A STUDY ON THE TRACE ELEMENT COMPOSITION OF THE XINGZI GROUP METAMORPHIC ROCKS IN THE LUSHAN AREA, SE CHINA

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Detailed studies on REE geochemistry of the Xingzi Group metasedimentary rocks at Lushan and rock-forming minerals such as garnet have been conducted.The results show that the REE are partly present in the rock-forming minerals and are dominantly contained in the lattice of secondary accessory minerals. In the process of metamorphism the REE reached equilibrium between garnet porphyroblast and rock and the distribution partitioning of REE between garnet and host rock is obviously controlled by the chemical composition of the system. The REE compositions of metamorphic veins and their minerals display remarked lanthanide tetrad effects. The element pairs Zr-Hf, U-Th and Y-Ho have also experienced remarkable fractionation with respect to the metamorphic rocks and therefore, they can be used as discriminating indicators for the occurrence of fluid processes in the process of metamorphism of the Xingzi Group.