

Mode of occurrence of fluorine in Late Palaeozoic coals from Junger Coalfield, Ordos Basin, China

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Abstract: Samples of the late Palaeozoic coals (the No. 5 Coal) are collected systematically from the Chuancaogedan Mine, Junger Coalfield, Ordos Basin, China. High temperature heating-F Ion Selective Electrode, X-ray diffraction(XRD), Scanning Electron Microscopy(SEM) were used to study the occurrence and enrichment of fluorine in No. 5 coal. The results show that: (1) Fluorine is enriched in No. 5 coal unusually. The content is 124.31~385.27 $\mu\text{g/g}$, average content is 218.37 $\mu\text{g/g}$, far higher than the content of No. 6 coal in the same area and coal in North China. (2) Fluorine in the coal has positive correlation with ash yield, which mainly indicates that fluorine exists in inorganic forms in No. 5 coal. (3) The enrichment of fluorine in coal is controlled by rock properties of provenance, sedimentary environment, organic matter, tectonic and magmatic hydrothermal and many other geological factors.