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Inside cover
See Kerstin Leopold, Henning Bruhn *et al.*, pp. 1021–1031. Image reproduced by permission of Kerstin Leopold from *J. Anal. At. Spectrom.*, 2023, **38**, 1021.

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

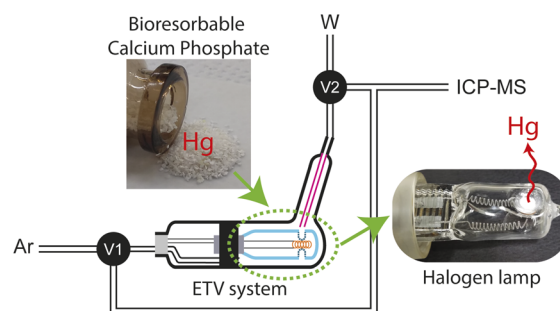


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Mercury determination in bioresorbable calcium phosphate using a new electrothermal vaporization system coupled to ICP-MS

Jussiane S. Silva,* Graciela M. Heidrich, Bruno O. Poletto, Jose N. G. Paniz, Valderi L. Dressler and Erico M. M. Flores



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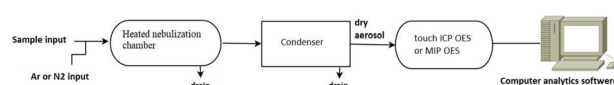


TECHNICAL NOTES

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Determination of trace elements in mineral water by MIP OES using the Marin-5 nebulization system

Alexsandro S. Martins, Heronides Adonias Dantas Filho and Kelly G. Fernandes Dantas*

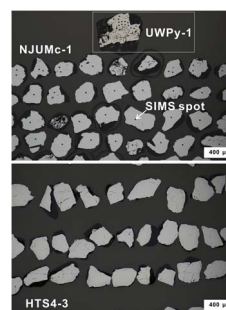


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The feasibility of using a pyrite standard to calibrate the sulfur isotope ratio of marcasite during SIMS analysis

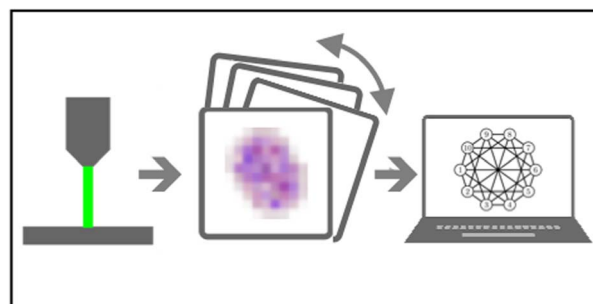
Rucuo Li, Xiao-Lei Wang,* Yue Guan, Jing Gu and Lan-Lan Tian



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Efficient and robust image registration for two-dimensional micro-X-ray fluorescence measurements

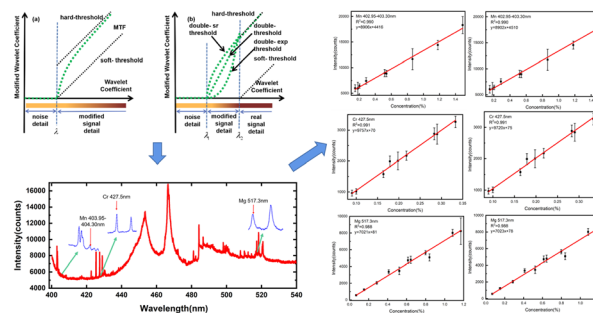
Felix Bock, Andreas Gruber, Kerstin Leopold* and Henning Bruhn*



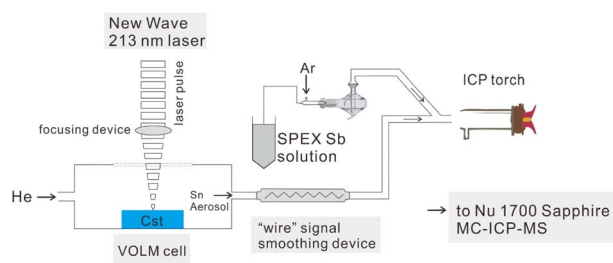
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Denoising preprocessing using novel wavelet threshold functions in laser-induced breakdown spectroscopy based on fiber laser

Bohan Xu, Zhanjian Lin, Zhiying Xu, Xiaotao Yan, Xinying Peng, Chuangkai Li, Yuzhi Qin, Jiaming Li,* Nan Zhao and Qingmao Zhang



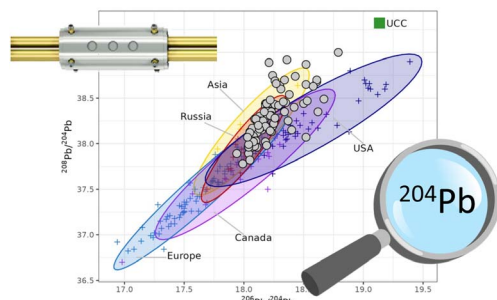
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In situ Sn isotope analysis of cassiterite (SnO₂) by nanosecond laser ablation MC-ICP-MS

Jia-Xin She, Weiqiang Li,* Shichao An, Tao Yang and Rongqing Zhang

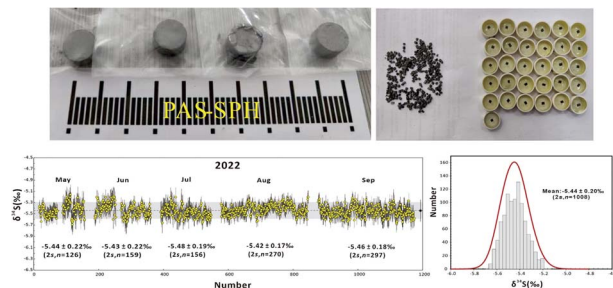
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Precise determination of ²⁰⁴Pb-based isotopic ratios in environmental samples by quadrupole inductively coupled plasma mass spectrometry

Marco Grotti,* Maria Alessia Vecchio, Dalia Gobbato, Matilde Mataloni and Francisco Ardini

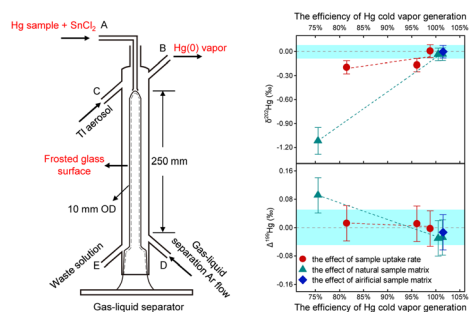
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A newly synthesized reference material for *in situ* sulfur isotope measurement of sphalerite using laser ablation MC-ICP-MS

Xiaojuan Nie, Zhian Bao, Chunlei Zong, Nan Lv, Kaiyun Chen and Honglin Yuan*

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The efficiency of Hg cold vapor generation and its influence on Hg isotope analysis by MC-ICP-MS

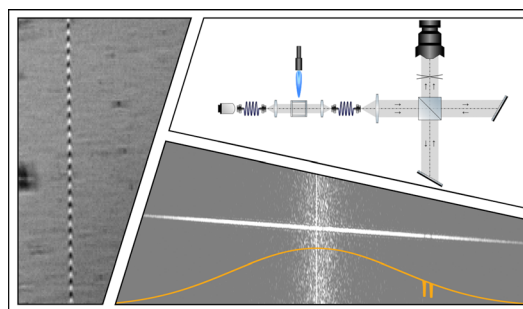
Miao Shi, Bridget A. Bergquist, Anwen Zhou, Yaqiu Zhao, Ruoyu Sun, Jiubin Chen and Wang Zheng*



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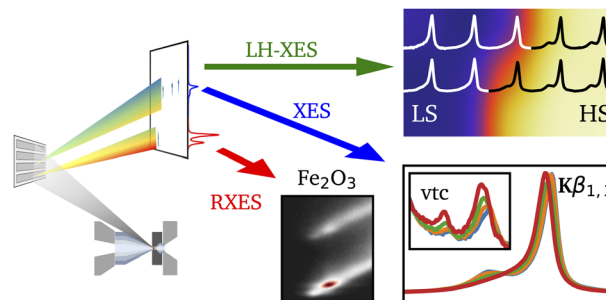
Xunyu Li, Jens Riedel and Yi You*



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High-efficiency X-ray emission spectroscopy of cold-compressed Fe₂O₃ and laser-heated pressurized FeCO₃ using a von Hámos spectrometer

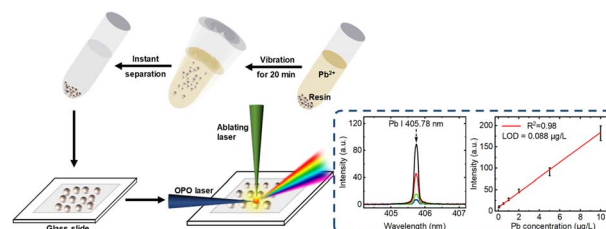
Christian Albers,* Robin Sakrowski, Nicola Thiering, Lélia Libon, Georg Spiekermann, Johannes M. Kaa, Hlynur Gretarsson, Martin Sundermann, Metin Tolan, Max Wilke and Christian Sternemann*



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Detection of lead in water at ppt levels using resin-enrichment combined with LIBS-LIF

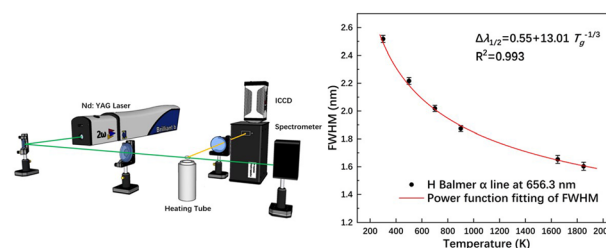
Xuelin Wen, Zhenlin Hu, Junfei Nie, Zhen Gao, Deng Zhang, Lianbo Guo,* Shixiang Ma* and Daming Dong



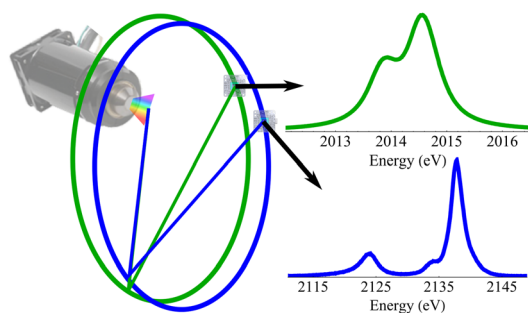
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Gas temperature measurement by atomic line broadening using the LIBS technique

Ercong Gao, Renmin Wei, Dayuan Zhang, Zhifeng Zhu, Qiang Gao* and Bo Li



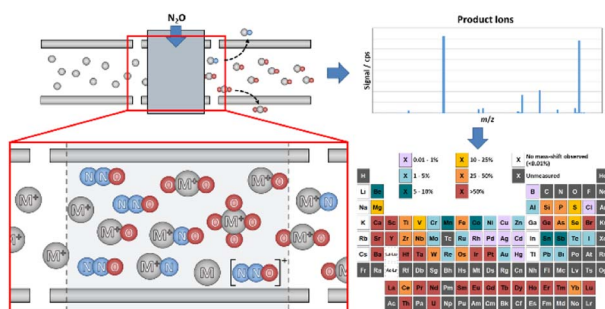
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A laboratory X-ray emission spectrometer for phosphorus $K\alpha$ and $K\beta$ study of air-sensitive samples

Jared E. Abramson, William M. Holden, Ricardo A. Rivera-Maldonado, Alexandra Velian, Brandi M. Cossairt and Gerald T. Seidler*

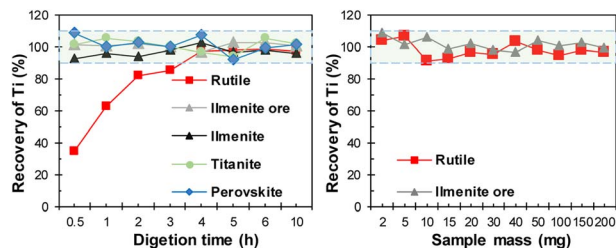
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Characterisation of gas cell reactions for 70+ elements using N_2O for ICP tandem mass spectrometry measurements

Shaun T. Lancaster,* Thomas Prohaska and Johanna Irrgeher

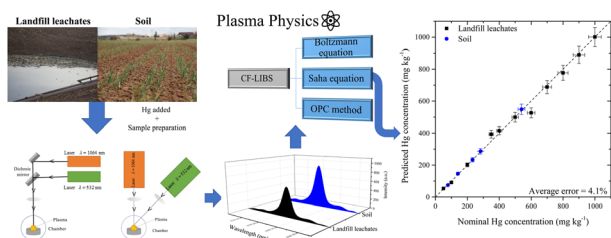
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Evaluation of the digestion capability of ammonium bifluoride for the determination of major and trace elements in Ti-rich minerals by ICP-MS

Hong Liu, Zhaochu Hu,* Tao He, Wen Zhang, Keqing Zong, Tao Luo, Xiaoyun Qiu, Yang Gao and Mufei Li

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Application of one-point calibration LIBS for quantification of analytes in samples with distinct matrix characteristics: a case study with Hg

Luís Carlos Leva Borduchi, Carlos Renato Menegatti, Débora Marcondes Bastos Pereira Milori, Hécio José Izário Filho and Paulino Ribeiro Villas-Boas*



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A parallel-beam wavelength-dispersive X-ray emission spectrometer for high energy resolution in-air micro-PIXE analysis

K. Isaković, M. Petric, A. Rajh, Z. Rupnik, M. Ribič, K. Bučar, P. Pelicon, P. Pongrac, V. Bočaj and M. Kavčič*

