

**Table S1.** Relaxed lattice constants **a** in [0001] plane (in Å) and **c** along (0001) direction (in Å), and unit cell volume **V** (in Å<sup>3</sup>).

Structure	Site	a	c	V
B <sub>12</sub> -CCC	No Si	5.64	12.12	111.4
	Chain Center	5.62	12.62	115.1
	Chain End	6.17	11.77	129.0
	Equatorial	5.78	12.43	120.0
	Polar	5.70	12.70	118.7
B <sub>12</sub> -CBC	No Si	5.66	12.13	112.0
	Chain Center	5.62	12.62	115.1
	Chain End	5.87	12.32	122.4
	Equatorial	5.79	12.45	120.5
	Polar	5.73	12.70	120.1
B <sub>11</sub> C <sup>P</sup> -CBC	No Si	5.60	12.06	109.0
	Chain Center	5.62	12.44	113.0
	Chain End	5.90	12.28	123.0
	Equatorial	5.71	12.59	118.2
	Polar	5.73	12.70	120.1