layers and motive of their interstratifications have been defined.

The established crystallochemical features and the regularities in distribution of clay minerals allowed decomposition zones at significant depths to be found out and the character as well as the degree of epigenetic transformations of Triassic rocks of West Siberian Plate penetrated by TCQ-6 well to be refined.

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PS08.02.17 CRYSTAL-CHEMICAL STUDY OF KAlSi3O8-KFeSi3O8 SOLID SOLUTION SERIES. V.K. Turoev1, V.L. Tauson1, H. Krofl2, J. Gottlicher3. 1Institute of Geochemistry, Irkutsk, 664033, Russia; 2Institute of Experimental Mineralogy, Munster Univ., D-48149, Germany; 3Institute of Technical Mineralogy, Karlsruhe, D-76021, Germany

The monoclinic mixed crystals K(Fe,Al)Si3O8 are synthesized under hydrothermal conditions from pure oxides in KOH solution at temperatures 500 and 600°C and pressure ca. 100 MPa. The mixed crystals up to 2 mm were obtained. An extensive formation of solid soloution was observed only under sufficiently high oxygen fugacities corresponding to CuO-Cu2O buffer assemblage (up to 60 mole per cent of KFeSi3O8). The unit cell edges vs. mole fraction of solid solution composition for its accommodation to the plane of the sheet and are close to the oxygen fugacity control. References: Eberhard, E. (1965) Tchermaks petr. Mitt. 10, 400-408. Tauson, V.L. & Akimov, V.V. (1995) Chem. Geol. 109, 113-118.

PS08.02.18 TRANSFORMATIONS OF CUBIC LAZURITE WITH INCOMMENSURATE-MODULATED STRUCTURE. V.L. Tauson, A.N. Sapozhnikov, K.E. Kuznetzov, and V.V. Akimov, Institute of Geochemistry, Irkutsk, 664033, Russia

The sodalite-like minerals are the convenient object for studying different types of structure modifications, especially ones which can be considered as the result of forced equilibration attained (Tauson & Akimov, 1993; 1994). The set of results is performed using lazurite sample of composition (Na4Ca)2.88Si6Al4O24(SO4,SCl)2 from the Baikal region deposit. The sample is characterized with the three-dimensional incommensurate modulation of structure with the modulation parameter n=0.217. When annealed in air, the sample changes the initial modulation to the commensurate one with n=0.168 via an intermediate state without superstructure. The diagrams of lazurite stability on coordinate graphs are close to linearity, their extrapolation to monoclinic end proves that the stable state is transformed via an intermediate state without modulation of structure. Among 11 carbonate minerals, which contain Y atoms in the individual positions, schoenokinite-(Y), Na3Y(CO3)2·3H2O, Pushcharovsky, Dmitir Yu. 1. Rastsvetneva, Ramisa K3, Pekov, I.V., 1Department of Geology, Moscow State University, 119899 Moscow, Russia; 2Institute of Crystallography RAN, 117333 Moscow, Russia

PR08.02.20 THE CRYSTAL STRUCTURE OF SCOMIOKITE-(Y), Na3Y(CO3)2·3H2O. Pushcharovsky, Dmitry Yu.1. Rastsvetneva, Ramisa K3, Pekov, I.V., 1Department of Geology, Moscow State University, 119899 Moscow, Russia; 2Institute of Crystallography RAN, 117333 Moscow, Russia

Among 11 carbonate minerals, which contain Y atoms in the individual positions, schoenokinite-(Y), Na3Y(CO3)2·3H2O, is chemically related to orthorhombic tengerite Y2(CO3)2·3H2O, kimurite CaY(CO3)2·6H2O, llokkite CaY(CO3)2·9H2O and tetragonal kanazawaite-(Y) CaY(CO3)2·9H2O. The aim of the present study is to determine the position of schoenokinite inside of this crystal chemical family. The parameters of the orthorhombic cell are: a=17.358, b=10.034, c=9.946Å, sp. gr. Pn21. The structure was refined up to Rm=0.059 for 1973 observed reflections. The structure contains isolated mixed complexes, formed by YO3 polyhedra, which share three edges with CO3 groups. YO3 polyhedra can be considered as 3-capped pseudotetragonal antiprisms, where one base is formed by three H2O molecules. Three CO3 groups are characterized by pyramidal distortion with the deviations of C atoms from the planes, formed by O atoms, 0.006, 0.003 and 0.01 Å respectively. The mixed complexes are considered as relics of the corrugated polyhedral layers, described in tengerite, kimurite and llokkite, and are connected by Na octahedra and 5-fold polyhedra as well as by a system of H-bonds. The interpretation of the structure in terms of the interrupted layers is confirmed by the values of its lattice parameters α=6 and 10Å, which are parallel to the plane of the sheet and are close to the corresponding values of tengerite, kimurite and llokkite.