原子能科学技术 1991 25 (4): ISSN: 1000-6931 CN: 11-2044/TL

稀土元素X射线快速自动分析系统

@谭亚军$中国原子能科学研究院!北京 @李纪民$中国原子能科学研究院!北京

收稿日期 1989-11-13 修回日期 网络版发布日期:

摘要 文章阐述了一种新型稀土元素测试系统(即稀土X射线快速自动分析系统)的研制。叙述了系统配置及有关功能,分析了数据获取及处理系统软件包的特点,其特点在于运用了INTEL8086/8088汇编语言和编译BASIC语言混合编程方法,起到充分利用IBM-PC/XT微机的硬设备资源的效果,重点介绍了系统软件包的设计思想(人机接口、稀土元素X荧光分析方法、回归曲线拟合、软件稳谱),表明该系统既可用于工业生产部门也可用于科研单位。

关键词 稀土元素 X射线荧光分析 多道-微机(IBM-PC/XT)系统 数据分析处理软件包

分类号

A AUTO-PROCESSING SYSTEM IN RARE EARTH ELEMENTS ANALYSIS BY X-RAY FLUORESCENCE SPECTROMETER

TAN YAJUN;LI JIMIN China Institute of Atomic Energy, P. O. Box 275, Beijing

Abstract Anew system of rare earth elements analtsis is described in this paper.Inparticular,the main system allocation and function are elaborated,The maincharacteristics of the system are:1.It can calculate the contents of 12 rare earthelements in no more than ten seconds.2.all programs are written by INTEL8086/8088 assemble language and compile BASIC language,so it can make use ofthe system-resources of IBM-PC/XT.3.it can be applicative in rare earth mine-ral production and science research.In addition,the work puts the stress on themethod of software-design man-computer interface.X-ray spectrometer,regressioncurve,and peak correction-compensation are the main characteristic of the systemsoftware.

Key words Rare earth elements X-ray spectrometer MCA-microcomputer system Software-package in data analysis and processing

DOI

通讯作者