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#### Cover

See Haoyu Jin, Xiaojian Hao et al., pp. 2280–2290. Image reproduced by permission of Haoyu Jin, Xiaojian Hao and Biming Mo from *J. Anal. At. Spectrom.*, 2023, **38**, 2280.

### ATOMIC SPECTROMETRY UPDATES

2215

#### Atomic spectrometry update: review of advances in the analysis of metals, chemicals and materials

Robert Clough, Andy Fisher,\* Bridget Gibson and Ben Russell

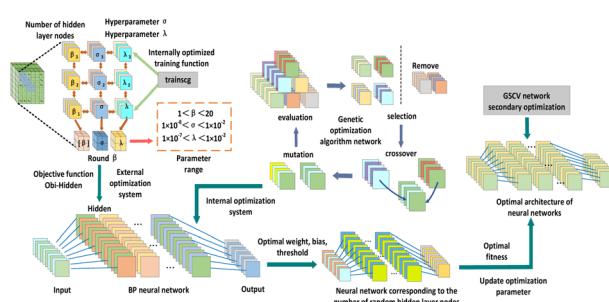


### PAPERS

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#### Rapid classification of heavy metal soils from different mining areas by using a GCSV quadratic merit seeking network combined with MF-LIBS

Haoyu Jin, Xiaojian Hao\* and Biming Mo



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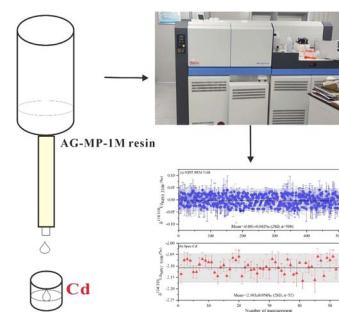


## PAPERS

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**A single-stage anion exchange separation method for Cd isotopic analysis in geological and environmental samples by MC-ICP-MS**

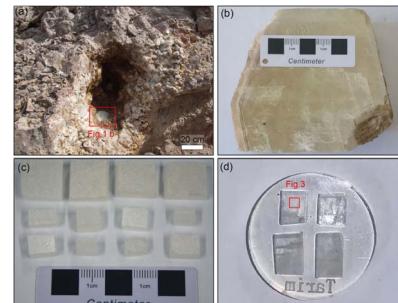
Qiao-Hui Zhong, Lu Yin, Jie Li,\* Yue-Xing Feng, Neng-Ping Shen, Bing-Yu Peng and Zhao-Yang Wang



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**TARIM calcite: a potential reference material for laser ICPMS *in situ* calcite U–Pb dating**

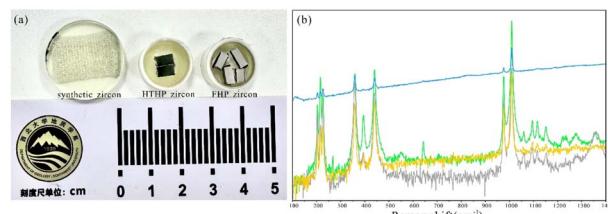
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**Comparison of synthetic zircon, high-temperature and high-pressure sintered zircon and fast hot-pressing sintered zircon for *in situ* hafnium isotope analysis by LA-MC-ICP-MS**

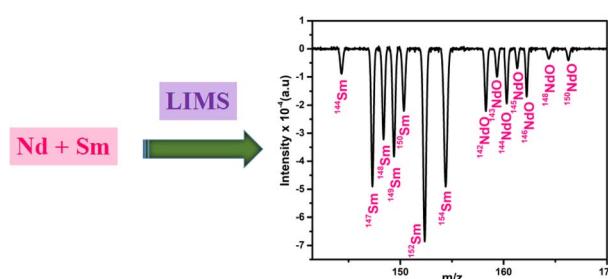
Zhian Bao, Kaiyun Chen, Lei Kang, Chunlei Zong, Xiaojuan Nie, Nan Lv, Peng Liang and Honglin Yuan\*



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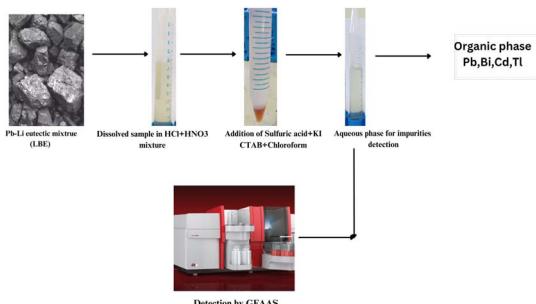
**Resolving isobaric interference in the determination of Nd isotopes using laser ionisation mass spectrometry towards atom percent fission measurements**

Namitha Janardhanan, Ujjwal Kumar Maity, M. Joseph, P. Manoravi and N. Sivaraman\*



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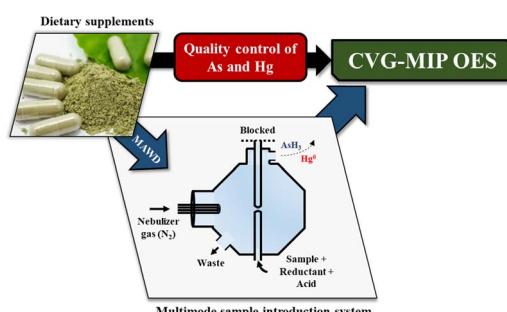
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**Analysis of PbBi eutectic after matrix separation by acid induced dispersive liquid–liquid microextraction followed by HR-CS-ETAAS determination**

K. Madhavi, G. Venkateswarlu, N. N. Meeravali and A. C. Sahayam\*

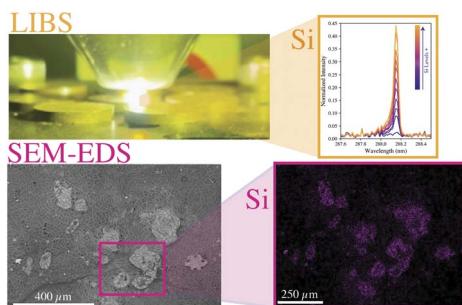
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**On a single method for determining As and Hg in dietary supplements by CVG-MIP OES: optimization of the multimode sample introduction system**

Gustavo Rossato Bitencourt, Fabio Andrei Duarte, Valderi Luiz Dressler, Rodrigo Cordeiro Bolzan, Érico Marlon de Moraes Flores and Paola Azevedo Mello\*

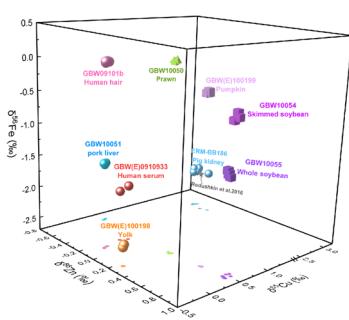
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**Rapid screening of wood and leaf tissues: investigating silicon-based phytoliths in *Populus trichocarpa* for carbon storage applications using laser-induced breakdown spectroscopy and scanning electron microscopy–energy dispersive X-ray spectroscopy**

Hunter B. Andrews,\* Ann M. Wymore, E. E. Wetter, Elizabeth M. Herndon, Hui Li, Samir A. Martin, Natalie A. Griffiths, Xiaohan Yang, Wellington Muchero, David J. Weston and Madhavi Z. Martin

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**Iron, copper and zinc isotope compositions of biological reference materials determined by MC-ICP-MS**

Rui Guo, Hui-Min Yu,\* Shu-Bin Fang, Zi-Cong Xiao and Fang Huang

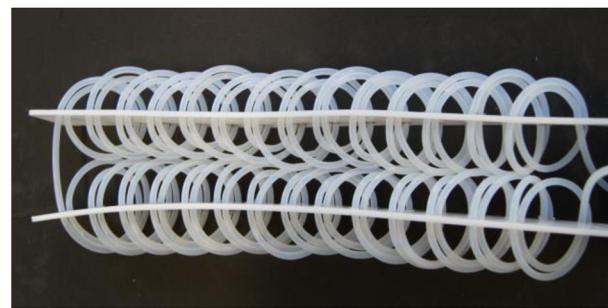


## PAPERS

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## An improved digestion coil arrangement for high-pressure microwave-assisted flow digestion

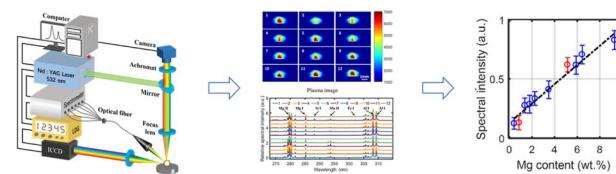
Franz Hallwirth, Herbert Motter and Helmar Wiltsche\*



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## A spectral standardization method based on plasma image-spectrum fusion to improve the stability of laser-induced breakdown spectroscopy

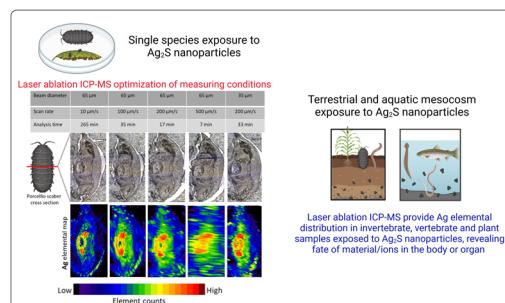
Junfei Nie, Ying Zeng, Xuechen Niu, Deng Zhang\* and Lianbo Guo\*



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## High throughput laser ablation ICP-MS bioimaging of silver distribution in animal organisms and plant tissue after exposure to silver sulfide nanoparticles

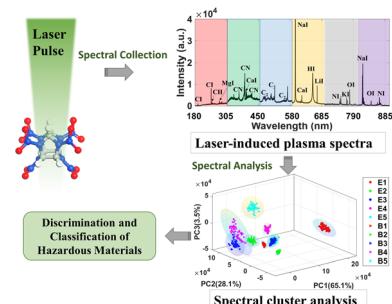
Gregor Marolt, Sara Novak,\* Anita Jemec Kokalj, Iva Talaber, Veno Kononenko, Susana Loureiro, Zahra Khodaparast, Patrícia V. Silva, Martí Busquets Fité, Richard D. Handy and Damjana Drobne



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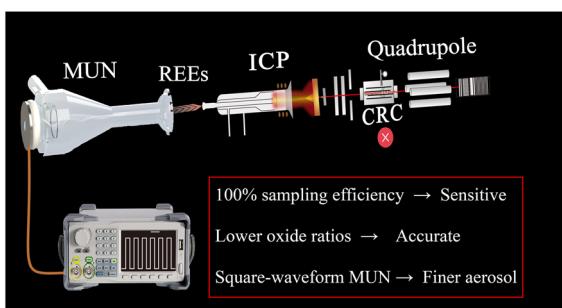
## Discrimination and classification of high explosives and other organic materials based on laser-induced plasma spectroscopy

Xianshuang Wang, Yage He, Ying Zhang, An Li, Xinyu Zhang, Xueyong Guo, Tonglai Zhang, Wei Guo, Ruibin Liu\* and Yugui Yao\*



## PAPERS

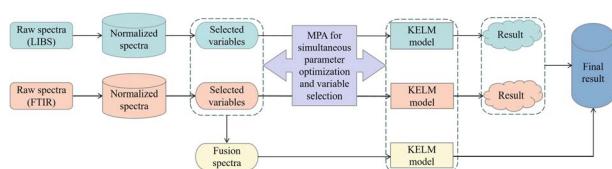
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### Sensitive and accurate determination of REEs using a high-efficiency miniaturized ultrasonic nebulization sampling system coupled with the inductively coupled plasma mass spectrometer

Junhang Dong, Meihua Chen, Lujie Li, Pengju Xing, Shuyang Li, Zhe Zhang, Jingwen Zhang, Jinzhao Liu, Xing Liu, Wenkai Zhang, Huan Tian, Hongtao Zheng and Zhenli Zhu\*

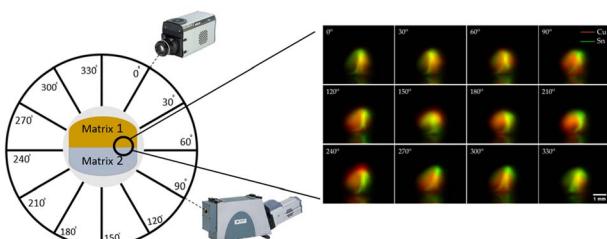
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### Performing parameter optimization and variable selection simultaneously in Fourier transform infrared and laser-induced breakdown spectroscopy data fusion

Chunhua Yan,\* Yuemei Su, Yijiang Liu, Tianlong Zhang and Hua Li\*

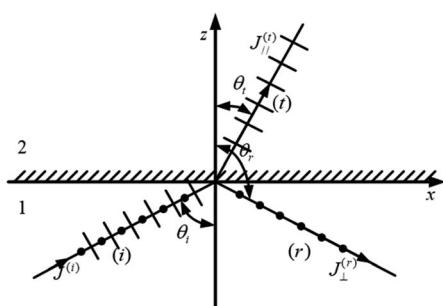
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### Laser-induced plasma on the boundary of two matrices

Megha Mohan,\* Jakub Buday, David Prochazka, Pavel Gejdoš, Pavel Pořízka and Jozef Kaiser

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### Improving the stability of LIBS for chromium in soil based on the model of micro-linear spectrum

Jiang Xu,\* Xiao Wang, Mingyin Yao and Muhua Liu\*

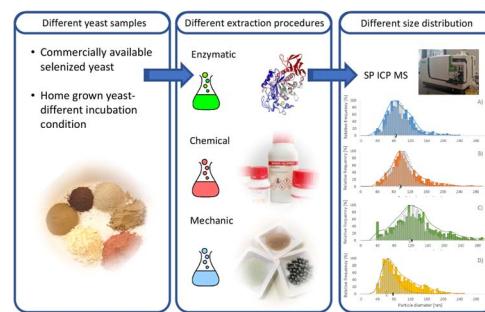


## PAPERS

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## Critical evaluation of sample preparation for SP-ICP-MS determination of selenium nanoparticles in microorganisms – focus on yeast

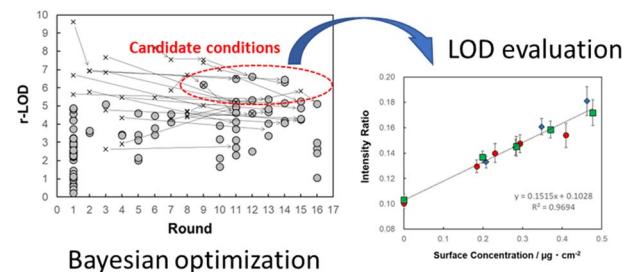
Adam Sajnóg, Katarzyna Bierla, Joanna Szpunar and Javier Jiménez-Lamana\*



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## Bayesian optimization of the conditions for highly sensitive detection of surface contamination by laser-induced breakdown spectroscopy

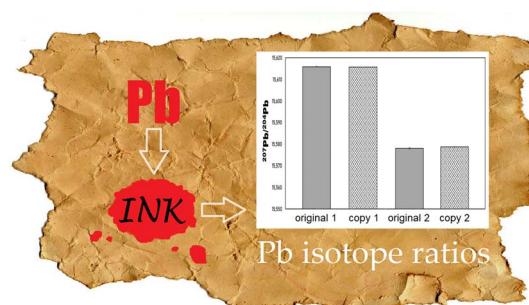
Tadatake Sato,\* Kenichi Tashiro, Yoshizo Kawaguchi, Hideki Ohmura and Haruhisa Akiyama



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## Precise determination of lead isotope ratios by MC-ICP-MS without matrix separation exemplified by unique samples of diverse origin and history

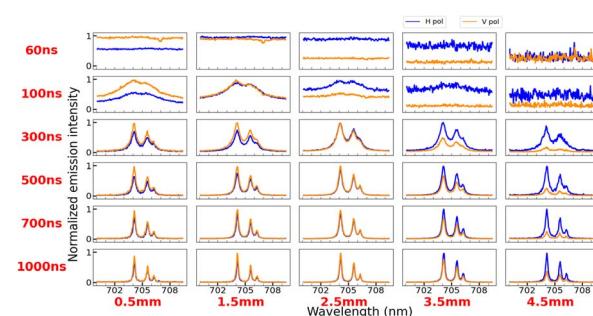
Jakub Karasiński,\* Ewa Bulska, Ludwik Halicz, Andrii Tupys and Barbara Wagner



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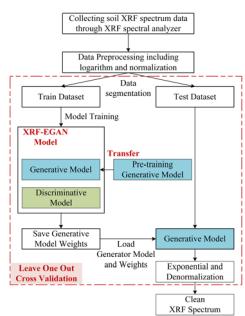
## Spatio-temporal dynamics of anisotropic emission from nano-second laser produced aluminium plasma

B. R. Geethika,\* Jinto Thomas,\* Milaan Patel, Renjith Kumar R. and Hem Chandra Joshi



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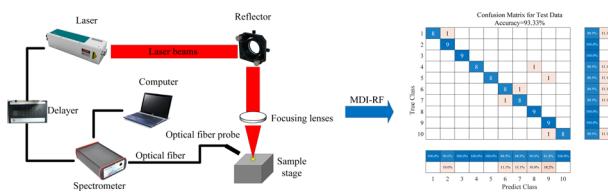
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## A new technique for baseline calibration of soil X-ray fluorescence spectra based on enhanced generative adversarial networks combined with transfer learning

Xinghua He, Yanchun Zhao\* and Fusheng Li

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## Determination of soil source using laser induced breakdown spectroscopy combined with feature selection

Yu Ding,\* Yan Shu, Ao Hu, Meiling Zhao, Jing Chen, Linyu Yang, Wenjie Chen and Yufeng Wang

