贵州梵净山地区震旦系微量元素特征及沉积环境

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中文摘要:为了详细研究梵净山地区震旦系沉积地球化学特征及沉积环境演化,笔者对该处永义剖面自下而上进行系统采样.样品分析结果表明该处剖面稀土元素呈轻稀土(LREE)富集,重稀土(HREE)亏损,铈总体上表现为亏损,垂向上逐渐变小,铕异常发生3次波动,表明该处震旦系沉积时总体上为氧化环境,局部沉积环境发生变化.而且陡山沱组底部"碳酸盐帽"稀土元素标准化分配模式不同于冷泉碳酸盐岩分配模式,表明两者处于不同的沉积环境,成因上无关.V/Cr、Ni/Co、U/Th及V/V Ni等微量元素比值均表明震旦系沉积时为总体上氧化环境,但垂向上仍有沉积环境及水体分层性的变化.

中文关键词:稀土元素 微量元素 铈,铕异常 沉积环境 水体分层性

Trace Element Characteristics and Sedimentary Environment of the Sinian system of the Fanjingshan Area in Guizhou Province

Abstract:In order to study characteristics of trace elements and evolution of sedimentary environment of Fanjingshan area in Sinian,the authors systematically collected samples from Yongyi section in upward direction.The analytical results of these samples reveal that REE display LREE enrichment and HREE depletion,Ce on the whole exhibits depletion and vertical decrease,and Eu anomaly shows three times of fluctuation,suggesting a general oxidation environment during Sinian deposition,but with local variation.Furthermore,the normalized REE distribution model of cap carbonate at the bottom of Doushantuo Formation is different from that of seep carbonate,implying that they lie in different sedimentary environments and have no genetic connection.The ratios of trace elements such as V/Cr,Ni/Co,U/Th and V/V Ni indicate that the sedimentary environment during Sinian deposition was on the whole oxidization,but with vertical variation of both sedimentary environment and water column stratification.

keywords:REE; trace element; Ce Eu anomaly; sedimentary environment; water column stratification