

SUPPLEMENTARY INFORMATION

Silica nanowires synthesized from gas by-product of SiC synthesis from alkoxide precursors

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T (°C)	2SiO(g) = SiO ₂ + Si		SiO(g) + CO(g) = SiO ₂ + C		2SiO(g) + O ₂ (g) = 2SiO ₂	
	ΔG (kcal)	K	ΔG (kcal)	K	ΔG (kcal)	K
1200	-46.20	7.15E+06	-42.86	2.29E+06	-201.29	7.33E+29
1180	-47.76	1.53E+07	-44.46	4.87E+06	-203.67	4.30E+30
1160	-49.33	3.33E+07	-46.06	1.06E+07	-206.05	2.65E+31
1140	-50.90	7.45E+07	-47.67	2.36E+07	-208.43	1.73E+32
1120	-52.47	1.70E+08	-49.27	5.37E+07	-210.81	1.19E+33
1100	-54.04	3.99E+08	-50.88	1.25E+08	-213.20	8.62E+33
1080	-55.61	9.61E+08	-52.49	3.01E+08	-215.59	6.66E+34
1060	-57.19	2.37E+09	-54.10	7.40E+08	-217.98	5.47E+35
1040	-58.76	6.04E+09	-55.71	1.87E+09	-220.38	4.79E+36
1020	-60.34	1.58E+10	-57.32	4.88E+09	-222.77	4.50E+37
1000	-61.92	4.27E+10	-58.94	1.31E+10	-225.17	4.53E+38
980	-63.51	1.19E+11	-60.56	3.65E+10	-227.57	4.92E+39
960	-65.09	3.45E+11	-62.18	1.05E+11	-229.98	5.79E+40
940	-66.68	1.03E+12	-63.80	3.12E+11	-232.39	7.38E+41
920	-68.27	3.21E+12	-65.42	9.63E+11	-234.80	1.03E+43
900	-69.86	1.04E+13	-67.04	3.10E+12	-237.21	1.56E+44
880	-71.45	3.49E+13	-68.67	1.04E+13	-239.63	2.62E+45
860	-73.05	1.23E+14	-70.30	3.63E+13	-242.04	4.86E+46
840	-74.65	4.54E+14	-71.93	1.33E+14	-244.47	1.00E+48
820	-76.25	1.76E+15	-73.56	5.11E+14	-246.89	2.31E+49
800	-77.85	7.18E+15	-75.20	2.07E+15	-249.32	6.02E+50

Table S1. Calculated Gibbs free energies and equilibrium constants as a function of temperature for chemical reactions that can produce SiO₂ from SiO(g).