

**Table S7:** Elemental compositions of B<sub>4</sub>C and B<sub>4</sub>C:Si.

Boron Carbide				Boron Carbide w/ Silicon			
Peak name	Binding Energy [eV]	atomic %		Peak name	Binding Energy [eV]	atomic %	
		Mean	95% C.I.			Mean	95% C.I.
B-B	187.3	46.8	0.9	B-B	187.3	29.9	4.5
B-C	188.7	16.1	1.4	B-C	188.7	10.9	3.2
B <sub>2</sub> O <sub>3</sub>	192.9	14.3	0.8	B-O	190.4	2.1	0.4
C-B	282.2	8.5	0.4	B-O	192.0	4.1	0.6
C-C	284.5	11.0	0.5	B <sub>2</sub> O <sub>3</sub>	193.2	9.3	1.3
C-O	286.0	1.8	0.3	B-Si	186.5	12.3	4.2
C=O	288.3	1.4	0.2	Si-C-B	281.1	7.2	0.3
				C-B	282.1	3.3	0.6
				C-Si	283.3	7.9	1.0
				C-C	284.4	4.2	1.0
				C-O	285.9	1.6	0.6
				C=O	287.3	0.5	0.4
				Si-Si	98.9	1.2	0.1
				Si-C/B	101.1	2.2	0.1
				Si-O	102.6	3.1	0.3