

IN THIS ISSUE

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Cover

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Inside cover

See Benjamin T. Manard, Hunter B. Andrews *et al.*, pp. 1412–1420. Image reproduced by permission of Oak Ridge National Laboratory, US Department of Energy. Designed by Jacquelyn DeMink from *J. Anal. At. Spectrom.*, 2023, **38**, 1412.

ATOMIC SPECTROMETRY UPDATES

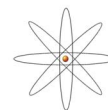
1339

Atomic spectrometry update: review of advances in elemental speciation

Robert Clough,* Chris F. Harrington, Steve J. Hill, Yolanda Madrid and Julian F. Tyson



Atomic
Spectrometry
Updates

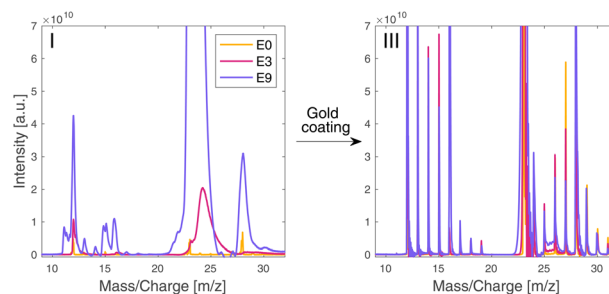


TECHNICAL NOTES

1372

Reduction of surface charging effects in laser ablation ionisation mass spectrometry through gold coating

Salome Gruchola,* Andreas Riedo, Peter Keresztes Schmidt, Coenraad P. de Koning, Luca N. Knecht, Marek Tulej, Frances Westall and Peter Wurz



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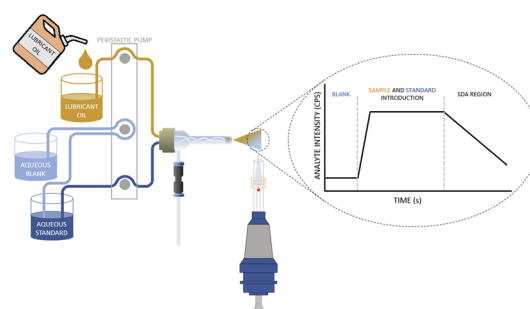


TECHNICAL NOTES

1379

Applicability of microwave induced plasma optical emission spectrometry for wear metal determination in lubricant oil using a multinebulizer

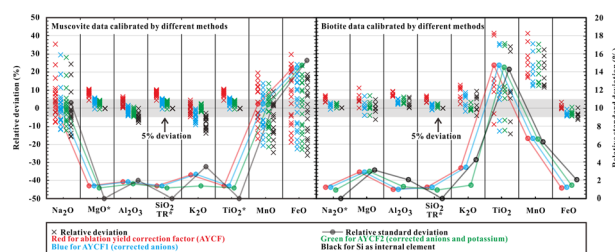
Sergio J. Abellán-Martín, Miguel Ángel Aguirre* and Antonio Canals*



1387

A mineral formula-based calibration method for major and trace element determination of mica without applying an internal element by LA-ICP-MS

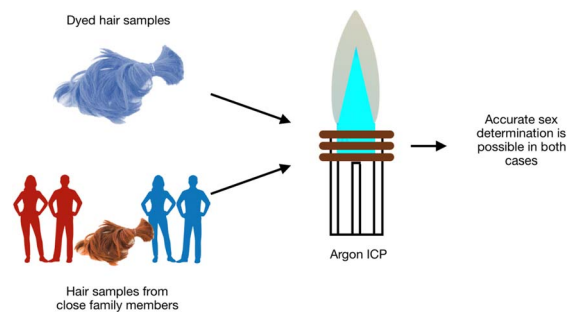
Hao-Xiang Zhang, Shao-Yong Jiang,* Hui-Min Su,* Wen-Tian Li, Si-Qi Liu and Yu-Ying Che



1394

Validation and expansion of sex determination method through analysis of human hair using electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry

Margaret MacConnachie and Diane Beauchemin*

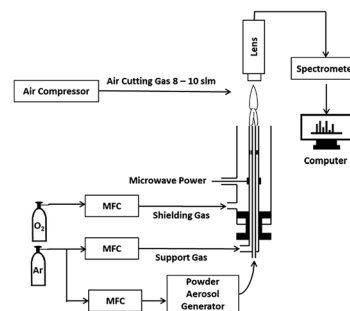


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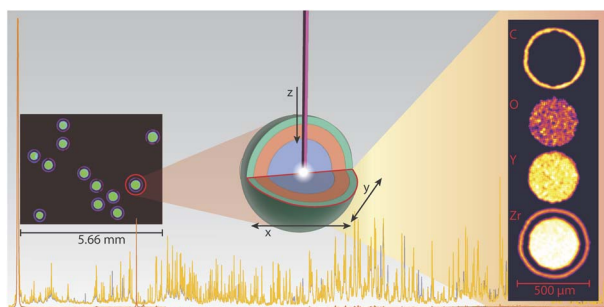
1402

Study on a modified spectral standardization method and quantitative analysis of cement based on microwave plasma torch

Dengjie Yu, Haoze Wei, Yarui Li, Yibo Shao, Wei Jin* and Bingwen Yu*



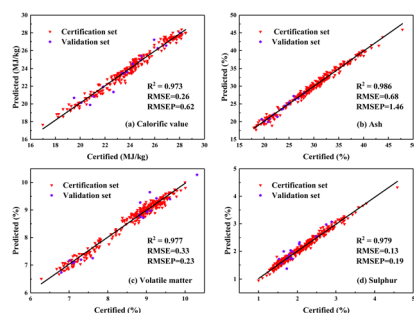
1412



Exploration of LIBS as a novel and rapid elemental mapping technique of nuclear fuels in the form of surrogate TRISO particles

Benjamin T. Manard,* Hunter B. Andrews,*
C. Derrick Quarles Jr, Veronica C. Bradley, Peter Doyle,
N. Alex Zirakparvar, Daniel R. Dunlap and Cole R. Hexel

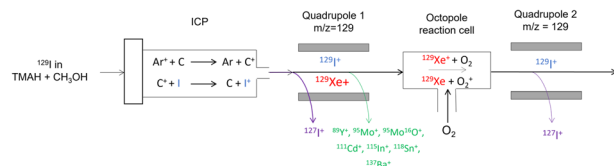
1421



Development and industrial application of LIBS-XRF coal quality analyzer by combining PCA and PLS regression methods

Zhihui Tian, Jiakuan Li, Shuqing Wang, Yu Bai, Yang Zhao,
Lei Zhang,* Peihua Zhang, Zefu Ye, Zhujun Zhu,
Wangbao Yin* and Suotang Jia

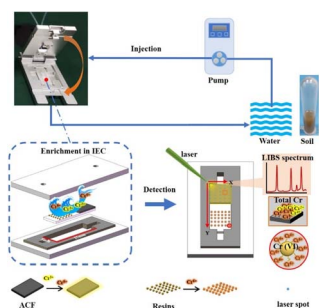
1431



Development of an optimised method for measurement of iodine-129 in decommissioning wastes using ICP-MS/MS

Žilvinas Zacharauskas, Phil Warwick, Ben Russell,*
Dave Reading and Ian Croudace

1442



Detection of chromium in different valence states in water and soil using laser-induced breakdown spectroscopy combined with an ion enrichment chip

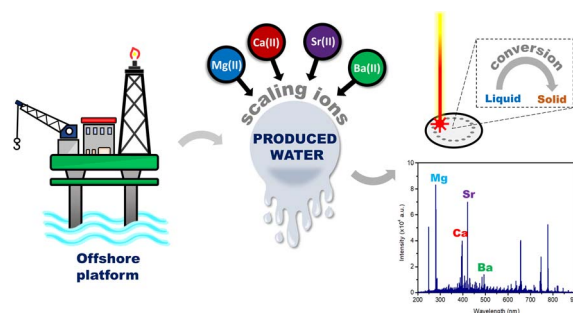
Fanghao Xu, Shixiang Ma, Hongwu Tian, Zhen Xing,
Chunjiang Zhao, Quan Feng,* Xiande Zhao*
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1450

Determination of scaling ions in oilfield produced water by laser-induced breakdown spectroscopy

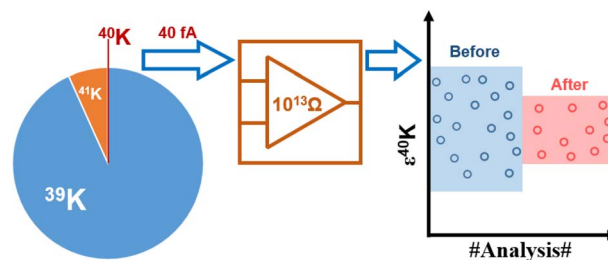
Nilvan A. Silva and Ivo M. Raimundo, Jr*



1461

Precise measurement of ^{40}K isotopic anomalies in small samples using a TIMS with a $10^{13}\ \Omega$ amplifier

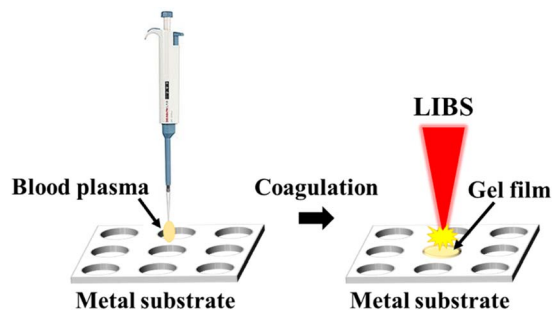
Yingnan Zhang, Siwei Wang, Jia Liu, Bing Yang and Liping Qin*



1469

Fast determination of electrolyte elements in human blood plasma using surface-enhanced laser-induced breakdown spectroscopy combined with a gel film method

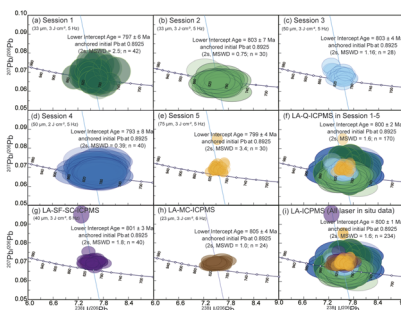
Yuanhang Wang, Yang Bu,* Biao Yang and Yachao Cai



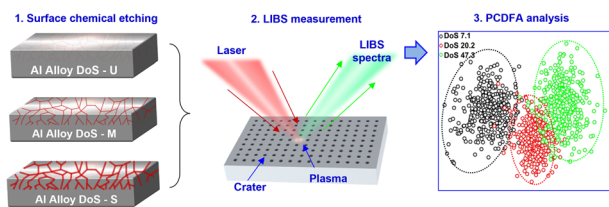
1478

Apatite MAP-3: a new homogeneous and low common lead natural reference for laser *in situ* U–Pb dating and Nd isotope analysis

Li-Jun Duan, Liang-Liang Zhang,* Di-Cheng Zhu,* Yue-Heng Yang, Jin-Cheng Xie, Qing Wang, Shi-Tou Wu, Chao Huang, Chao Li, Wen-Tan Xu, Sandra Kamo, Li-Juan Xu, Chen-Xu Pan and Guang-Hai Shi*



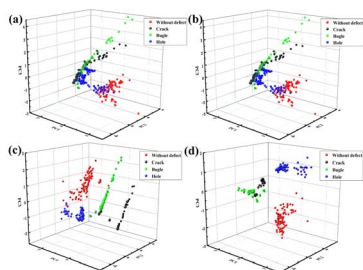
1494



Rapid nondestructive assessment of the degrees of sensitization of 5456 aluminum alloys using laser-induced breakdown spectroscopy (LIBS) with multivariate analysis

Lei Liu, Xi Huang,* Haoyu Dong, Aofei Mao, Peizi Li, Bai Cui, Jean-Francois Silvain and Yongfeng Lu*

1501



PCA three-dimensional scatter diagram obtained by four preprocessing methods: no preprocessing (a), SNV (b), first derivative (c), and second derivative (d)

Laser-induced breakdown spectroscopy and stoichiometry to identify various types of defects in metal-additive manufacturing parts

Jingjun Lin, Jiangfei Yang, Yutao Huang, Xiaomei Lin* and Changjin Che*

