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See Yue-Heng Yang *et al.*, pp. 2992–2999. Image reproduced by permission of Ming Yang from *J. Anal. At. Spectrom.*, 2024, **39**, 2992.



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See Ruizhong Hu *et al.*, pp. 3000–3009. Image reproduced by permission of Youwei Chen from *J. Anal. At. Spectrom.*, 2024, **39**, 3000.

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Laser-induced breakdown spectroscopy (LIBS): calibration challenges, combination with other techniques, and spectral analysis using data science

Dennis Silva Ferreira, Diego Victor Babos, Mauro Henrique Lima-Filho, Heloisa Froehlick Castello, Alejandro C. Olivieri, Fabiola Manhas Verbi Pereira and Edenir Rodrigues Pereira-Filho*

- Data fusion
- Space exploration
- Univariate calibration
- Multivariate calibration
- Calibration-free
- Spectral interference minimization
- Non-conventional calibration
- Data science
- Direct solid samples analysis

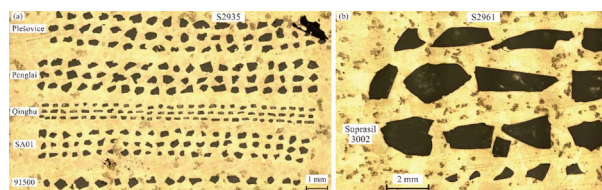


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A Pb-free Sn–Bi alloy mount preparation method for secondary ion mass spectrometry (SIMS) analyses

Wan-Feng Zhang, Qing Yang,* Xiao-Ping Xia, De-Wen Zheng, Ze-Xian Cui, Yan-Qiang Zhang and Yi-Gang Xu



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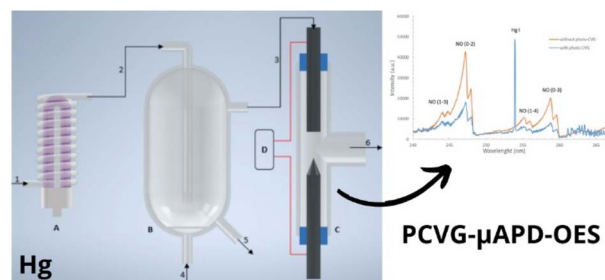
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TECHNICAL NOTES

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A miniaturized microplasma excitation source coupled with photochemically induced volatile species generation as a cost-effective tool for *in situ* mercury pollution analyses

Tymoteusz Klis, Pawel Pohl, Anna Dzimitrowicz and Piotr Jamroz*

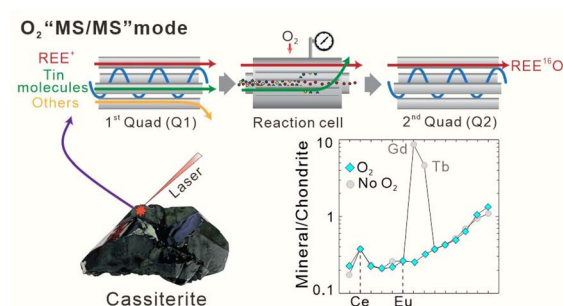


PAPERS

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Accurate determination of ultra-trace rare earth elements by LA-ICP-MS/MS and its application to cassiterite for effective elimination of Gd and Tb false positive anomalies

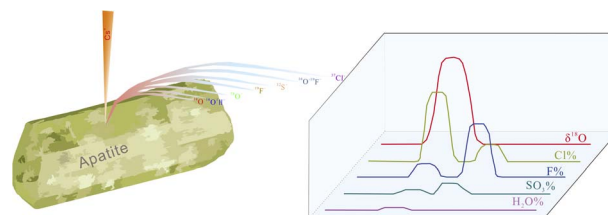
Ming Yang, Wu Wei, Yue-Heng Yang,* Rolf L. Romer, Shi-Tou Wu, Tao Wu and Li-Feng Zhong



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Simultaneous determination of the oxygen isotope ratio and volatile composition of apatite with high lateral resolution via nano-secondary-ion mass spectrometry

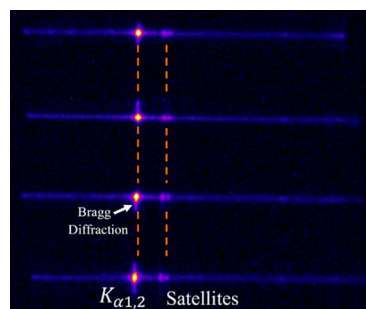
Youwei Chen, Jianfeng Gao, Xianwu Bi, Shaohua Dong, Quanliang Lei and Ruizhong Hu*



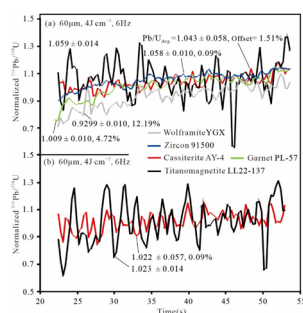
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Investigation of Al K α satellite lines through a high-efficiency multi-channel FSSR

Zexian Zhou, Rui Cheng,* Huiyao Du, Shengzhen Yi, Fen Fu, Guodong Wang, Lulin Shi, Zhao Wang, Xuejian Jin, Yanhong Chen, Yanshi Zhang, Liangwen Chen, Jie Yang and Maogen Su*



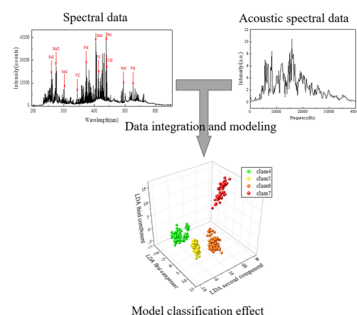
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Titanomagnetite, a new potential geochronometer for *in situ* U–Pb dating

Yanwen Tang, Na Liu, Jianfeng Gao, Junjie Han, Zhongjie Bai* and Tingguang Lan*

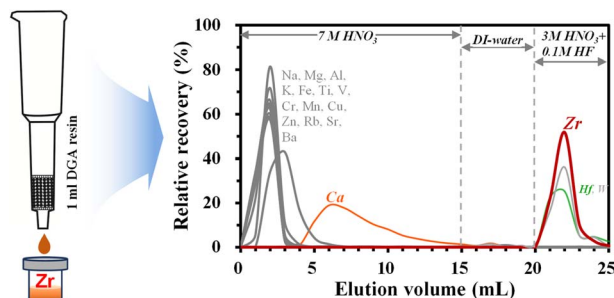
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Assessment of the metal grain size of 12Cr1MoV steel by LIBS coupled with acoustic wave information

Feiqiang Tang, Meirong Dong,* Junbin Cai, Zhichun Li, Kaiqing Chen, Weijie Li, Shunchun Yao and Jidong Lu

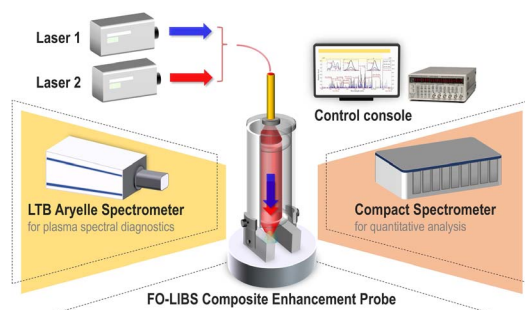
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A single-stage purification method for the precise determination of zirconium isotopic composition in geological samples by double spike MC-ICP-MS

Lanping Feng, Chen Wang, Yan Han, Wen Zhang, Jing-Liang Guo, Lian Zhou* and Zhaochu Hu

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Combined enhancement of fiber-optic laser-induced breakdown spectroscopy coupling spatial confinement and double-pulse irradiation

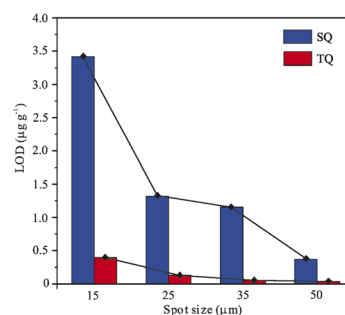
Yan Qiu, Jinghui Li, Bowen Lu, Jian Wu, Xinyu Guo, Yuhua Hang,* Yongdong Li and Xingwen Li



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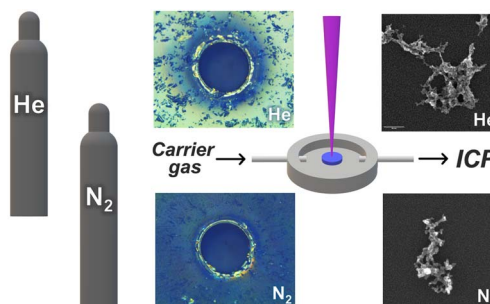
Junlong Niu, Shitou Wu,* Yueheng Yang, Hao Wang, Chao Huang, Lei Xu and Liewen Xie



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Fundamental studies of laser ablation ICPMS using a nitrogen plasma source and helium, argon and nitrogen as carrier gas

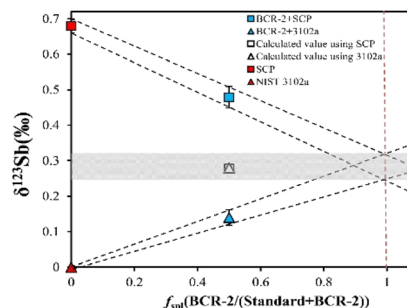
Dylan Käser, Ralf Käge, Bodo Hattendorf and Detlef Günther*



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Applying standard addition to determine antimony isotopes in low-Sb samples using HG-MC-ICP-MS

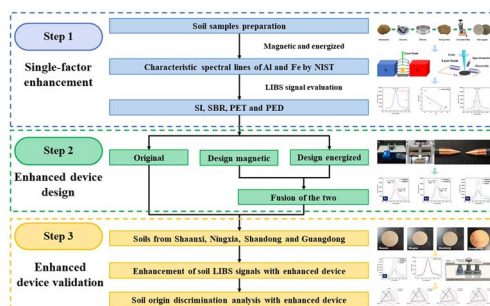
Honggang Zhu, Jian-Ming Zhu,* Decan Tan, Zhuo Lu, Hongfei Liao and Yiwei Ma



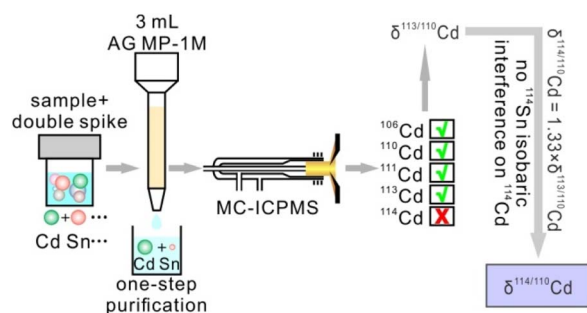
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Magneto-electrical fusion enhancement of LIBS signals: a case of Al and Fe emission lines' characteristic analysis in soil

Zihan Yang, Mengyu Pang, Jincheng Ma, Yanru Zhao, Keqiang Yu* and Yong He



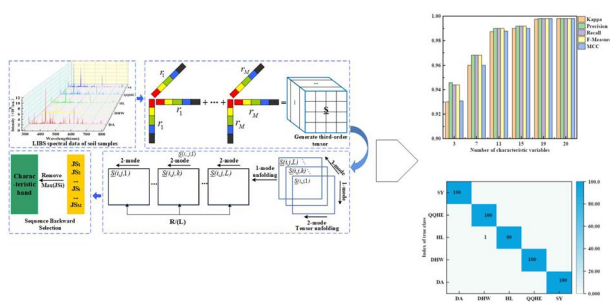
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High-precision MC-ICP-MS measurements of Cd isotopes using a novel double spike method without Sn isobaric interference

Jin Li,^{*} Suo-han Tang, Xiangkun Zhu, Jian-xiong Ma, Zhiyong Zhu and Bin Yan

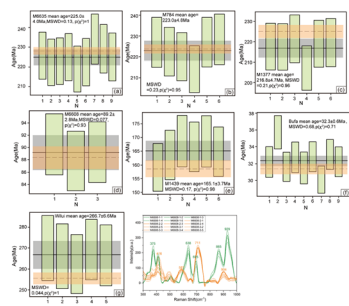
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Enhancing soil geographic recognition through LIBS technology: integrating the joint skewness algorithm with back-propagation neural networks

Weinan Zheng, Xun Gao,^{*} Kaishan Song, Hailong Yu, Qiuyun Wang,^{*} Lianbo Guo and Jingquan Lin

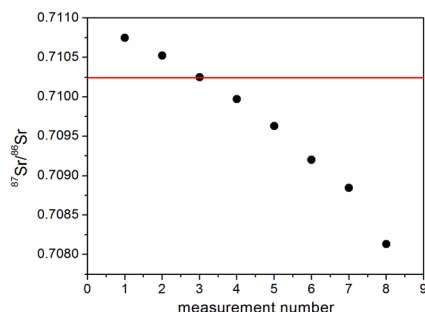
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Vesuvianite: a new mineral species of (U–Th)/He geochronology

Jie An, Lin Wu,^{*} Fei Wang, Qindi Wei, Jingbo Sun, Zhiyong Zhang, Rong Ren and Nan Wang

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A new concept for correction of instrumental isotopic fractionation in MC-ICP-MS using a pair of monoisotopic elements: a critical evaluation

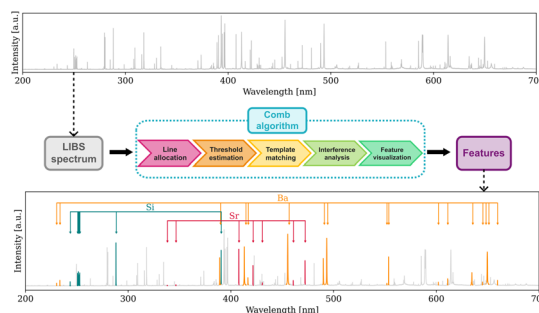
Andrii Tupys, Klaudia Tetfejer, Ludwik Halicz, Ewa Bulska and Jakub Karasiński^{*}



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Automated detection of element-specific features in LIBS spectra

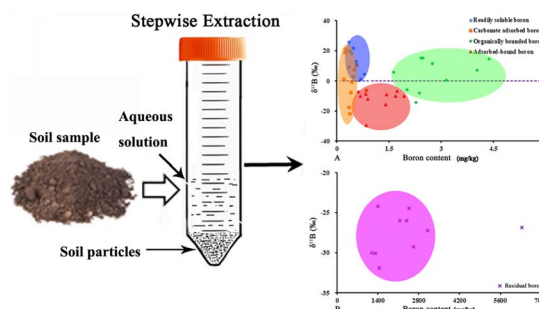
Zuzana Gajarska,* Anna Faruzelová, Erik Képeš, David Prochazka, Pavel Pořízka, Jozef Kaiser, Hans Lohninger and Andreas Limbeck



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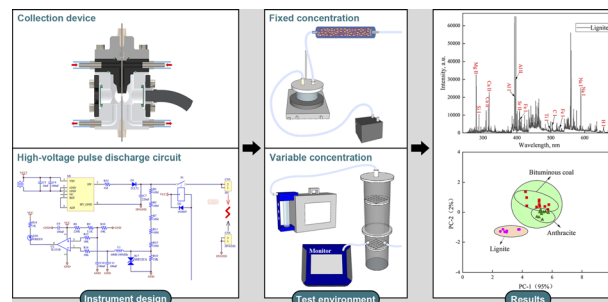
Xuejun Chen, Qingcai Xu, Li Yan, Xiaodong Hao, Xiaochen Guan, Xiaopeng Han, Aide Sun,* Zhiqun Chen,* Lihua Liu* and Zihao Zhu



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Fast analysis of metal components in coal dust using spark emission spectroscopy

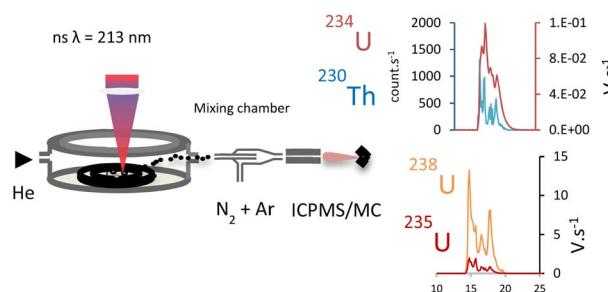
Jialin Li, Jing Huang, Lina Zheng,* Shakila Naz and Xutong Liu



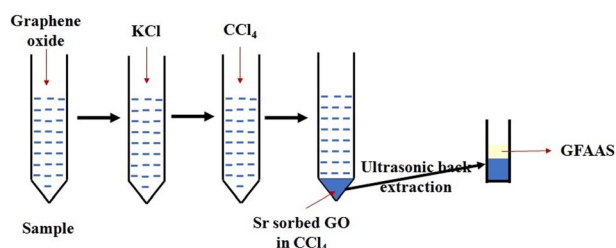
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Investigation of direct simultaneous uranium isotopic determination and age dating of micrometer-sized uranium particles by laser ablation – multi-collector ICPMS

Anne-Claire Humbert,* Fabien Pointurier and Amélie Hubert



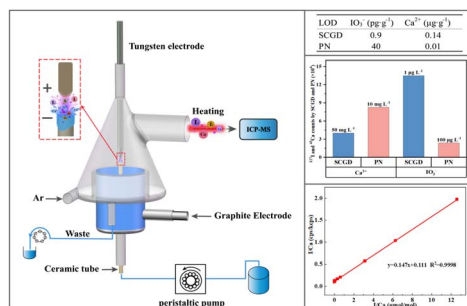
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Hydrophobicity induced graphene oxide based dispersive micro solid phase extraction of strontium from seawater and groundwater prior to GFAAS determination

M. Sebastian, D. Saikrishna,* S. K. Jayabun, N. N. Meeravali, R. Shekhar and A. C. Sahayam

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Sensitive and rapid determination of the iodine/calcium ratio in carbonate rock samples by ICP-MS based on solution cathode glow discharge sampling

Xuan Wang, Xing Liu,* Lanlan Jin, Zhenli Zhu,* Junhang Dong, Pengju Xing, Linjie Chen, Yuanhui Geng, Jingwen Zhang, Hao Tong, Hongtao Zheng, Min Zhang and Shenghong Hu

