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Casting synthesis of $Bi_{12}SiO_{20}$

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The Bi_2O_3–SiO_2 system is represented by one stable phase diagram (Figure S1) and two metastable ones (Figure S2).

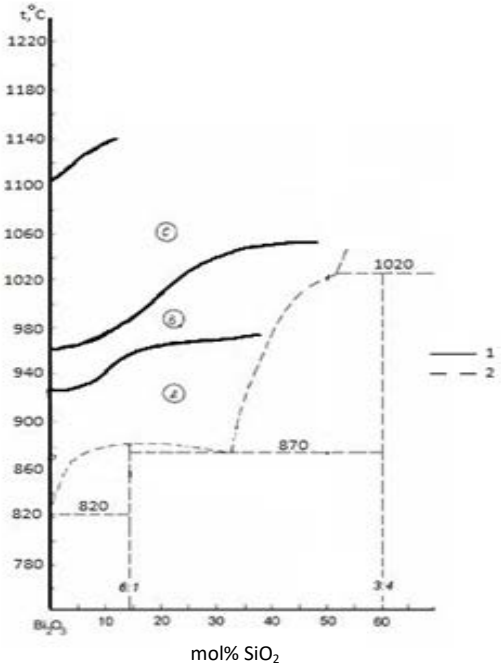
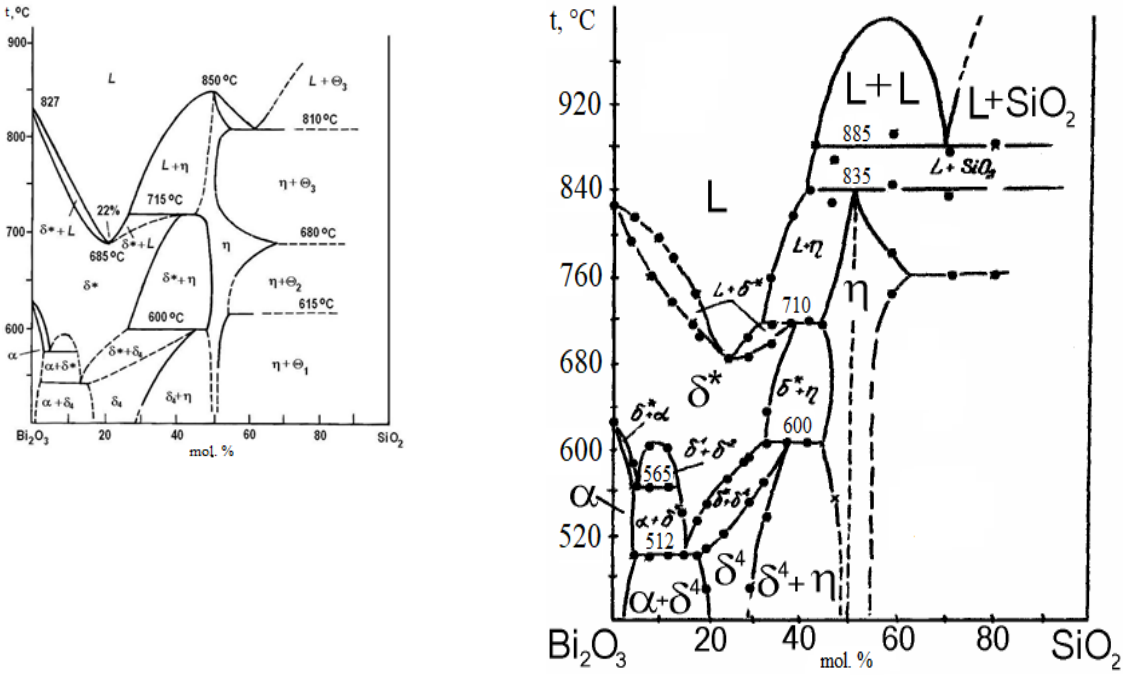


Figure S1 The boundaries of the temperature zones (*1*) constructed from the results of heating in the melt region on the phase diagram of stable equilibrium (*2*) of the Bi_2O_3–SiO_2 system [S1].



a *b*

Figure S2 Phase diagrams of metastable equilibria of the Bi_2O_3-SiO_2 system, constructed from the results of cooling the melt from temperatures lying in the zone B (*a*) and C (*b*) [S2]. The solid solution designated as δ*.

References

S1. V. P. Zhereb, *Metastable states in oxide bismuth-containing systems*, MAX Press, Moscow, 2003, p. 162 (in Russian).

S2. V. P. Zhereb, *Physicochemical studies of metastable equilibria in Bi_2O_3–EO_2 systems, where E is Si, Ge, Ti*. Abstract of the dissertation for the degree of candidate of chemical sciences. Institute of General and Inorganic Chemistry, Academy of Sciences of the USSR, Moscow, 1980, p. 22 (in Russian).