

## IN THIS ISSUE

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**Cover**  
See Jie Lin *et al.*, pp. 1192–1202. Image reproduced by permission of Jie Lin from *J. Anal. At. Spectrom.*, 2025, **40**, 1192.



**Inside cover**  
See Ye Tian *et al.*, pp. 1203–1212. Image reproduced by permission of Ye Tian from *J. Anal. At. Spectrom.*, 2025, **40**, 1203.

## ATOMIC SPECTROMETRY UPDATES

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### Atomic spectrometry update: review of advances in atomic spectrometry and related techniques

E. Hywel Evans,\* Jorge Pisonero, Clare M. M. Smith and Rex N. Taylor

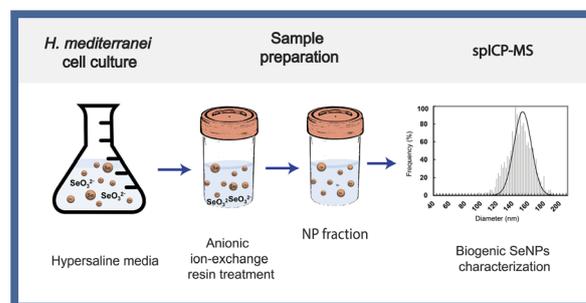


## TECHNICAL NOTES

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### Improving detection capabilities of biogenic selenium nanoparticles in spiCP-MS using an anionic ion-exchange resin

Nuria Guijarro-Ramírez,\* Iraide Sáez-Zamacona, Guillermo Grindlay, Luis Gras and Rosa María Martínez-Espinosa



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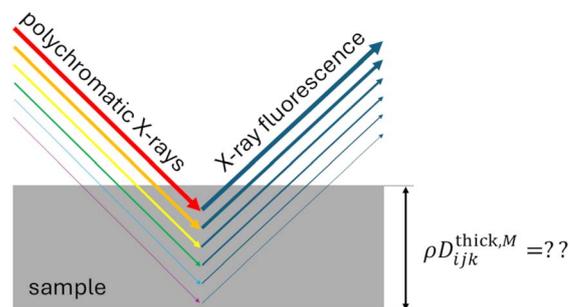
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## TECHNICAL NOTES

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## Some considerations on thick sample thickness in X-ray fluorescence analysis

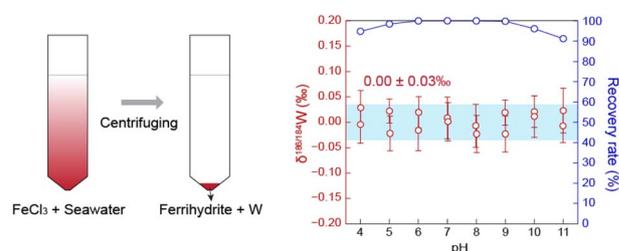
Pawet Wróbel\* and Filip J. Baran



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## Precise determination of stable W isotopic compositions of seawater with Fe co-precipitation and double spike MC-ICP-MS

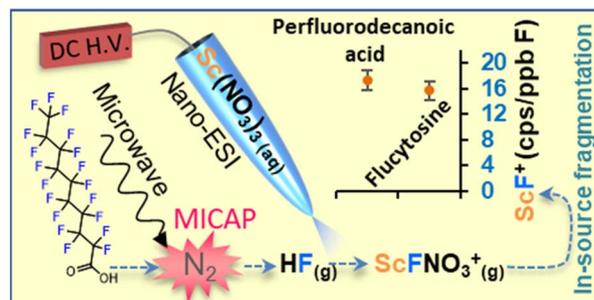
Mengnan Liu, Tao Li,\* Ruiyu Yang, Shu Liu, Qingquan Hong, Tianyu Chen and Gaojun Li



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## Nitrogen MICAP with post-plasma ionization mass spectrometry for elemental fluorine quantitation

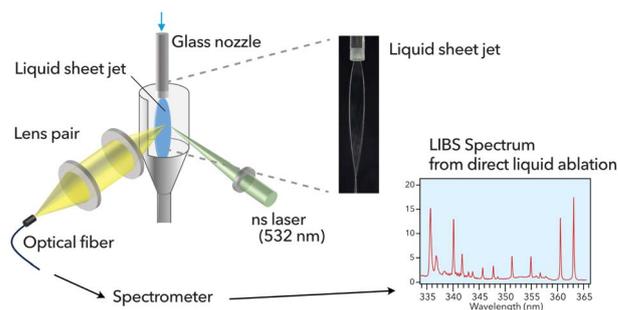
Jordan L. Tanen and Kaveh Jorabchi\*



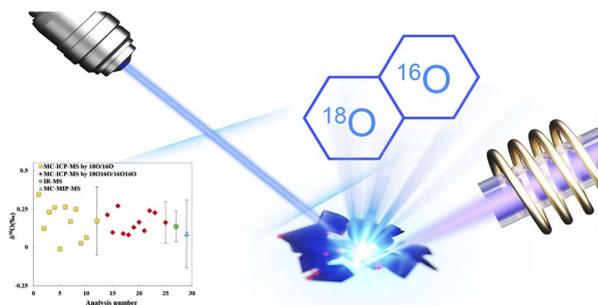
1185

## Sensitive detection of trace precious metals in acidic solutions using liquid sheet jet laser-induced breakdown spectroscopy

Ryuzo Nakanishi,\* Morihisa Saeki and Hironori Ohba



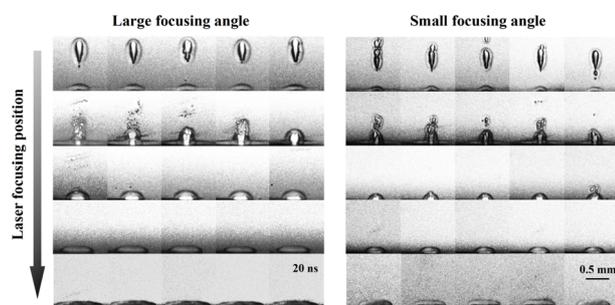
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### First attempt to determine oxygen isotopes in oxygen by MC-ICP-MS

Zhenyi Liu, Jie Lin,\* Xin Jiang, Xi Zhu, Wengui Liu, Yongsheng Liu, Wen Zhang and Zhaochu Hu

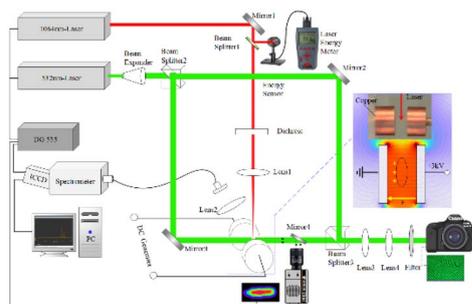
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### Effects of laser-focusing geometry on underwater laser ablation and LIBS measurement of a submerged target

Longshang Wang, Ye Tian,\* Yuanyuan Xue, Ziwen Jia, Canxu Zhai, Yuan Lu, Jinjia Guo and Ronger Zheng

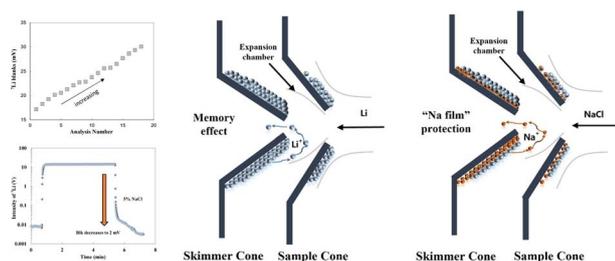
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### Non-invasive microscale electric field measurements using LIBS technology

Zefeng Yang, Zhe Li, Ziqian Yang, Jie Yong, Wenfu Wei,\* Bo Tang and Langyu Xia

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### Investigating the mechanism that reduces the memory effect of Li on MC-ICP-MS

Tiantian Zhang, Jie Lin,\* Xi Zhu, Ao Yang, Kexin Deng, Zhaochu Hu and Yongsheng Liu



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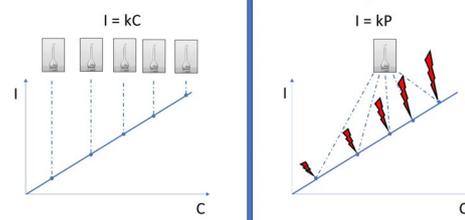
## Multi-laser-power calibration for quantitative determination of N and P in fertilizers by Raman spectroscopy

Evilim M. Oliveira, Edilene C. Ferreira, José A. Gomes Neto, George L. Donati\* and Bradley T. Jones

### Quantitative Raman Spectroscopy

External standard calibration

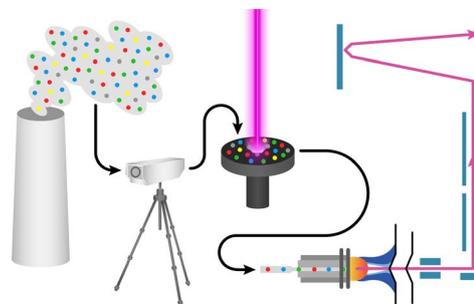
Multi-laser-power calibration



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## Evaluating the feasibility of LA-ICP-TOF-MS for the analysis of environmental particle collections

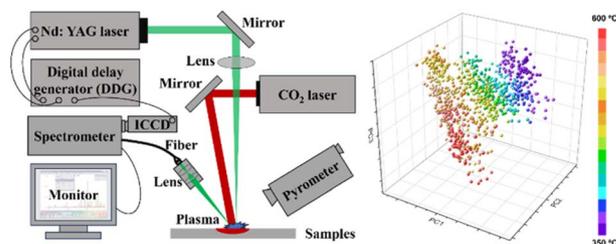
Benjamin T. Manard,\* Sarah E. Szakas, Jordan S. Stanberry, Brian W. Ticknor, Leslie O'Brien, Mark Boris, Joshua T. Hewitt, Paula Cable-Dunlap and Hunter B. Andrews\*



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## Machine learning-assisted laser-induced breakdown spectroscopy for estimating substrate surface temperatures

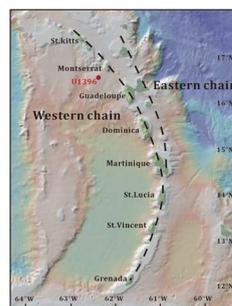
Haoyu Dong, Xi Huang, Luke Wadle, Lanh Trinh, Peizi Li, Jean-Francois Silvain, Bai Cui and Yongfeng Lu\*



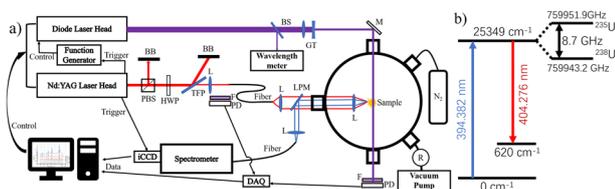
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## $^{40}\text{Ar}/^{39}\text{Ar}$ dating of volcanic fallout under seawater: influence of glass

Zhiyu Han,\* Fei Wang, Liekun Yang, Wenbei Shi and Yinzhi Wang



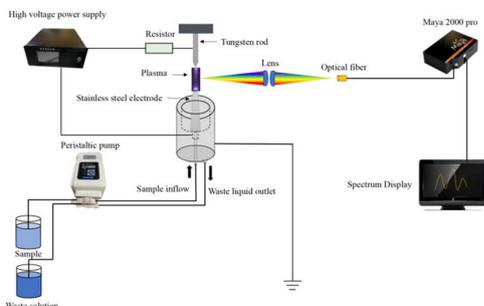
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## Uranium enrichment measurements using tunable laser spectroscopy coupled with fiber-optic laser-induced breakdown spectroscopy

Yichen Zhao,\* Haori Yang and Sivanandan S. Harilal\*

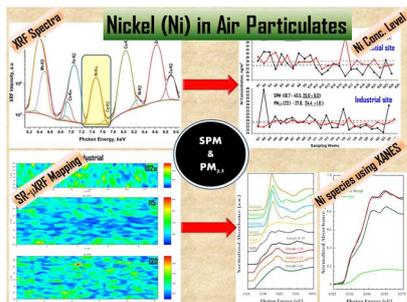
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## Spatial distribution characteristics of atmospheric pressure solution cathode glow discharge plasma based on Abel inversion

Peichao Zheng, Jingtong Zhou, Jinmei Wang,\* Jiali Liu, Wei Li, Biao Li, Lianbo Guo, Hongwu Tian and Daming Dong

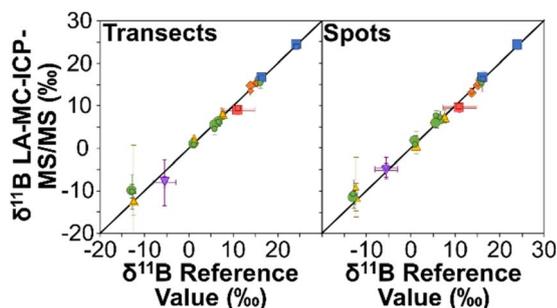
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## The occurrence and sources of Ni in ambient air particulates using synchrotron radiation based X-ray fluorescence and X-ray absorption near edge structure

Abdallah A. Shaltout,\* Messaoud Harfouche, Omar H. Abd-Elkader and Diane Eichert

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## Matrix independent and interference free *in situ* boron isotope analysis by laser ablation MC-ICP-MS/MS

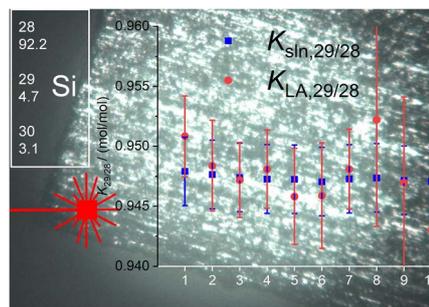
Christopher D. Standish,\* J. Andy Milton, Rachel M. Brown and Gavin L. Foster



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### An improved protocol for LA-MC-ICP-MS isotope ratio measurements of natural silicon at 213 nm: comparison of mass bias correction factor dependence (solution vs. solid single crystal) and solid sample homogeneity

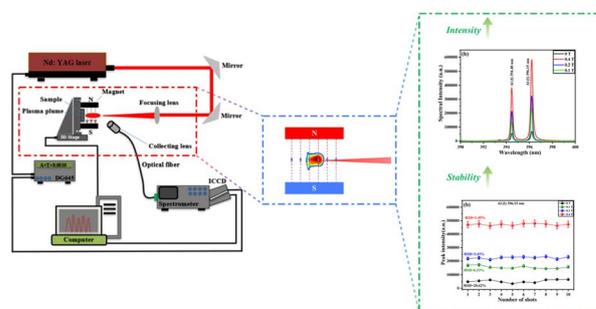
Tongxiang Ren, Olaf Rienitz, Tianheng Gao and Axel Pramann\*



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### The spectral repeatability improvement of nanosecond pulsed laser-induced Al plasma with magnetic field confinement

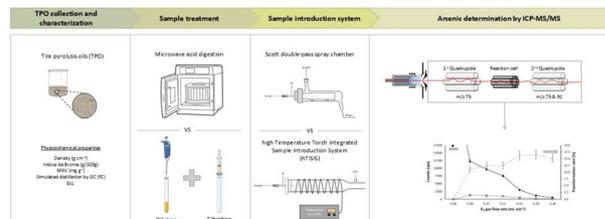
Rana Muhammad Shahbaz, Qiuyun Wang,\* Hailong Yu, Lianbo Guo and Xun Gao\*



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### Cutting-edge arsenic quantification in pyrolysis oils: evaluation of a high temperature torch integrated sample introduction system (hTISIS) combined with an ICP-MS/MS

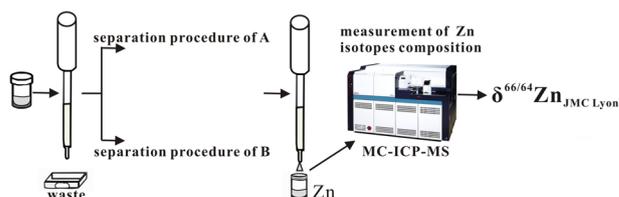
Mar Todoli-Carbonell, Rebeca Pérez-Ramírez, Thomas Coquet, Fabien Chainet, Marion Lacoue-Nègre and Raquel Sánchez-Romero\*



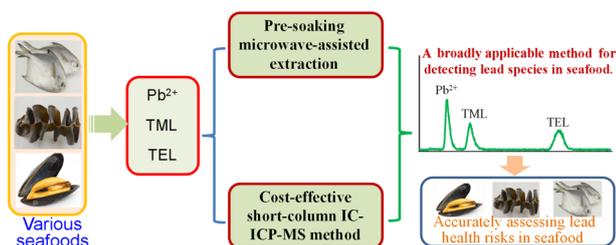
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### Effective separation of zinc from geological samples for high-precision zinc isotope measurement using MC-ICP-MS

Qiao-Hui Zhong, Lu Yin, Gao-bin Chu, Chi-feng He and Jie Li\*



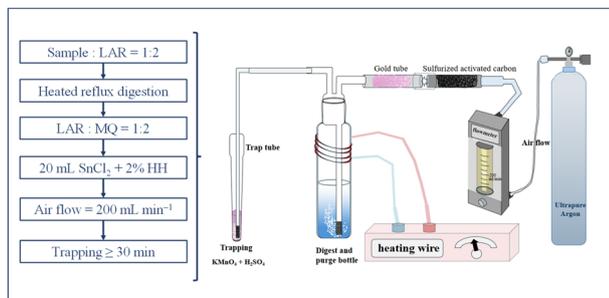
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### A cost-effective method applicable to the speciation analysis of lead in various types of seafood based on short-column ion chromatography-inductively coupled plasma mass spectrometry

Haochen Xu, Yiwei Zhu, Ying Peng, Chaochen Sun, FengFu Fu\* and Yue Lin\*

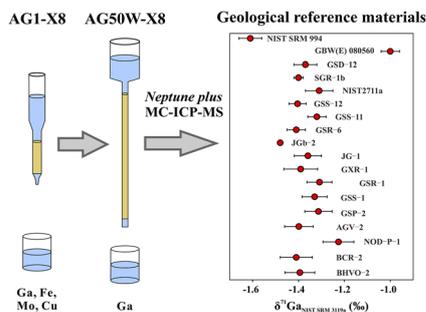
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### A digestion-purging-trapping method for precise stable mercury isotope measurements of natural carbonates

Fei Cao, Ruoyu Sun, Larissa Schneider, Yongquan Zhang, Songjing Li, Rujia Yan, Shicheng Tao, Xiuyang Jiang, Pengfei Li, Wang Zheng, Jiubin Chen and Yi Liu\*

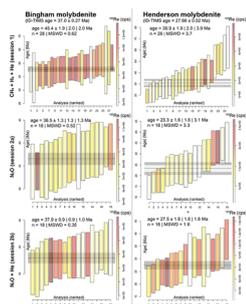
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### Precise and accurate Ga isotope analysis of solution standards and geological reference materials by MC-ICP-MS

Dandan Li, Zida Zhang, Xuesong Fan, Tianhao Wu, Zixuan Huang, Qianqian Shen, Xuefei Liu and Sheng-Ao Liu\*

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### *In situ* Re–Os geochronology of Re-rich Palaeogene molybdenite by LA-ICP-MS/MS

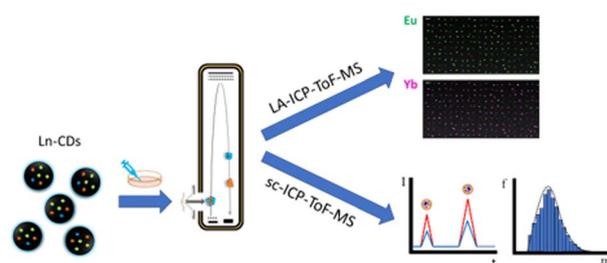
Stijn Glorie,\* Jay M. Thompson, Sarah E. Gilbert and A. Kate Souders



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## Determination of the uptake of lanthanide doped-carbon dots by human cells using single cell ICP-ToF-MS

Guillermo Redondo-Fernandez, Kharmen Billimoria, Simon Cowen, David Ojeda, Dorota Bartczak, Ana Soldado, Jose M. Costa-Fernandez and Heidi Goenaga-Infante\*



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## High sensitivity detection of heavy metal elements in water by polishing assisted SE-LIBS

Qiuyun Wang, Xun Gao,\* Zeyu Wang, Ying Cui, Anmin Chen and Xueyan Han\*

