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Cover

See Jian Wu *et al.*, pp. 2716–2727. Image reproduced by permission of Jian Wu from *J. Anal. At. Spectrom.*, 2024, **39**, 2716.

ATOMIC SPECTROMETRY UPDATES

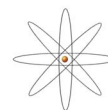
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Atomic spectrometry update: review of advances in the analysis of metals, chemicals and materials

Eduardo Bolea-Fernandez, Robert Clough, Andy Fisher,* Bridget Gibson and Ben Russell



Atomic Spectrometry Updates

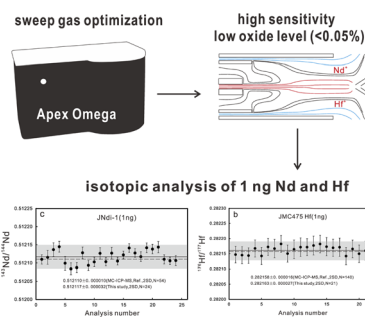


TECHNICAL NOTES

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A simplified instrumental protocol for trace Nd and Hf isotope measurements (<10 ng) using a MC-ICP-MS and an Apex Omega de-solvating system

Ting Zhou,* Liang Qi, Sheng-hua Liu and Bo Zhou



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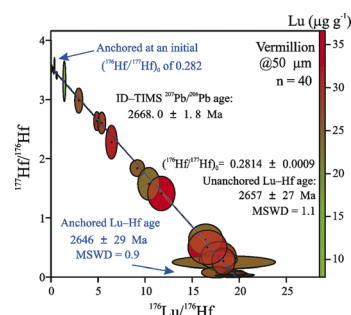
Fundamental questions
Elemental answers

TECHNICAL NOTES

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First demonstration of *in situ* Lu–Hf dating using LA-ICP-MS/MS applied to monazite

Shitou Wu,* Junlong Niu, Yueheng Yang, Hao Wang, Jinhui Yang and Fuyuan Wu

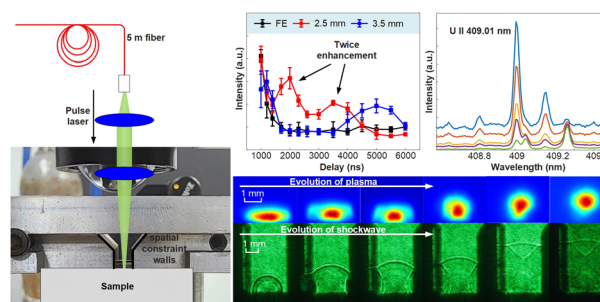


PAPERS

2716

Measurement of uranium in a glass matrix based on spatial confinement using fiber-optic laser-induced breakdown spectroscopy

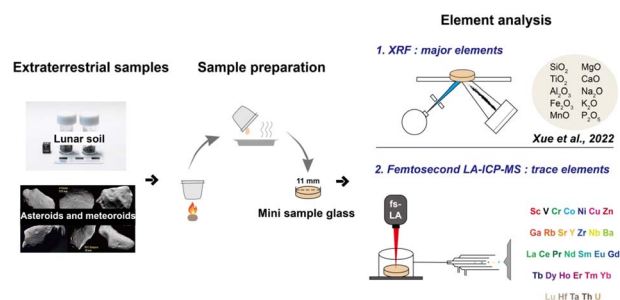
Xinyu Guo, Jian Wu,* Jinghui Li, Mingxin Shi, Xinxin Zhu, Ying Zhou, Di Wu, Ziyuan Song, Sijun Huang and Xingwen Li



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Trace element determination by femtosecond LA-ICP-MS in 10 mg extraterrestrial geological samples prepared as lithium borate glasses

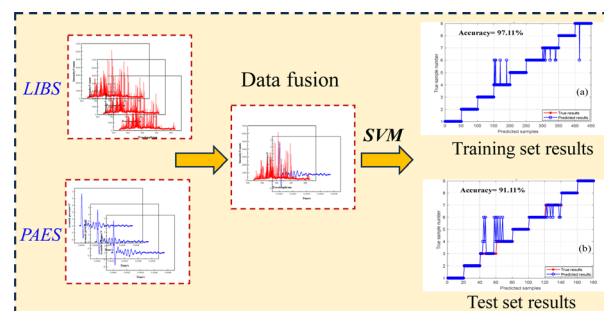
Yan-Hong Liu, Ding-Shuai Xue,* Wen-Jun Li, Zhong-Qiang Wang, Yan Liang, Shun Guo* and Bo Wan



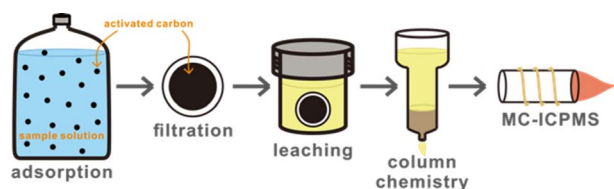
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Bimodal data fusion of LIBS spectroscopy and plasma acoustic emission signals: improving the accuracy of machining process identification for low roughness samples

Shilei Xiong, Minchao Cui,* Nan Yang, Guangyuan Shi, Yuxin Pi, Yuyang Mu, Yuntao Zhang and Yue Zhao



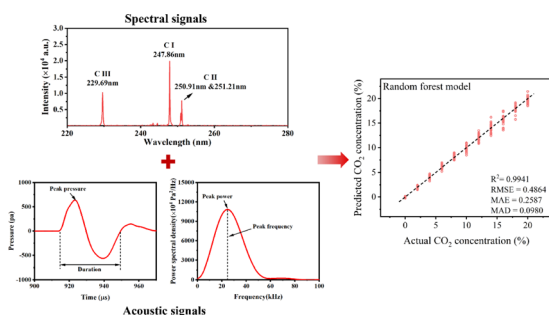
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Efficient pre-concentration of ultra-trace rhenium from geological materials via induced adsorption for accurate isotope analysis

Yumeng Liu, Tianyu Chen,* Tao Li, Weiqiang Li, Qingquan Hong and Jiubin Chen

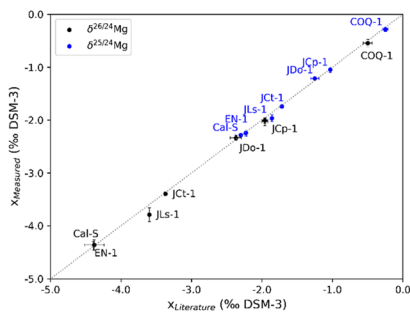
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Data fusion of spectral and acoustic signals in LIBS to improve the measurement accuracy of carbon emissions at varying gas temperatures

Shu Chai, Jie Ren, Suming Jiang, Aochen Li, Ziqing Zhao, Haimeng Peng, Qiwen Zhang and Wendong Wu*

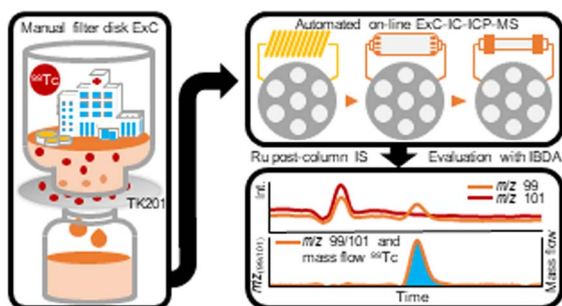
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Mg separation from samples with very high Ca/Mg ratios for Mg isotope analysis

Niklas Keller* and Michael Tatzel

2774



Quantification of technetium-99 in wastewater by means of automated on-line extraction chromatography – anion-exchange chromatography – inductively coupled plasma-mass spectrometry

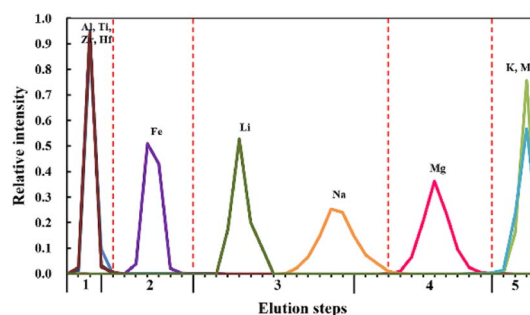
Maximilian Horstmann, C. Derrick Quarles, Jr, Steffen Happel, Michael Sperling, Andreas Faust, David Clases* and Uwe Karst*



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A single-column and efficient procedure for separating Fe and Mg from geological materials for isotopic analyses using MC-ICP-MS

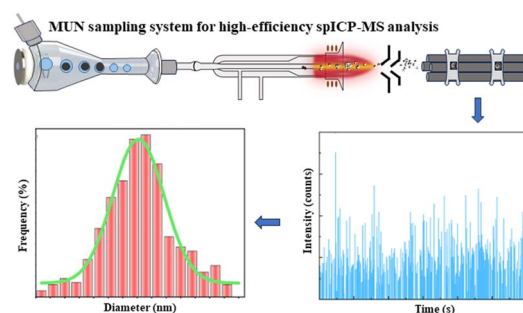
Guanhong Zhu, Zhenmin Ge, Le Zhang, Gangjian Wei and Jinlong Ma*



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Evaluation of miniaturized ultrasonic nebulization for high-efficiency sampling in characterization of silver nanoparticles by single particle inductively coupled plasma mass spectrometry

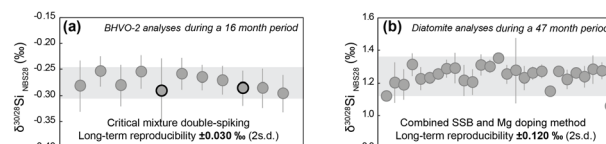
Junhang Dong, Zhenli Zhu,* Lujie Li, Pengju Xing, Shuyang Li, Lei Ouyang, Xing Liu, Wei Guo, Hongtao Zheng and Rong Qian*



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High-precision, mass dependent Si isotope measurements via the critical mixture double-spiking technique

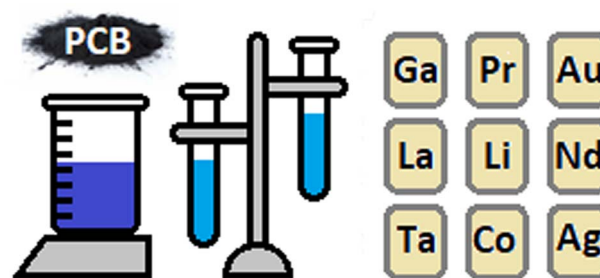
Xiao-Ning Liu,* Martijn Klaver, Remco C. Hin, Christopher D. Coath, Hong Chin Ng and Tim Elliott



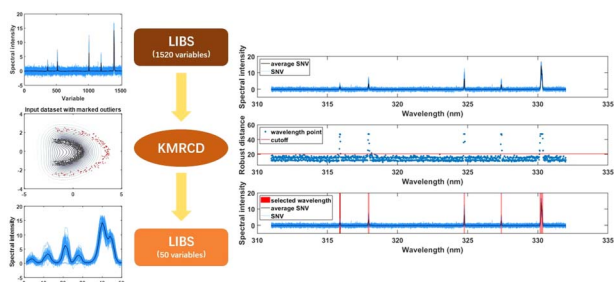
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Development and application of reference and routine analytical methods providing SI-traceable results for the determination of technology-critical elements in PCB from WEEE

Giancarlo D'Agostino,* Marcus Oelze, Jochen Vogl, Jean-Philippe Ghestem, Nicolas Lafaurie, Ole Klein, Daniel Pröfrock, Marco Di Luzio, Luigi Bergamaschi, Radojko Jačimović, Caroline Oster, Johanna Irrgeher, Shaun T. Lancaster, Anna Walch, Anita Röthke, Lena Michaliszyn, Axel Pramann, Olaf Rienitz, Timo Sara-Aho, Oktay Cankur, Derya Kutan and Johanna Noireaux



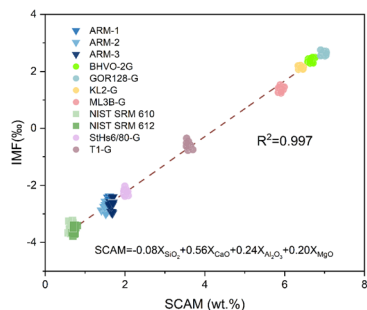
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Optimization of informative variables selection for quantitative analysis of heavy metal (Cu) contaminated *Tegillarca granosa* using laser-induced breakdown spectroscopy

Xudong Huang, Xiaojing Chen,* Guangzao Huang,* Zhonghao Xie, Wen Shi, Shujat Ali, Leiming Yuan and Xi Chen

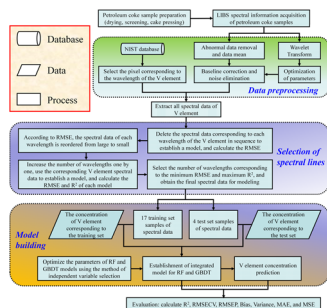
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Evaluation and calibration of matrix effects during SIMS silicon isotope analysis in silicate glasses

Liu-Yang Chen, Yu Liu, Di Zhang, Guo-Qiang Tang and Qiu-Li Li*

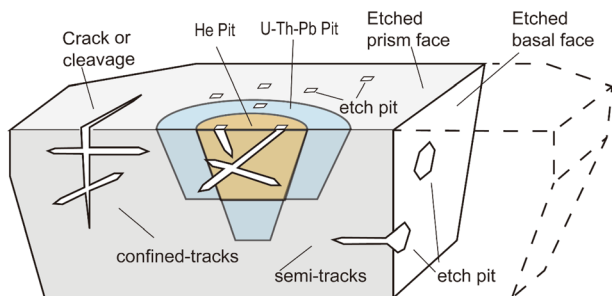
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An ensemble model for rapid quantitative determination of vanadium (V) in petroleum coke by laser-induced breakdown spectroscopy

Hongkun Du, Tengfei Sun,* Shaoying Ke, Dongfeng Qi, Wei Zhang, Juan Wei, Bing Yang and Hongyu Zheng*

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A novel *in situ* methodology for U-Pb, (U-Th)/He, and fission track triple dating

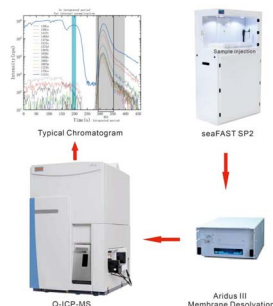
Jie Hu, Zhiwu Li,* Jinxi Li, Shugen Liu, Ganqing Xu, Chaoqun Yang, Kui Tong and Yin Li



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Accurate determination of ultra-trace REEs in seawater using a membrane desolvation Q-ICP-MS coupled with an online automatic separation system

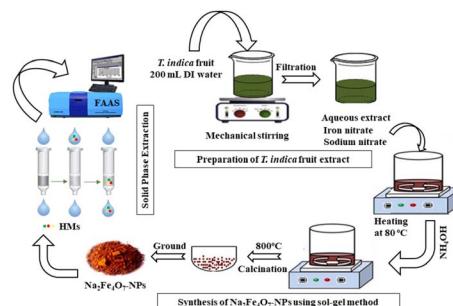
Ji-Hao Zhu,* Feng-You Chu, Feng Liang, Xian-Ying Luo, Qiang Liu, Quan-Hui Xu, Wei Yu, Yong-Chun Li, Jiang-Gu Lu, Yun-Xiu Li, Yan-Hui Dong, Huai-Ming Li, Jun Zhao and Cai Zhang



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Sodium nanoferrite-based solid phase extraction: a green method for the simultaneous determination of cadmium, copper, and lead

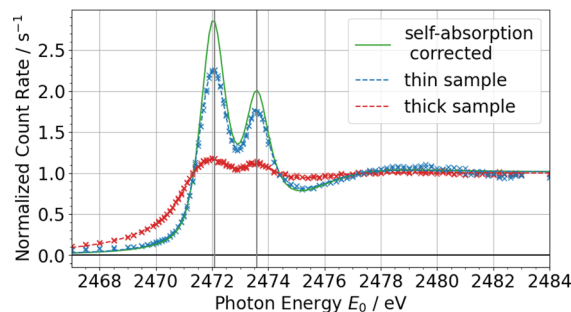
Saima Perveen, Aysen Hol, Jameel Ahmed Baig,* Syed Tufail Hussain Sherazi, Khalil Akhtar, Sajjad Hussain and Fahad Abbasi



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Self-absorption correction of NEXAFS spectra for intermediate sample thicknesses applied to organo-sulfur model compounds

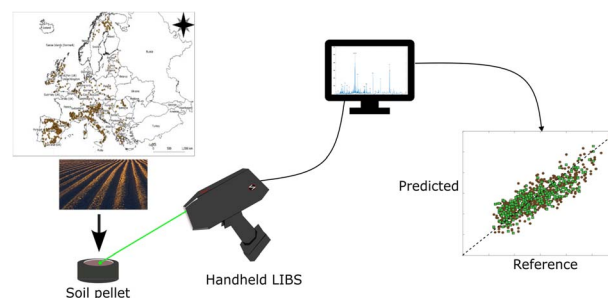
Konstantin Skudler,* Michael Walter, Michael Sommer and Matthias Müller



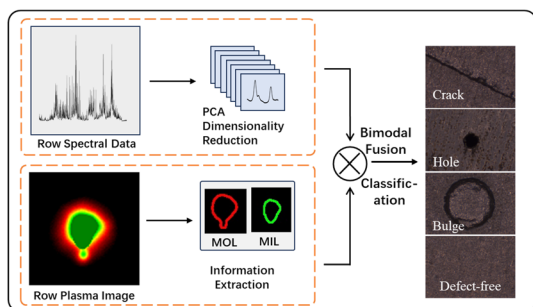
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Assessing the performance of handheld LIBS for predicting soil organic carbon and texture in European soils

Alex Wangeci,* Maria Knadel, Olga De Pascale, Mogens H. Greve and Giorgio S. Senesi*



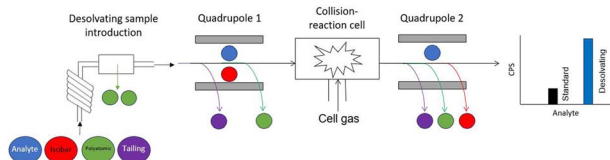
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Research on a bimodal fusion detection method for surface defects of metal AM components based on LIBS

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

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Improvements in low-level radionuclide measurement capability through use of the Apex Q sample introduction system combined with ICP-MS/MS

Ben Russell,* Frankie Falksohn, Alexandre Tribolet, Hibaaq Mohamud, Olivia Pearson, Emma Braysheer, Saskia Burke and Anu Bhaisare

