**Full Paper** 

Registration Code of Publication: 12-31-8-132 Subsection: Phase Equilibrium. Publication is available for discussion in the framework of the on-line Internet conference "Butlerov readings". http://butlerov.com/readings/ Contributed: September 21, 2012.

## Investigation of the united stable tetrahedron LiF-KBr-Li<sub>2</sub>MoO<sub>4</sub>-K<sub>2</sub>MoO<sub>4</sub> of the quaternary mutual system Li,K||F,Br,MoO<sub>4</sub>

© Maria A. Radzikhovskaia,<sup>1+</sup> Ivan K. Garkushin,<sup>2\*</sup> and Elena G. Danilushkina<sup>3</sup>

Samara State Technical University. Molodogvardeiskava St., 244. 443100, Samara. Russia. Phone: +7 (846) 278-36-92. Fax: +7 (846) 278-44-00. *E-mail*: <sup>1</sup>*baschem@samgtu.ru*, <sup>2</sup>*radzihovskaya@mail.ru* 

\*Supervising author; <sup>+</sup>Corresponding author

*Keywords:* differential thermal analysis, ternary systems, phase equilibrium, quaternary mutual system, united stable tetrahedron, points of invariant equilibria.

## Abstract

The quaternary mutual system Li,K||F,Br,MoO<sub>4</sub> was broken into the simplexes. For the experimental confirmation of the partition the stable triangles LiF-KBr-Li2MoO4, LiF-KBr-K2MoO4 and LiF-KBr-LiKMoO<sub>4</sub> were investigated by the method of differential thermal analysis (DTA). The united stable tetrahedron LiF-KBr-Li<sub>2</sub>MoO<sub>4</sub>-K<sub>2</sub>MoO<sub>4</sub> was investigated by the method of differential thermal analysis (DTA). The temperatures and compounds of the points of invariant equilibria were established. Volumes of crystallizing phases were identified.