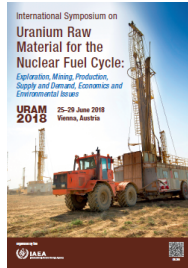


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Structural Characteristics and Its Control on Uranium Mineralization in Xiangshan Uranium Ore-Field

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Xiangshan uranium ore-field is the largest volcanic-related hydrothermal uranium deposit in China. Based on high precision deep geophysical survey, 3D geologic modeling and scientific drilling projects, EW-trending faults in basement were rejuvenated by strong shearing of Suichuan-Dexing fault during later Jurassic to Early Cretaceous, the tectonic-stress field changed from compression to extension at the beginning of Early-Cretaceous, and it is advantageous to the ascension of deep-derived materials, with ore-bearing hydrothermal fluid transiting, precipitating and enriching. The favorable position for uranium mineralization include the junctions of faults with different directions, the junctions between main faults and subsidiary fractures, the junctions between branch fractures of main faults and derived fractures of subsidiary faults. EW-trending faults in basement is the main channel-way in which substance can transmit to surface, the linear, ringlike and radial pattern structures which are connect with faults in basement controlled the shape, occurrence, scale and spatial locations of uranium ore bodies, these faults are main ore-hosting structures. Therefore, we hold fault structures are still the emphasis of ore-finding, especially, the belts where deep E-W faults and surface faults intersected are favorable areas to explore uranium resources.

Country or International Organization

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