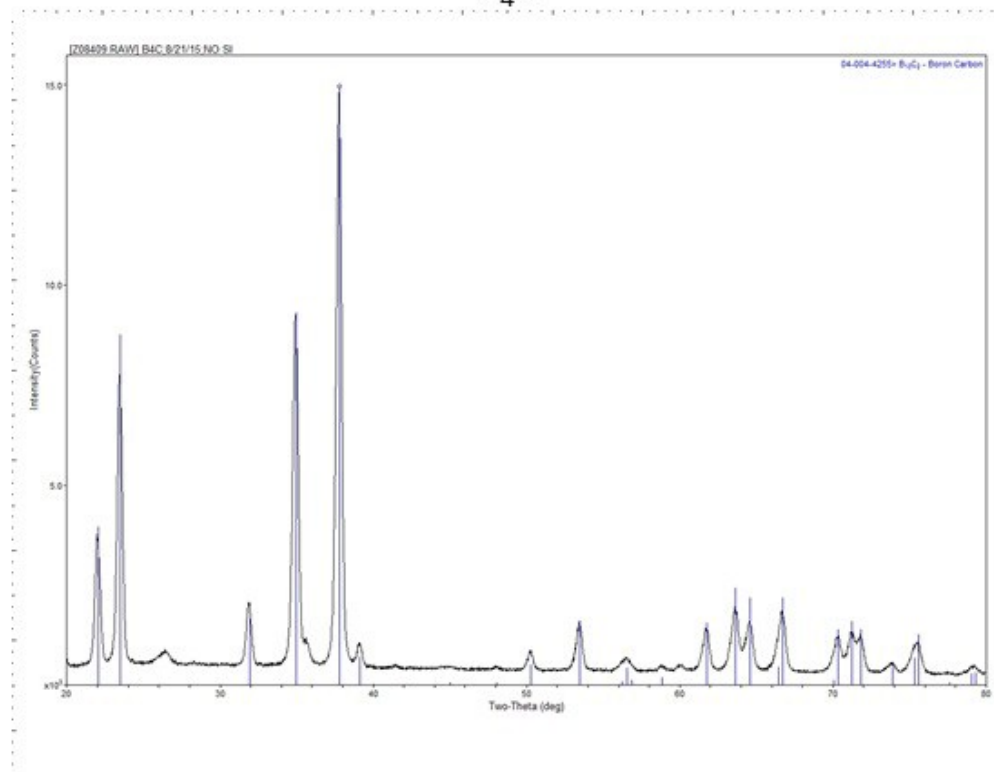


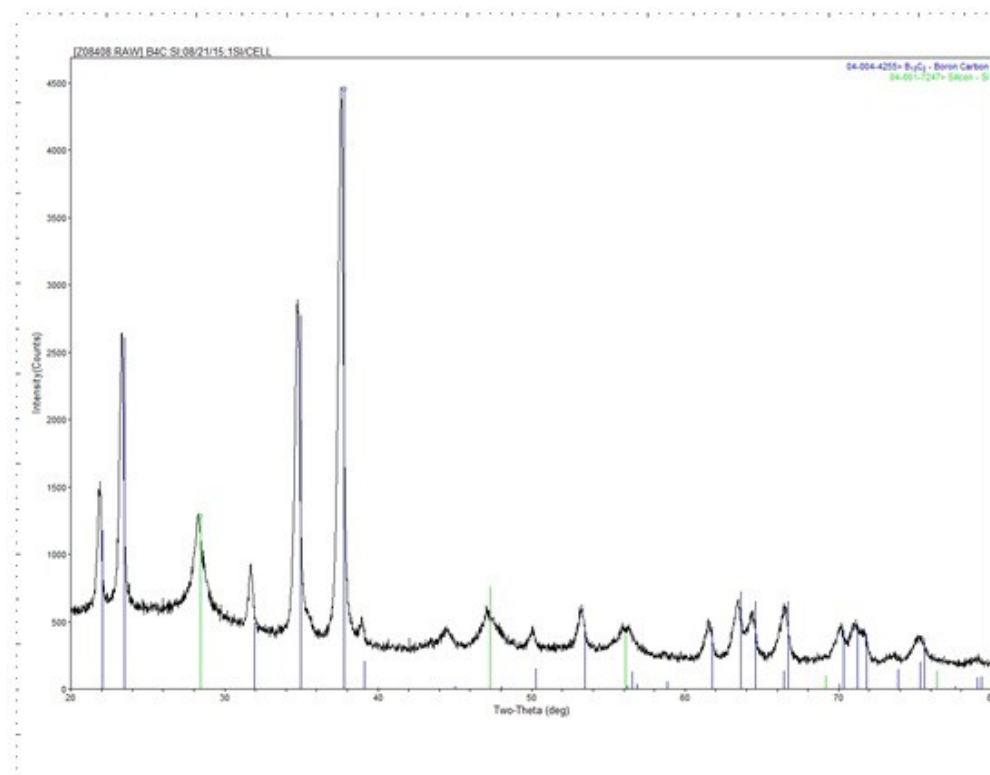
Figure S2: XRD spectra of  $B_4C$  and the reaction product of  $B_4C$  with enough Si to substitute all of the  $B_4C$  unit cells

$B_4C$



$$a = 5.601(4) \text{ \AA} \quad c = 12.042(9) \text{ \AA}$$

$B_4C$ :Si product



$$a = 5.629(7) \text{ \AA} \quad c = 12.132(17) \text{ \AA}$$

Volume change = 17.5%

Unreacted Si seen in the  $B_4C$ : Si product