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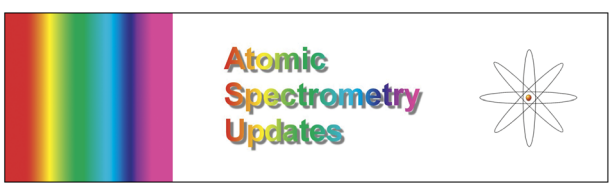

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COMMUNICATION

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Ultrafast LIBS elemental imaging: a new tool for pedogenesis studies in highly polluted anthropogenic soils

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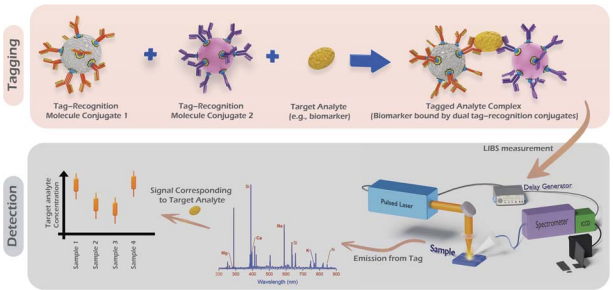
Tag-laser induced breakdown spectroscopy (Tag-LIBS): progress and prospects

Ali Safi* and Noureddine Melikechi



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Laser ablation-based techniques for microplastic analysis: recent advances and applications

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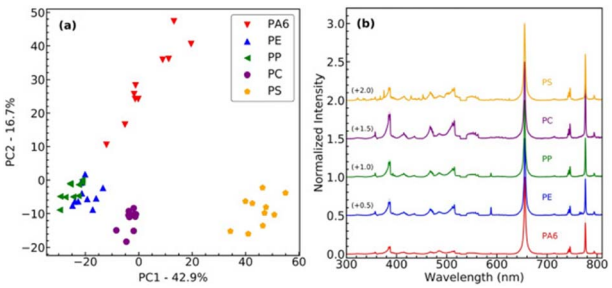

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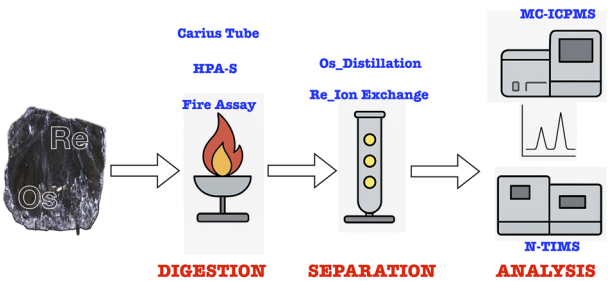
Rhenium and osmium analysis in soil and rock samples: a review of ultra-trace detection methods

Ashok Kumar Maurya* and Ashish Kumar Pandey



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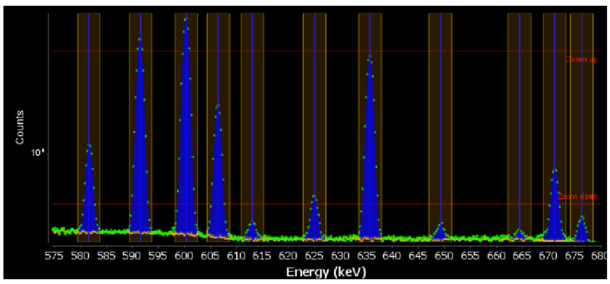
TUTORIAL REVIEW

3082



Multi-method approaches for gamma spectrometry software: calibration, peak analysis, and corrections

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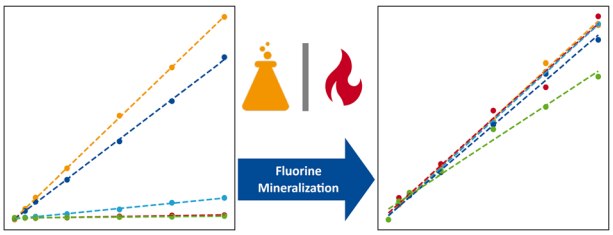

Combining fluorine-specific graphite furnace-molecular absorption spectrometry with mineralization approaches

Alexander Köhrer, Marco Biel, Pascal Stopper, Svenja Berit Seiffert and Matthias Schmitt*

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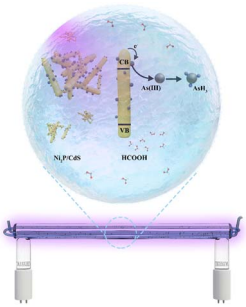

Determination of trace arsenic using noble metal-free Ni_2P/CdS composites for photochemical vapor generation for sample introduction into ICP-MS

Lu Zhang, Yuqi Li, Hanjiao Chen* and Xiandeng Hou*

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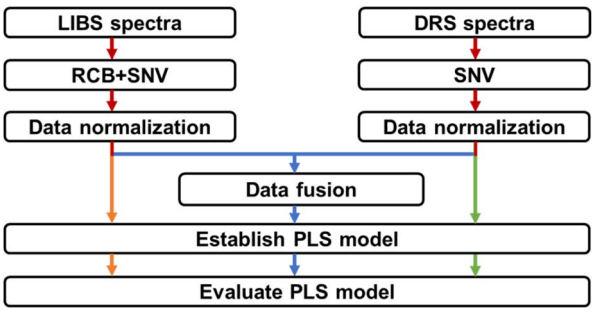

Data fusion of laser-induced breakdown spectroscopy and diffuse reflectance spectroscopy for improved quantitative analysis of EAST-like plasma-facing materials

Jianping Mu, Ran Hai,* Yupeng Yang, Mingzhe Zhao, Cong Li, Ding Wu and Hongbin Ding

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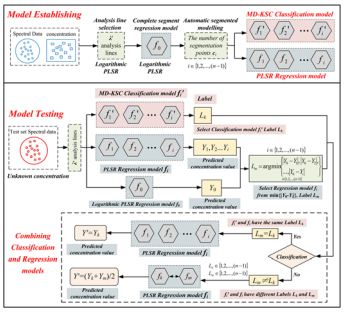
Enhancing LIBS analysis accuracy of C element in low-carbon alloy steel by automatic segmented modelling with nonlinear-regression-based spectral line selection and Mahalanobis distance kernel space classification

Shiheng Zhang, Hui Lu, Jianhong Yang,* Fu Chang, Zhanxiang Wang, Yongqi Zhang and Baojia Du



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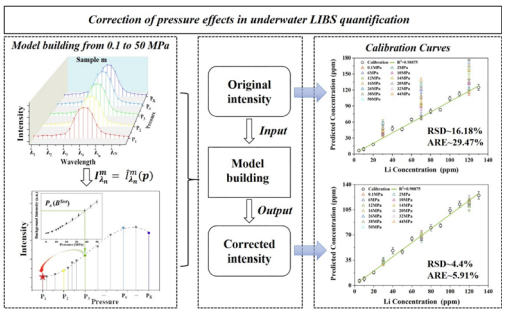
Quantification of underwater LIBS at varying ambient pressures towards deep-sea applications

Boyang Xue, Ye Tian,* Tie Li, Ying Li, Ziwen Jia, Yuan Lu, Jinjia Guo, Chao Chen, Zhangjun Wang and Ronger Zheng



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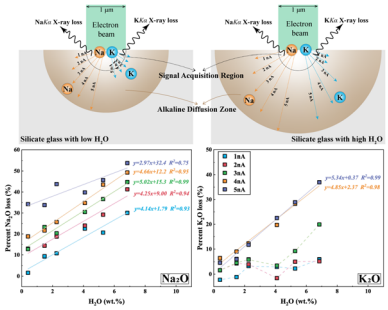
High spatial resolution electron probe analysis of H_2O-bearing aluminosilicate glasses

Cong Tu, Xiao-Ying Gao,* Oleg G. Safonov, Ting-Ting Xiao, Vasily O. Yapaskurt and Wan-Cai Li



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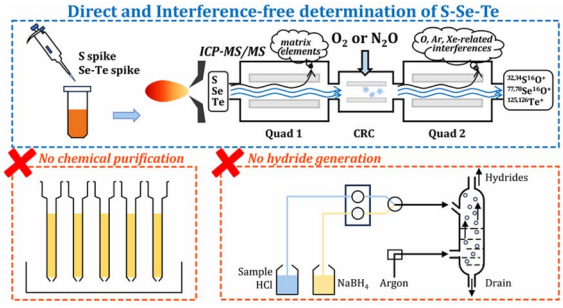
Accurate determination of sulfur, selenium and tellurium in geological reference materials by isotope dilution inductively coupled plasma-tandem mass spectrometry (ID-ICP-MS/MS)

Jiawei Li, Keqing Zong,* Zaicong Wang, Zongqi Zou, Tao He, Jiyao Sun, Jie Lin, Wen Zhang, Ming Li, Zhaochu Hu and Yongsheng Liu



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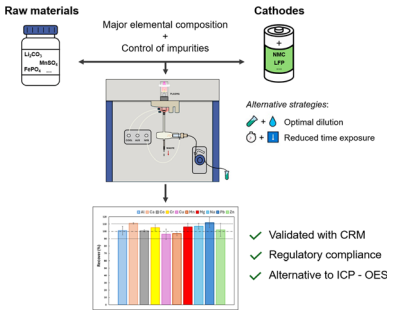

Innovations in battery material quality control: microwave-sustained inductively coupled atmospheric-pressure plasma optical emission spectroscopy (MICAP OES) for elemental analysis

Jorge Pérez-Vázquez, Raquel Serrano,* Guillermo Grindlay, Luis Gras and Juan Mora

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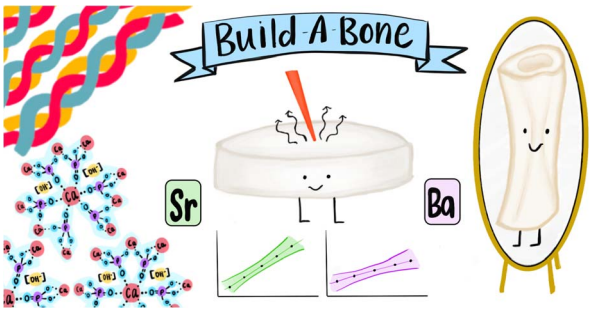

Build-a-bone: development of a matrix-matched reference material for quantitative analysis of bone with portable LIBS

Kristen M. Livingston, Amanda T. Williams and Matthieu Baudelet*

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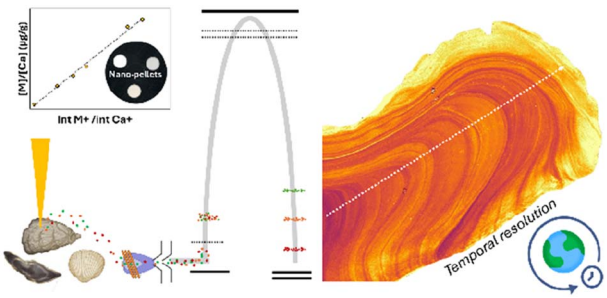

LA-ICP-TOF-MS for quantitative mapping of biogenic carbonate samples using matrix-matched nanoparticulate pressed powder pellets

Ana Lores-Padin,* Thibaut Van Acker, Niels J. de Winter, Martin Wiech, Simon Nordstad, Yannic Hallier and Frank Vanhaecke

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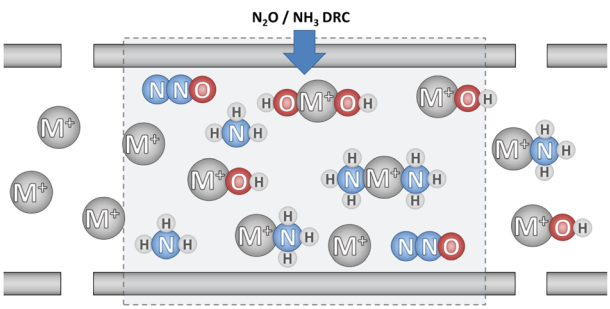

Isobaric interference removal for selected radionuclides using nitrous oxide and ammonia with inductively coupled plasma tandem mass spectrometry

Shaun T. Lancaster,* Ben Russell, Thomas Prohaska and Johanna Irrgeher

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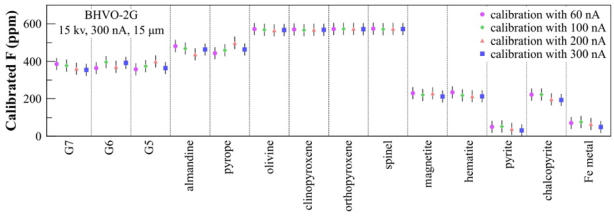
A refined electron probe microanalysis protocol for accurate quantification of F and Cl in mafic silicate glasses

Peng-Li He,* Xiao-Long Huang, Yan-Qiang Zhang, Wen-Hua Lu, Ying-Zhuo Liu and Yang Yu



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LCT02: a new natural reference material for U–Pb isotopic microanalysis of columbite

Zhi Chen, Xiao-Xiao Ling,* Shi-Tou Wu, Sandra L. Kamo, Yu Liu, Di Zhang, Qiu-Li Li and Xian-Hua Li

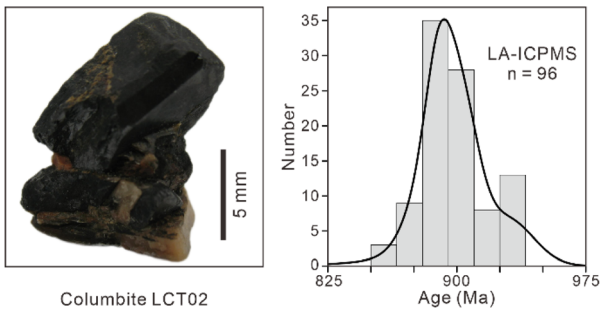

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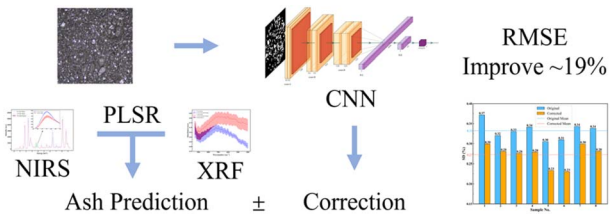
Image deep learning-driven granularity effect correction: a novel approach to improve the accuracy of NIRS-XRF coal quality analysis

Jiaxin Yin, Rui Gao, Jiaxun Li, Yang Zhao, Zhihui Tian, Junxiao Wang, Yan Zhang, Peihua Zhang, Lei Zhang,* Wangbao Yin* and Suotang Jia



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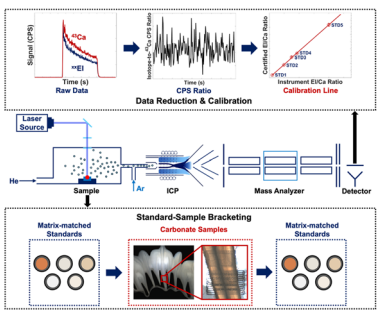
Accurate high-resolution LA-ICP-MS determination of trace element contents in carbonates with matrix-matched standards

Zhekai Tang, Sang Chen,* Derong Zhao, Tianhui Zhang, Yuncong Ge, Zhuohang Li, Ruifeng Zhang and Lei Zhou



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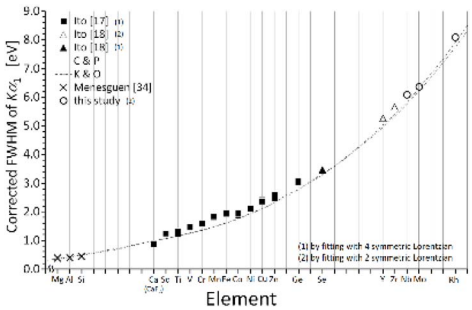

X-ray spectroscopic evaluation of *K*-, L_2-, and L_3-level widths in Zr, Nb, Mo, and Rh

Yoshiaki Ito, Tatsunori Tochio, Michiru Yamashita, Sei Fukushima, Łukasz Syrocki, Katarzyna Słabkowska, Marek Polasik, José Pires Marques and Fernando Parente*

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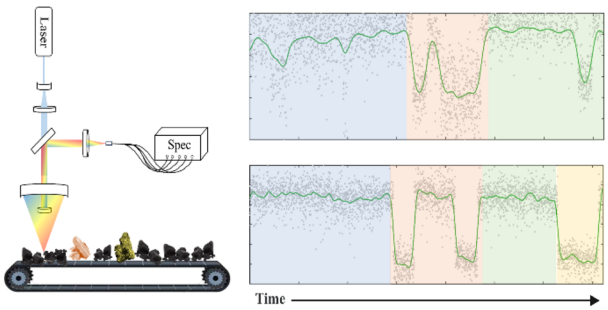

Calibration and application of a large-scale LIBS project based on transfer learning in the online quantitative analysis of coal

An Li, Xinyu Zhang, Xiaodong Liu, Haohan Sun and Ruibin Liu*

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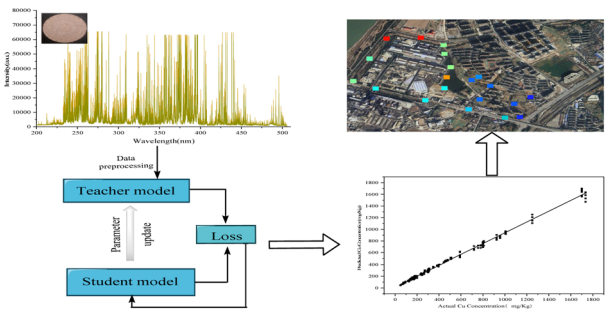

Semi-supervised graph learning for spatial mapping of heavy metal concentrations in smelter-adjacent soils using a mobile LIBS device

Yanhong Gu, Zhen Li, Shichao Jin, Zhao Cheng* and Fudong Nian*

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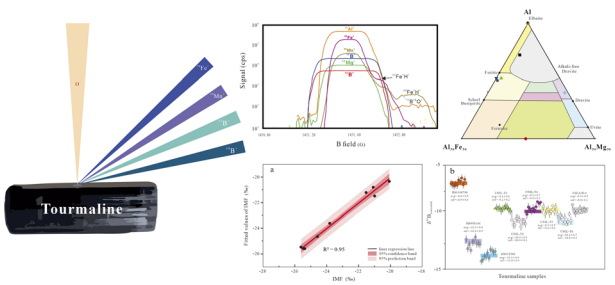

Online correction of matrix effects for boron isotope analysis in tourmaline using nano-secondary-ion mass spectrometry

Shaohua Dong, Youwei Chen,* Jian-Feng Gao, Xianwu Bi and Ruizhong Hu

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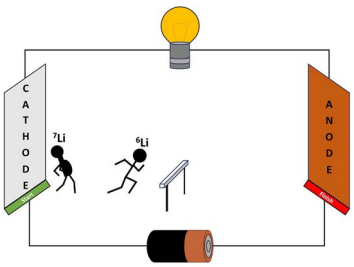
Exploring age-induced lithium isotope fractionation in lithium-ion batteries using microwave-induced cold nitrogen plasma mass spectrometry

Dalia Morcillo, Alexander Winckelmann, Marcus Oelze, Robert Leonhardt, Anita Schmidt, Silke Richter, Sebastian Recknagel, Jochen Vogl, Ulrich Panne and Carlos Abad*



Who will win the hurdles race in a Li-ion battery?
^{6}Li or ^{7}Li?

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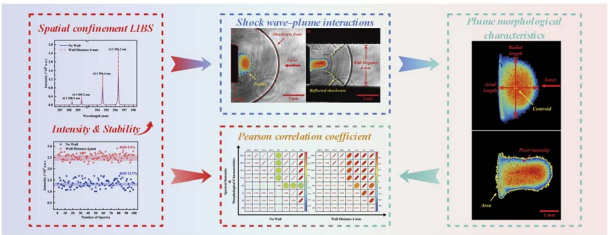
Morphology–spectral correlations of laser-induced Al plasma with plate wall spatial confinement

Hailong Yu, Qiuyun Wang, Xun Gao,* Xingsheng Wang and Jingquan Lin*