桂西堆积型铝土矿中三水铝石成因矿物学研究

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提要：桂西堆积型铝土矿中三水铝石的矿物共生组合、矿物空间分布规律、产出特征、矿物的形成世代、化学成分、稀土元素和矿体内外的水质成分等成因矿物学特征研究结果表明，红土中的三水铝石是由硬水铝石水解形成的，三水铝石形成于本区特殊的气候和地质条件，特别是地下水溶液中Al+3、[SiO4]-2浓度及pH值等多种因素的制约，经历了Al(OH)3的沉淀、老化、脱玻化、结晶几个阶段。在淋滤作用的早期，形成了高岭石；在淋滤作用较弱的位置，形成了次生石英。不仅是新类型矿床，而且其成因也是独特的，是正处于退化中的铝土矿。

关键词：堆积型铝土矿；红土；三水铝石；成因矿物学
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Minerageny of gibbsite in accumulation-type bauxite deposits in western Guangxi

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Abstract:The mineragenic features such as the mineral assemblage of gibbsite, spatial distribution of minerals, mode of occurrence, generations of mineral formation, chemical composition, rare earth elements and water composition inside or outside orebodies in accumulation-type bauxite deposits in western Guangxi have been studied.The results of the study indicate that gibbsite in laterite formed by hydrolytic dissociation of diaspore. The formation of gibbsite occurred under special climatic and geological conditions in the area and was controlled by several factors such as the concentrations of Al3+ and [SiO4] 2- and pH in groundwater. It is supposed to have experienced the stages of precipitation, solidization, devitrification and crystallization of Al (OH)3. In the early stage kaolinite was formed by leaching and secondary quartz was formed at the sites of slight leaching. This kind of bauxite is considered to be not only a new type of deposit but its genesis is also unique. It is degenerating bauxite.
Key words: accumulation-type bauxite; laterite; gibbsite; minerageny