + O_2(g) + 2NO_2(g) = 2AgNO_3(s2)$	-301869	-455,566	433 - 483
$2Ag(s) + O_2(g) + 2NO_2(g) = 2AgNO_3(l)$	-270190	-390,739	483 - 665
$2Al(fcc) + Cl_2(g) = 2AlCl(g)$	-107890	163,597	298 - 933
$2Al(l) + Cl_2(g) = 2AlCl(g)$	-148826	120,769	933 - 2000
$2Al(fcc) + 3Cl_2(g) = 2AlCl_3(g)$	-1170890	-101,229	298 - 933
$2Al(l) + 3Cl_2(g) = 2AlCl_3(g)$	-1201423	-133,955	933 - 2000
$4Al(fcc) + 3O_2(g) = 2Al_2O_3(s)$	-3349820	-623,776	298 - 933
$4Al(l) + 3O_2(g) = 2Al_2O_3(s)$	-3376820	-653,474	933 - 2000
$2Al(fcc) + N_2(g) = 2AlN(s)$	-637918	-211,254	298 - 933
$Al_2O_3(s) + MgO(s) = MgAl_2O_4(s)$	-21538	9,954	298 - 2000
$Al_2O_3(s) + NiO(s1) = NiAl_2O_4(s)$	-5869	10,050	298 - 525
$Al_2O_3(s) + NiO(s2) = NiAl_2O_4(s)$	-6908	8,008	525 - 565
$Al_2O_3(s) + NiO(s3) = NiAl_2O_4(s)$	-7015	7,631	565 - 2000
$Al_2O_3(s) + SiO_2(k\_emen1) = Al_2O_3.SiO_2(andalusit)$	-4816	-1,280	298 - 847
$Al_2O_3(s) + SiO_2(k\_emen2) = Al_2O_3.SiO_2(andalusit)$	-7891	-5,470	847 - 1800
$Al_2O_3(s) + SiO_2(k\_emen1) = Al_2O_3.SiO_2(kyanit)$	-7642	-8,240	298 - 847
$Al_2O_3(s) + SiO_2(k\_emen2) = Al_2O_3.SiO_2(kyanit)$	-9103	-10,120	847 - 1600
$Al_2O_3(s) + SiO_2(k\_emen1) = Al_2O_3.SiO_2(sillimanit)$	-1449	3,242	298 - 847
$Al_2O_3(s) + SiO_2(k\_emen2) = Al_2O_3.SiO_2(sillimanit)$	-4644	-0,578	847 - 1800
$3Al_2O_3(s) + 2SiO_2(k\_emen1) = 3Al_2O_3.2SiO_2(s)$	29166	38,149	298 - 847
$3Al_2O_3(s) + 2SiO_2(k\_emen2) = 3Al_2O_3.2SiO_2(s)$	23525	31,316	847 - 1823
$2As(l) = As_2(g)$	136051	110,839	298 - 1250
$4As(l) = As_4(g)$	46734	74,277	298 - 1250
$2BaO_2(s) = 2BaO(s) + O_2(g)$	174153	165,790	298 - 1200
$C(gra) + 2H_2(g) = CH_4(g)$	-83049	-102,025	298 - 1100

Reakce	$\Delta_r G = A - B.T$ (J)		Obor teplot (K)
	A (J)	B (J/K)	
	-92698	-111,857	1100 - 2000
$2C(gra) + O_2(g) = 2CO(g)$	-220587	180,608	298 - 1100
	-229963	172,368	1100 - 2000
$C(gra) + O_2(g) = CO_2(g)$	-393365	3,316	298 - 1100
	-394980	1,955	1100 - 2000
$2CO(g) + O_2(g) = 2CO_2(g)$	-564086	-171,029	298 - 2000
$2Ca(fcc) + O_2(g) = 2CaO(s)$	-1268552	-207,801	298 - 716
$2Ca(bcc) + O_2(g) = 2CaO(s)$	-1268001	-207,032	716 - 1115
$2Ca(l) + O_2(g) = 2CaO(s)$	-1286171	-223,328	1115 - 1774
$2Ca(g) + O_2(g) = 2CaO(s)$	-1574275	-385,792	1774 - 2500
$2Ca(fcc) + S_2(g) = 2CaS(s)$	-1073452	-192,937	298 - 716
$2Ca(bcc) + S_2(g) = 2CaS(s)$	-1073296	-192,720	716 - 1115
$2Ca(l) + S_2(g) = 2CaS(s)$	-1091454	-209,005	1115 - 1774
$2Ca(g) + S_2(g) = 2CaS(s)$	-1384623	-374,324	1774 - 2000
$CaO(s) + In_2O_3(s) = CaIn_2O_4(s)$	-43126	-35,300	923 - 1123
$2Cd(g) + S_2(g) = 2CdS(s)$	-644972	-381,476	298 - 1748
$2Co(hcp) + O_2(g) = 2CoO(s)$	-471823	-147,569	298 - 700
$2Co(fcc) + O_2(g) = 2CoO(s)$	-467327	-140,654	700 - 1000
	-466270	-139,485	1000 - 1400
	-467513	-140,484	1400 - 1768
$2Co(l) + O_2(g) = 2CoO(s)$	-496392	-156,800	1768 - 2000
$4Cu(fcc) + O_2(g) = 2Cu_2O(s)$	-338509	-147,233	298 - 1358
$4Cu(l) + O_2(g) = 2Cu_2O(s)$	-382005	-178,573	1358 - 1517
$2Cu(fcc) + O_2(g) = 2CuO(s)$	-305347	-171,573	298 - 1358
$2Cu(fcc) + S_2(g) = 2CuS(s)$	-233102	-153,513	298 - 774
$4Cu(fcc) + S_2(g) = 2Cu_2S(s1)$	-286609	-115,831	298 - 376
$4Cu(fcc) + S_2(g) = 2Cu_2S(s2)$	-268911	-71,299	376 - 717
$4Cu(fcc) + S_2(g) = 2Cu_2S(s3)$	-252414	-47,866	717 - 1358
$2Cu(fcc) + SO_2(g) = Cu_2S(s1) + O_2(g)$	218012	13,812	298 - 376
$2Cu(fcc) + SO_2(g) = Cu_2S(s2) + O_2(g)$	227192	36,925	376 - 717

Reakce	$\Delta_r G = A - B.T$ (J)		Obor teplot (K)
	A (J)	B (J/K)	
$2Cu_2O(s) + O_2(g) = 4CuO(s)$	-272616	-196,577	298 - 1364
$2Cu_2O(s) + 4SO_2(g) + 3O_2(g) = 4CuSO_4(s)$	-1525130	-1295,400	298 - 1075
$2CuO(s) + 2SO_2 + O_2(g) = 2CuSO_2(s)$	-625115	-547,500	298 - 1075
$2CuO(s) + Y_2O_3(s) = Y_2Cu_2O_5(s)$	12671	13,560	298 - 1200
$2Cu_2S(s1) + 3O_2 = 2Cu_2O(s) + 2SO_2(g)$	-777438	-180,670	298 - 376
$2Cu_2S(s2) + 3O_2 = 2Cu_2O(s) + 2SO_2(g)$	-794955	-224,924	376 - 717
$Cu_2S(s1) + SO_2(g) + 3O_2(g) = 2CuSO_4(s)$	-1163670	-766,094	298 - 376
$Cu_2S(s2) + SO_2(g) + 3O_2(g) = 2CuSO_4(s)$	-1166010	-773,030	376 - 717
$2CuS(s) + O_2(g) = Cu_2S(s1) + SO_2(g)$	-269120	30,081	298 - 376
$2CuS(s) + O_2(g) = Cu_2S(s2) + SO_2(g)$	-263139	45,300	376 - 717
$CuS(s) + 2O_2(g) = CuSO_4(s)$	-714675	-363,758	298 - 774
$2Fe(bcc) + O_2(g) = 2FeO(s)$	-528840	-132,316	298 - 800
	-528890	-131,731	800 - 1184
$2Fe(fcc) + O_2(g) = 2FeO(s)$	-531248	-133,920	1184 - 1645
$3Fe(bcc) + 2O_2(g) = Fe_3O_4(s1)$	-1108110	-326,417	298 - 800
	-1089270	-300,916	800 - 900
$3Fe(bcc) + 2O_2(g) = Fe_3O_4(s2)$	-1087170	-298,493	900 - 1184
$3Fe(fcc) + 2O_2(g) = Fe_3O_4(s2)$	-1086850	-298,459	1184 - 1665
$3Fe(bcc) + 2O_2(g) = Fe_3O_4(s2)$	-1084580	-296,979	1665 - 1809
$3Fe(l) + 2O_2(g) = Fe_3O_4(s2)$	-1126507	-320,147	1809 - 1870
$Ga(l) + As(l) = GaAs(s)$	-115950	-55,22	900 - 1250
$4Ga(l) + O_2(g) = 2Ga_2O(g)$	-226329	106,685	303 - 700
	-249038	77,578	700 - 2000
$4Ga(l) + 3O_2(g) = 2Ga_2O_3(s)$	-2198680	-677,914	303 - 700
	-2168460	-641,354	700 - 1998
$Ga(l) + Sb(rho) = GaSb(s)$	-50050	-30,283	303 - 700
	-50373	-30,801	700 - 904
$Ga(l) + Sb(l) = GaSb(s)$	-70286	-52,824	904 - 985
$H_2(g) + Cl_2(g) = 2HCl(g)$	-188357	12,509	298 - 2000
$3H_2(g) + N_2(g) = 2NH_3(g)$	-105061	-229,083	298 - 1500

Reakce	$\Delta_r G = A - B.T$ (J)		Obor teplot (K)
	A (J)	B (J/K)	
$2H_2(g) + O_2(g) = 2H_2O(g)$	-493189	-108,874	298 - 2000
$2H_2(g) + S_2(g) = 2H_2S(g)$	-177898	-94,473	298 - 2000
$2Mg(hcp) + O_2(g) = 2MgO(s)$	-1202300	-214,016	298 - 923
$2Mg(l) + O_2(g) = 2MgO(s)$	-1217390	-230,113	923 - 1366
$2Mg(hcp) + S_2(g) = 2MgS(s)$	-817832	-187,034	298 - 923
$2Mg(l) + S_2(g) = 2MgS(s)$	-833307	-203,502	923 - 1366
$MgO(s) + CO_2(g) = MgCO_3(s)$	-99418	-172,127	298 - 812
$2Ni(fcc) + O_2(g) = 2NiO(s1)$	-479013	-187,414	298 - 400
	-476955	-182,370	400 - 525
$2Ni(fcc) + O_2(g) = 2NiO(s2)$	-474955	-177,640	525 - 565
$2Ni(fcc) + O_2(g) = 2NiO(s3)$	-473446	-175,734	565 - 700
	-468400	-169,622	700 - 1728
$2Ni(l) + O_2(g) = 2NiO(s3)$	-496702	-185,679	1728 - 2200
$S_2(g) + 2O_2(g) = 2SO_2(g)$	-723002	-144,780	298 - 2000
$S_2(g) + 3O_2(g) = 2SO_3(g)$	-917883	-327,512	298 - 2000
$Si(dia) + C(gra) = SiC(s)$	-72918	-7,268	298 - 1100
	-72697	-7,000	1100 - 1685
$Si(l) + C(gra) = SiC(s)$	-122461	-36,550	1685 - 2500
$Si(dia) + 2Cl_2(g) = SiCl_4(g)$	-660158	-128,647	298 - 1685
$2Si(dia) + O_2(g) = 2SiO(g)$	-202795	168,483	298 - 1685
$2Si(l) + O_2(g) = 2SiO(g)$	-319942	97,696	1685 - 2000
$Si(dia) + O_2(g) = SiO_2(k\_emen1)$	-910307	-181,346	298 - 847
$Si(dia) + O_2(g) = SiO_2(k\_emen2)$	-903411	-173,251	847 - 1685
$Si(l) + O_2(g) = SiO_2(k\_emen2)$	-951196	-201,446	1685 - 2000
$Si(dia) + O_2(g) = SiO_2(trydimit)$	-905759	-173,786	500 - 1685
$Si(l) + O_2(g) = SiO_2(trydimit)$	-951468	-200,489	1685 - 1743
$Si(dia) + O_2(g) = SiO_2(cristobalit)$	-899136	-169,621	1079 - 1685
$Si(l) + O_2(g) = SiO_2(cristobalit)$	-946605	-197,700	1685 - 2001
$3Si(dia) + 5Ti(bcc) = Ti_5Si_3(s)$	-579276	2,536	1166 - 1685
$SiCl_4(g) + CH_4(g) = SiC(s) + 4HCl(g)$	297497	254,399	298 - 2000

Reakce	$\Delta_r G = A - B.T$ (J)		Obor teplot (K)
	A (J)	B (J/K)	
Ti(hcp) + C(gra) = TiC(s)	-183957	-10,368	298 - 1100
	-184457	-10,812	1100 - 1166
Ti(bcc) + C(gra) = TiC(s)	-185800	-11,921	1166 - 1939
Ti(hcp) +2Cl_2(g) = $TiCl_4$(g)	-762058	-119,374	298 - 1166
Ti(bcc) +2Cl_2(g) = $TiCl_4$(g)	-762866	-119,930	1166 - 1939
2Ti(hcp) + N_2(g) = TiN(s)	-673941	-187,813	298 - 1166
2Ti(bcc) + N_2(g) = TiN(s)	-667394	-181,922	1166 - 1939
W(bcc) + S_2(g) = WS_2(s)	-378280	-178,180	298 - 2000
2Zn(hcp) + O_2(g) = 2ZnO(s)	-700231	-198,326	298 - 693
2Zn(l) + O_2(g) = 2ZnO(s)	-712185	-215,549	693 - 1179
2Zn(hcp) + S_2(g) = 2ZnS(s)	-537006	-191,356	298 - 693
2Zn(l) + S_2(g) = 2ZnS(s)	-548060	-207,244	693 - 1179