

B-Cr (Boron-Chromium)

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The B-Cr phase diagram in [Massalski2] (dashed lines in Fig. 1) was adopted from [1986Lia] (invariant reaction temperatures are given in parentheses).

[2002Cam] assessed the B-Cr system thermodynamically. The calculated phase diagram is shown with solid lines in Fig. 1. [1986Lia] and [2002Cam] are based essentially on the same experimental phase boundary data. However, the two diagrams are significantly different on both the B-rich and Cr-rich eutectic points, as shown in Fig. 1. [2002Cam] could not adjust the thermodynamic model to yield a calculated phase diagram that was in better agreement with the experimental phase diagram and still retained

a reasonable parameter set. Because the original experimental phase boundary data, primarily [1969Por], are scattered, further refinement of this phase diagram may be needed.

References

- 1969Por:** K.I. Portnoi, V.M. Romashov, and I.V. Romanovich: *Sov. Powder Metall. Met. Ceram.*, 1969, 8, pp. 298-302.
1986Lia: P.K. Liao and K.E. Spear: *Bull. Alloy Phase Diagrams*, 1986, 7(3), pp. 232-37.
2002Cam: C.E. Campbell and U.R. Kattner: *Calphad*, 2002, 26(3), pp. 477-90.

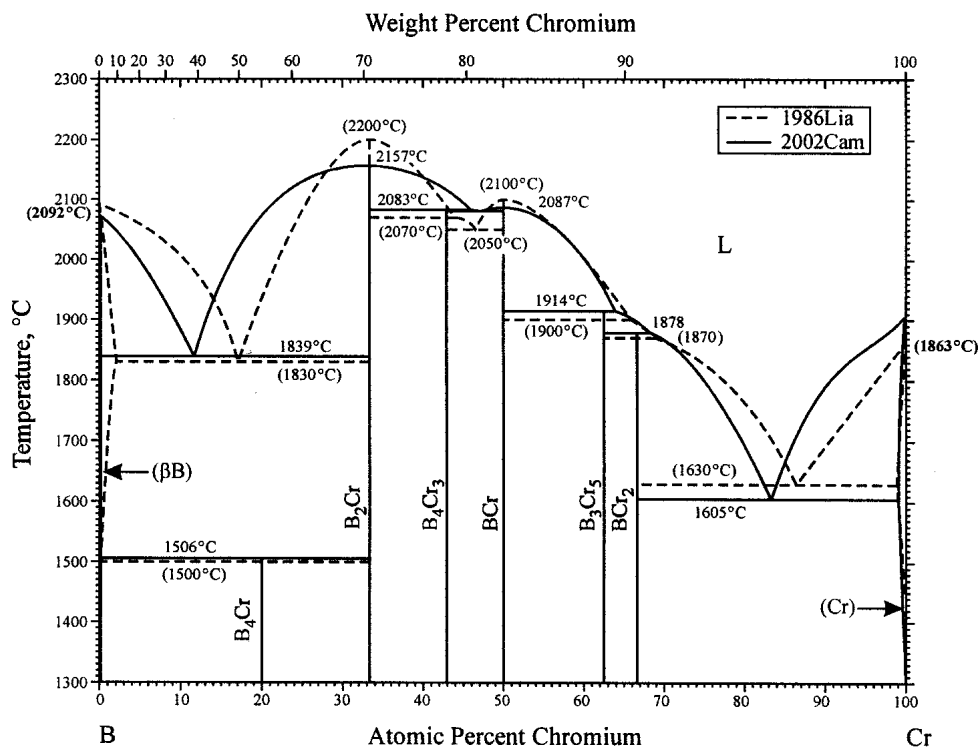


Fig. 1 B-Cr phase diagram