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Experimental research and computer modeling of stable triangle $LiF–KI–K_2CrO_4$ of quaternary reciprocal system $Li,K||F,I,CrO_4$

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Abstract

In this work we experimentally studied the quasi-ternary system $LiF-KI-K_2CrO_4$ for the first time. It's a stable triangle of the quaternary reciprocal system $Li,K||F,I,CrO_4$.The ternary eutectic is formed in this system. LiF-richer terminal solid solution field is formed in this system, so LiF-crystallizing vertex is situated inside the triangle. The liquid phase stratification occupies a large area in the concentrated triangle. Based experimental data we designed 3D solid state model of phase complex for the system in the form of *T-x-y* diagram and constructed isotherms of the liquidus surface, isothermal and polythermal sections, calculated coexistent phase material balance for some composition, using this model.