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鄂尔多斯盆地东北缘准格尔煤田煤中超常富集勃姆石的发现

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摘要：

运用X射线衍射分析(XRD)、带能谱仪的扫描电镜(SEM-EDX)和光学显微镜等技术,首次在鄂尔多斯盆地东北缘准格尔矿区6号巨厚煤层中发现了超常富集的勃姆石及其特殊的矿物组合,勃姆石含量可高达13.1%,与勃姆石伴生的矿物有磷锶铝石、锆石、金红石、菱铁矿、方铅矿、硒铅矿和硒方铅矿。重矿物的组合特征与华北地区本溪组铝土矿中的重矿物组合特征相似,高含量的勃姆石主要来源于聚煤盆地北偏东方向本溪组风化壳铝土矿,三水铝石以胶体溶液的形式从铝土矿中被短距离带入泥炭沼泽中,在泥炭聚积阶段和成岩作用早期经压实作用脱水凝聚而形成勃姆石。

关键词：煤 勃姆石 晚古生代 准格尔煤田

A Discovery of Extremely-enriched Boehmite from Coal in the Junger Coalfield, the Northeastern Ordos Basin

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Abstract:

The authors found an extremely-enriched boehmite and its associated minerals for the first time in the super-thick No.6 coal seam from the Junger Coalfield in the northeastern Ordos Basin by using technologies including the X-ray diffraction analysis (XRD), scanning electron microscope equipped with an energy dispersive X-ray spectrometer, and optical microscope. The content of boehmite is as high as 13.1%, and the associated minerals are goyazite, zircon, rutile, goethite, galena, clausthalite, and selenio-galena. The heavy minerals assemblage is similar to that in the bauxite of the Benxi Formation from North China. The high boehmite in coal is mainly from weathering crust bauxite of the Benxi Formation from the northeastern coal-accumulation basin. The gibbsite colloidstone solution was removed from bauxite to the peat mire, and boehmite was formed via compaction and dehydration of gibbsite colloidstone solution in the period of peat accumulation and early period of diagenesis

Keywords:coal boehmite Late Paleozoic period Junger Coalfield

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