

Ba-Li (Barium-Lithium)

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[1984Pel] obtained the Ba-Li phase diagram in [Massalski2] by thermodynamic modeling based on the experimental phase boundary data of [1958Kel].

[2007Sme] found a new phase Ba₁₉Li₄₄ by X-ray diffraction and thermal analysis. Figure 1 shows the Ba-Li phase diagram reported by [1984Pel] with the additional information on Ba₁₉Li₄₄.

Table 1 shows Ba-Li crystal structure data summarized by [1984Pel] and new information on Ba₁₉Li₄₄ reported by [2007Sme].

References

- 1958Kel:** D.V. Keller, F.A. Kanda, and A.J. King, Ba-Li Equilibrium System, *J. Phys. Chem.*, 1958, **62**, p 732-733
1984Pel: A.D. Pelton, The Ba-Li (Barium-Lithium) System, *Bull. Alloy Phase Diagr.*, 1984, **5**(5), p 452-454
2007Sme: V. Smetana, V. Babizhetskyy, G.V. Vajenine, C. Hoch, and A. Simon, Double-Icosahedral Clusters in a New Binary Compound Ba₁₉Li₄₄: A Reinvestigation of the Ba-Li Phase Diagram, *Inorg. Chem.*, 2007, **46**(13), p 5425-5428

Table 1 Ba-Li crystal structure data

Phase	Composition, at.% Li	Pearson symbol	Space group	Strukturbericht designation	Prototype
(Ba)	0	<i>cI2</i>	<i>Im</i> $\bar{3}m$	<i>A2</i>	W
Ba ₁₉ Li ₄₄	69.8	<i>tI252</i>	<i>I</i> $\bar{4}2d$
BaLi ₄	80	<i>hP30</i>	<i>P6</i> ₃ / <i>mmc</i>
(βLi)	100	<i>cI2</i>	<i>Im</i> $\bar{3}m$	<i>A2</i>	W

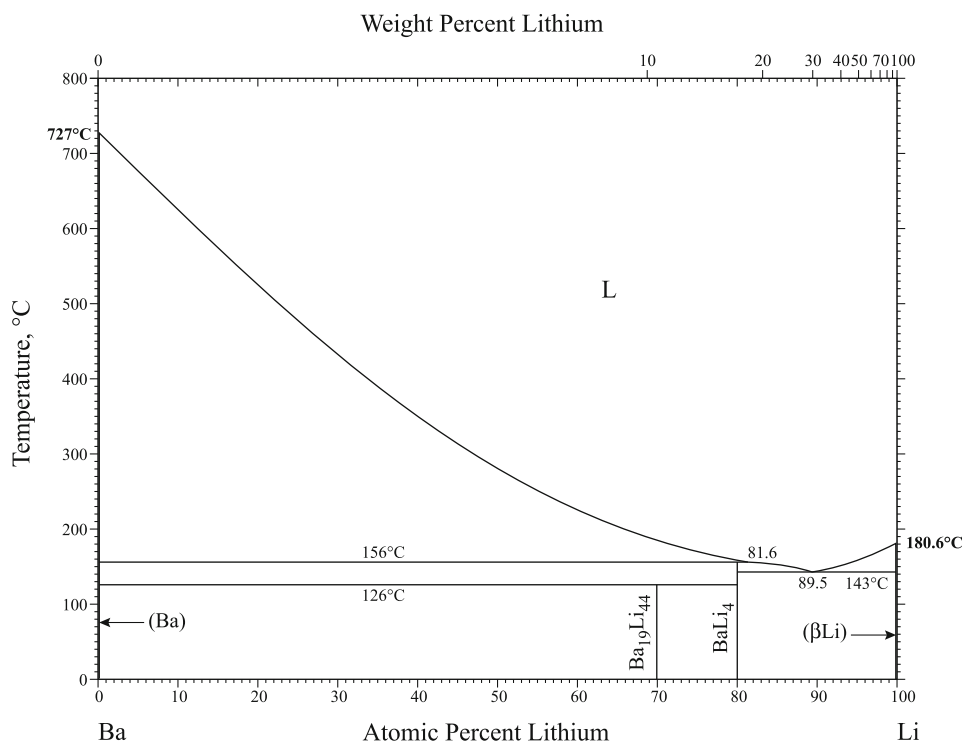


Fig. 1 Ba-Li phase diagram