

On Lindemann's Melting Criterion

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Abstract

Lindemann's empirical melting criterion is applied using data of the solid chemical elements. The respective expression which depends on the melt-ing temperature, the molar mass and the molar volume correlates fairly well with the Debye temperatures. However, it seems incapable to predict inversely the melting temperatures with the other parameters given. Thus, Lindemann's criterion has no empirical relevance in addition to its scientific deficits.

Key words:

Melting, melting temperature, melting criterion, Lindemann's criterion