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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

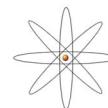
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Atomic spectrometry update: review of advances in elemental speciation

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



Atomic
Spectrometry
Updates

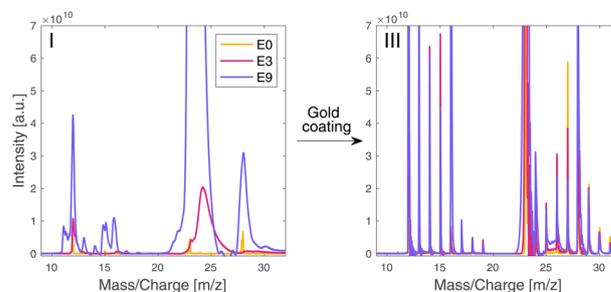


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Salome Gruchola,* Andreas Riedo, Peter Keresztes Schmidt, Coenraad P. de Koning, Luca N. Knecht, Marek Tulej, Frances Westall and Peter Wurz



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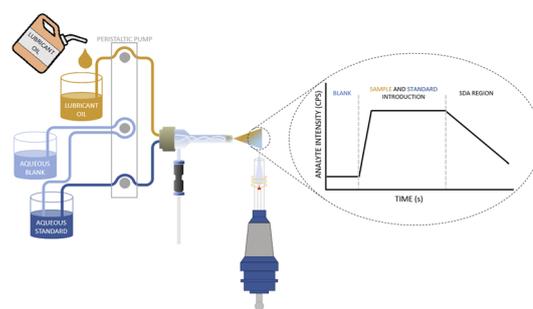


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Applicability of microwave induced plasma optical emission spectrometry for wear metal determination in lubricant oil using a multinebulizer

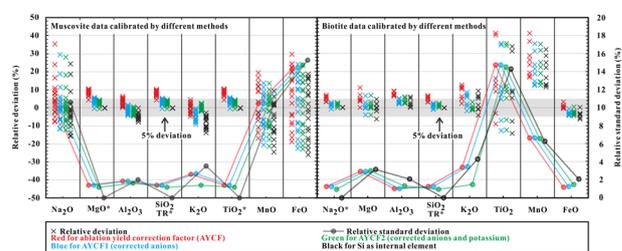
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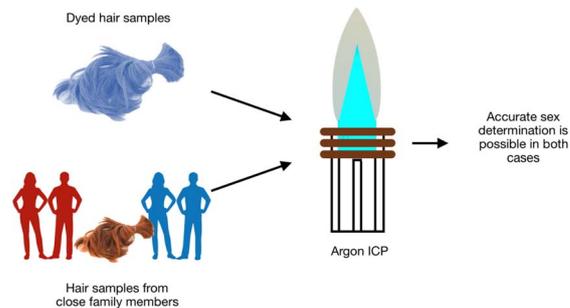
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Validation and expansion of sex determination method through analysis of human hair using electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry

Margaret MacConnachie and Diane Beauchemin*

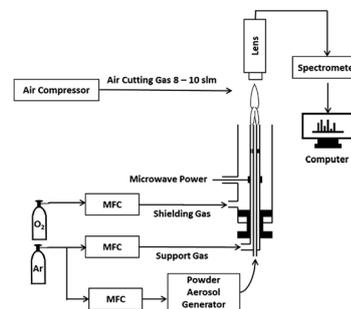


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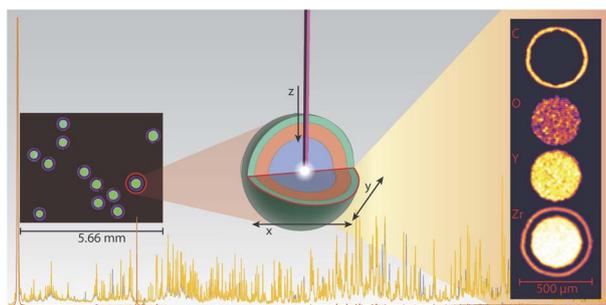
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Study on a modified spectral standardization method and quantitative analysis of cement based on microwave plasma torch

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



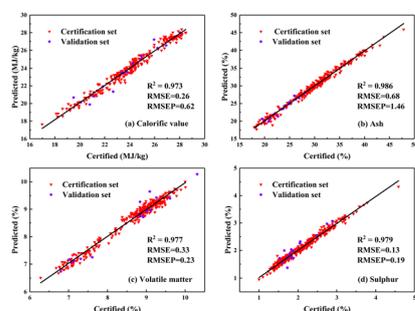
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Exploration of LIBS as a novel and rapid elemental mapping technique of nuclear fuels in the form of surrogate TRISO particles

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

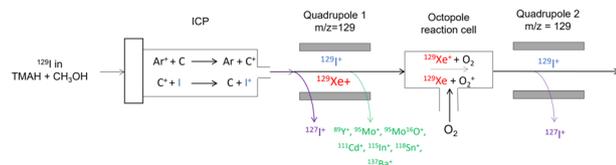
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Wangbao Yin* and Suotang Jia

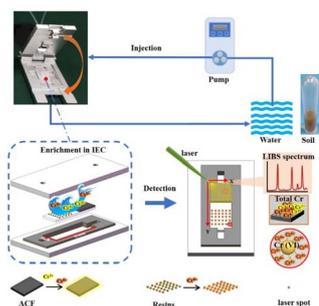
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Žilvinas Zacharauskas, Phil Warwick, Ben Russell,*
Dave Reading and Ian Croudace

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

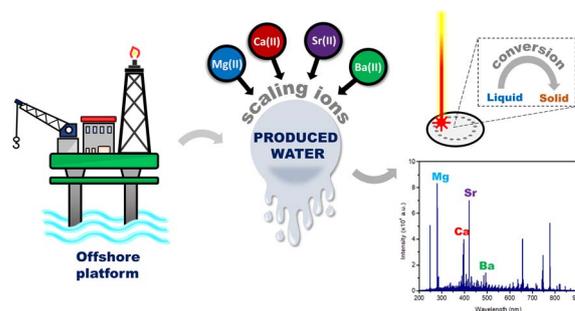
Fanghao Xu, Shixiang Ma, Hongwu Tian, Zhen Xing,
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Determination of scaling ions in oilfield produced water by laser-induced breakdown spectroscopy

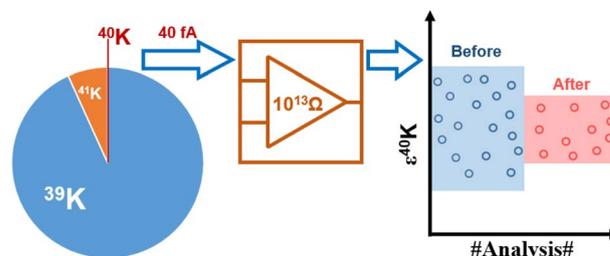
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Precise measurement of ^{40}K isotopic anomalies in small samples using a TIMS with a $10^{13}\ \Omega$ amplifier

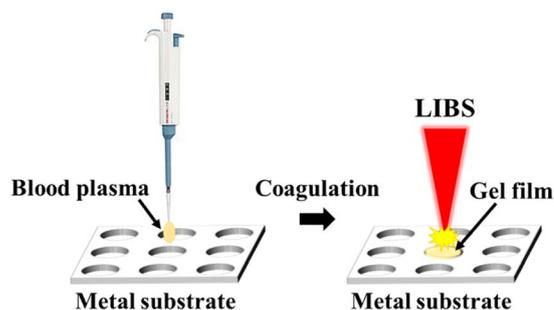
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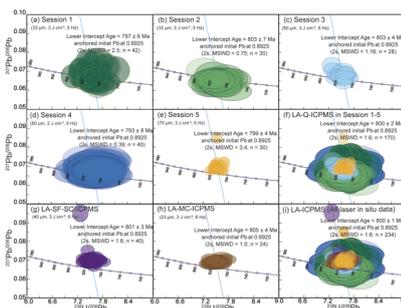
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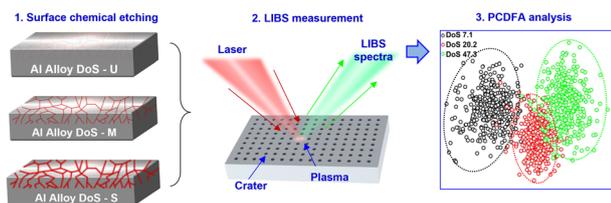
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Apatite MAP-3: a new homogeneous and low common lead natural reference for laser *in situ* U–Pb dating and Nd isotope analysis

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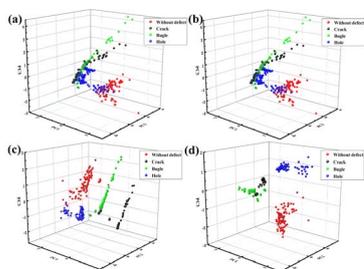
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Rapid nondestructive assessment of the degrees of sensitization of 5456 aluminum alloys using laser-induced breakdown spectroscopy (LIBS) with multivariate analysis

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

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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*

