

BaO-CaO-CuO

Fig. 11826—System BaO-CaO-CuO.

P. J. Majewski, A. Jalowicki, S. Kaesche, and F. Aldinger, *J. Am. Ceram. Soc.*, **84** [1] 183-187 (2001).

This phase diagram is valid at 890°-900°C for $P_{O_2} = 1$ atm. It is reliable and useful for studies concerning the ternary superconducting systems.

The samples were prepared using BaCO₃, CaCO₃, and CuO (purity >99%). The precursors were first mixed and annealed at 920°C for 48 h; they were then ground and compacted by cold isostatic pressing (CIP) at 625 MPa. The samples were sealed in a quartz glass tube containing an oxygen atmosphere (1 bar) at 890°C. No liquid phase was observed at annealing temperatures of 890°-900°C. The solubilities of BaO (2.9 mol%) in Ca₂CuO₃, CaO (4.7 mol%) in BaCaO₂, BaO (6 mol%) in CaO, Cu (6 mol%) in CaO were also determined. The solubility of CuO in BaO and CaO was less than 1 mol%.

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Fig. 11826

