increase of experiment temperature, biatization of glauconites is taking place which topotactically passes through intermediate montmorillonite and irregular mixed-layer formations. In this case, the ferro of biotite increases with the increase of temperature, and feldspar and amphibole are formed from free Al, Si and Mg. The fourth conclusion is that to some extent the following transformational rows can be picked out from the structural continuity of transformational phases: a) with a maximal structural continuity: glauconite - trioctahedral montmorillonite - disordered mixed-layer intermediates - biotite. Glauconite - talc - serpentine. b) with partial destruction of structure: glauconite - feldspars, amphibole, cordierite. Finally, data which have been got from the experiment are the result of crystallochemical model transformation of glauconites on their natural metamorphic and hydrothermal change in the presence of mineralized Na-, Ca-, Mg- chloridic environment. Formation of expandable montmorillonite phase considerably raises the interchange of cations in glauconites, which needs to be taken into account in deciding the absolute age of glauconites according to the K-Ar method. In this case the most common mistakes in deciding the absolute age appear in more ferriginous glauconites in which the process of montmorillonitization is taking place more actively than in their Al - differences.

PS-08.04.42 PHASE TRANSITION AND CRYSTAL STRUCTURE OF A NEW COMPOUND-Ca_2FeWO_6. By Zheng-min Fu and Wen-xiu Li, Institute of Physics, Academia Sinica, Beijing 100080, P.R.China.

In"Phase transition and Cryatal structure of A New Compound-Sr_2CdWO_6"(Fu Zheng-min, SCIENCE IN CHINA(Series A), 1991,34,455-466) and "Phase Transition and Crystal Structure of A New Compound-Sr_2FeWO_6" (to bo published), we have described the phase transition mechanism of Sr_2CaWO_6 (Fu Zheng-min, Li Wen-xiu and Liang Dong-cai,SCIENTIA SINICA (Series A),1983,26,835-847) and Sr_2FeWO_6. When Sr^{+2}ion in Sr_2FeWO_6 is replaced by Ca^{+2}ion, the volume of the crystal cell will erduce further, because the ionic radius of Ca^{+2} is smaller than that of Sr^{+2}. So the level squeezed of Fe^{+2} ion increases. As a result,the crystal structure of Ca_2FrWO_6 changes again from cubic to orthorhombic strucure, because its distortion degree increases further.

The phase transition of a new compound Ca_2FeWO_6 has been investigated by means of differential thermal analysis (DTA), X-ray powder diffraction, precise measurement of lattice parameters and other methods. It has been discovered that the compound has a first-order displacive phase transition. The low-temperature phase α-Ca_2FeWO_6 belongs to the orthorhombic crystal system with space group Pmm2. Its lattice parameters at room temperature are:a=5.5172Å, b=5.4042Å and c=7.7104Å,the measured denaity is D_m=6.04g/cm^3, and each unit cell contains two formula weights. the high-temperature phase ß-Ca_2FeWO_6 belongs to the cubic system, with space group Fm3m and lattice parameter a=7.808Å at 750°c,and Z=4.

The crystal structures of α-Ca_2FeWO_6 and ß- Ca_2FeWO_6 have been determined by means of the X-ray polycrystal method. The phase transition mechanism and temperature are investigated.

PS-08.04.43 PHASE TRANSITION AND CRYSTAl STRUCTURE OF A NEW COMPOUND--Sr_2FeWO_6. By Zheng-min Fu and Wen-xiu Li, Institute of Physics, Academia Sinica, Beijing 100080, P.R.China.

In "Phase Transition and Crystal Structure of A New Compound-- Sr_2CdWO_6" (Fu Zheng-min, SCIENCE IN CHINA (Series A), 1991, 34, 455-466) we have described the phase transition mechanism of Sr_2CaWO_6[Fu Zheng-min, Li Wen-xiu and Liang Dong-cai,SCIENTIA SINICA(Series A), 1983,26,835-847] and distortion degree.When Ca^{+2} ion in Sr_2CaWO_6 is replaced by Cd^{+2} ion, the distortion degree of Sr_2CdWO_6 is slightly smaller than of Sr_2CaWO_6 because the ionic radius of Cd^{+2} is slghtly smaller than that of Ca^{+2}. If Ca^{+2} ion in Sr_2CaWO_6 is replaced by an ion with the ionic radius of less size for example, Fe^{+2} ion, Will its distortion degree decrease further? In this case, the crystal structure of Sr_2FeWO_6 may not change from the cubic to the orthorhombic stucture, but change to tetragonal structure. Therefore, it is worthy to study.

The phase transition of a new compound Sr_2FeWO_6 has been invstigated by means of differential scanning calorimetry (DSC), X-ray powder diffraction, precise measurement of lattice parameters and other method. It has been discovered that the compound has a first-order displacive phase transition. The low-temperature phase α-Sr_2FeWO_6 belongs to the tetragonal crystal system with space group I4/m. Its lattice parameters at room temperature are:a=b=5.5652Å and c=7.9024Å, the measured density is Dm=6.94g/cm^3, and each unit cell contains two formula weights. The high-temperature phase ß-Sr_2FeWO_6 belongs to the cubic system, with space group Fm3m and lattice parameter a=7.939Å at 400°c, and Z=4.

The crystal structure of α-Sr_2FeWO_6 and ß-Sr_2FeWO_6 have been determined by means of the X-ray polycrystal diffraction method. The phase transition mechanism and temperature are investigated.

PS-08.04.44 SYNTHESIS AND PHYSICAL-CHEMICAL INVESTIGATIONS OF THIOCUPRATES WITH $ThCr_2Si_2$ STRUCTURE. By M. V. Saveliyeva, S. A. Gromilov, V. I. Alekseev*, Institute of Inorganic Chemistry, Russian Academy of Sciences, Siberian Branch, Novosibirsk, Russia.

