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See Ali Safi *et al.*, pp. 3031–3043. Image reproduced by permission of Ali Safi from *J. Anal. At. Spectrom.*, 2025, 40, 3031.

EDITORIAL

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Lasers in Ghent – the 16th European Workshop on Laser Ablation

Thibaut Van Acker and Frank Vanhaecke

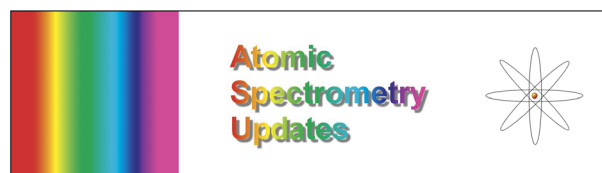


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Atomic spectrometry update: review of advances in the analysis of metals, chemicals and functional materials

Ayush Agarwal, Eduardo Bolea-Fernandez, Robert Clough,* Andy Fisher, Bridget Gibson and Steve Hill



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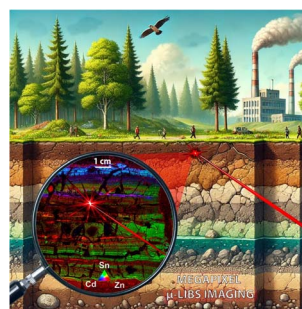
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Ultrafast LIBS elemental imaging: a new tool for pedogenesis studies in highly polluted anthropogenic soils

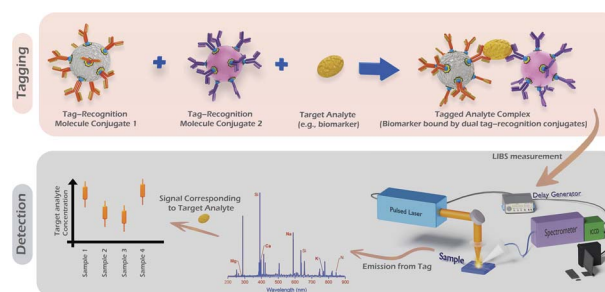
Clément Noel, Hermine Huot, César Alvarez-Llamas, Marc Offroy, Françoise Watteau, Ludovic Duponchel* and Vincent Motto-Ros*



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

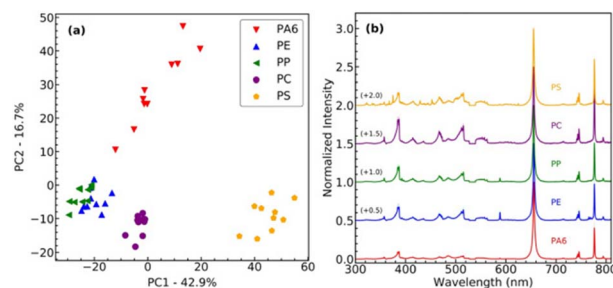
Ali Safi* and Nouredine Melikechi



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

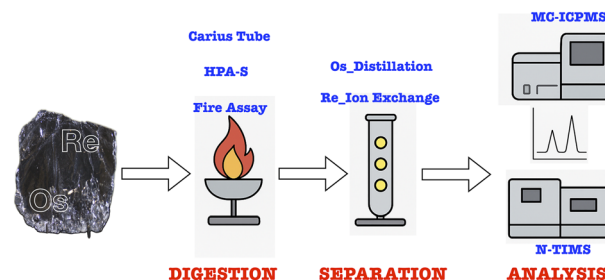
Pavlna Modlitbová, Lukas Brunnbauer, Gabriela Kalčíková, Aida Fazlić, Andreas Limbeck, Pavel Pořízka* and Jozef Kaiser



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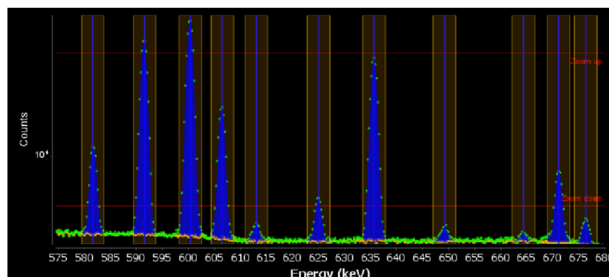
Rhenium and osmium analysis in soil and rock samples: a review of ultra-trace detection methods

Ashok Kumar Maurya* and Ashish Kumar Pandey



TUTORIAL REVIEW

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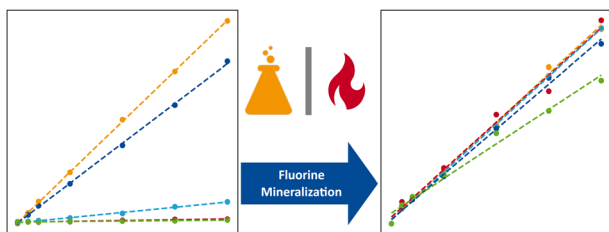


Multi-method approaches for gamma spectrometry software: calibration, peak analysis, and corrections

Lahcen El Amri,* Omar El Bounagui, Hamid Amsil, Brahim Elmokhtari, Abdessamad Didi, Hamid Bounouira and Abdelmajid El Badraoui

TECHNICAL NOTES

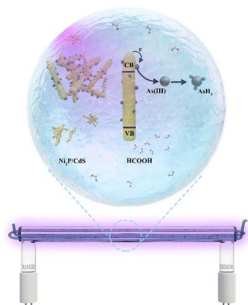
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Combining fluorine-specific graphite furnace-molecular absorption spectrometry with mineralization approaches

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

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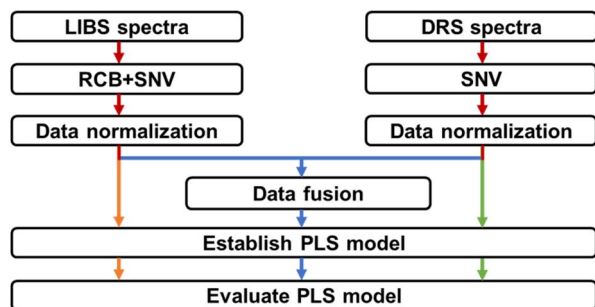


Determination of trace arsenic using noble metal-free Ni₂P/CdS composites for photochemical vapor generation for sample introduction into ICP-MS

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

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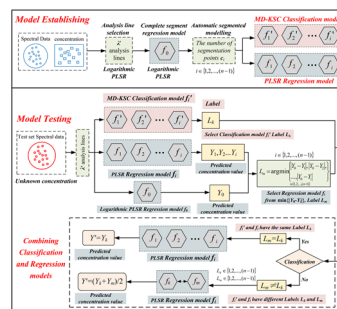
Jianping Mu, Ran Hai,* Yupeng Yang, Mingzhe Zhao, Cong Li, Ding Wu and Hongbin Ding



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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

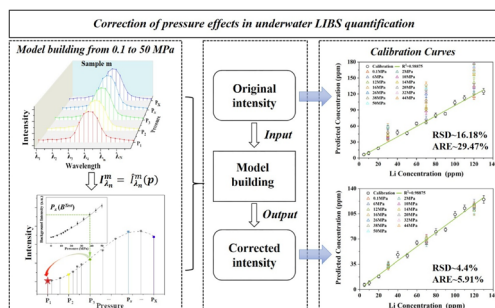
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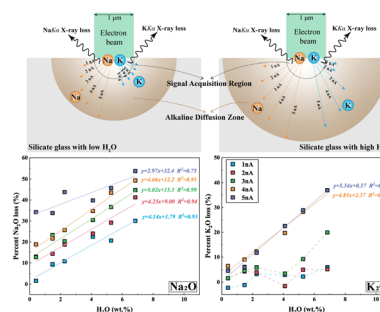
Boyang Xue, Ye Tian,* Tie Li, Ying Li, Ziwen Jia, Yuan Lu, Jinjia Guo, Chao Chen, Zhangjun Wang and Ronger Zheng



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High spatial resolution electron probe analysis of H₂O-bearing aluminosilicate glasses

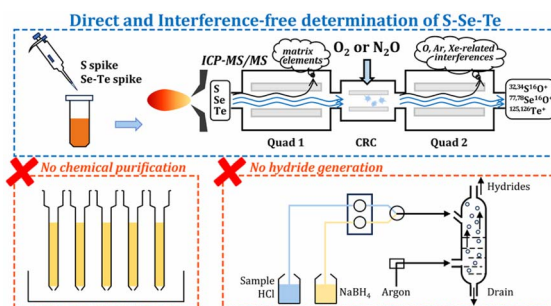
Cong Tu, Xiao-Ying Gao,* Oleg G. Safonov, Ting-Ting Xiao, Vasily O. Yapaskurt and Wan-Cai Li



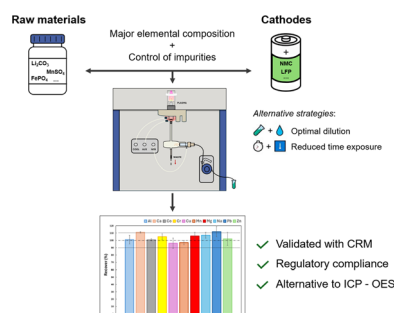
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Accurate determination of sulfur, selenium and tellurium in geological reference materials by isotope dilution inductively coupled plasma-tandem mass spectrometry (ID-ICP-MS/MS)

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



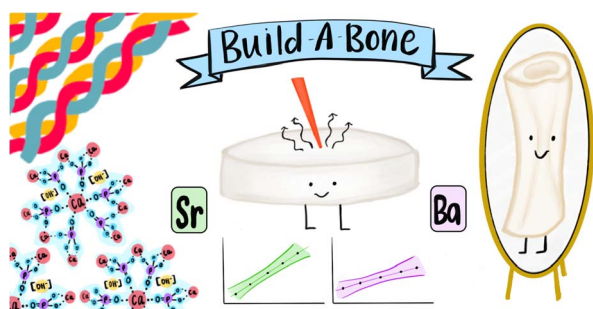
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Innovations in battery material quality control: microwave-sustained inductively coupled atmospheric-pressure plasma optical emission spectroscopy (MICAP OES) for elemental analysis

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

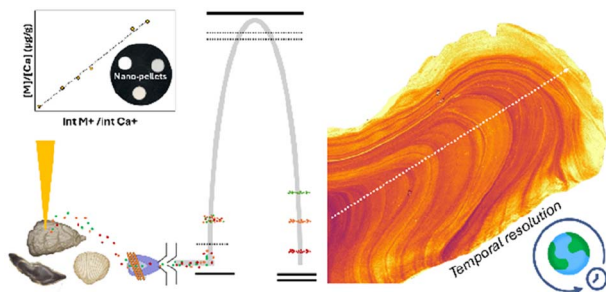
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Build-a-bone: development of a matrix-matched reference material for quantitative analysis of bone with portable LIBS

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

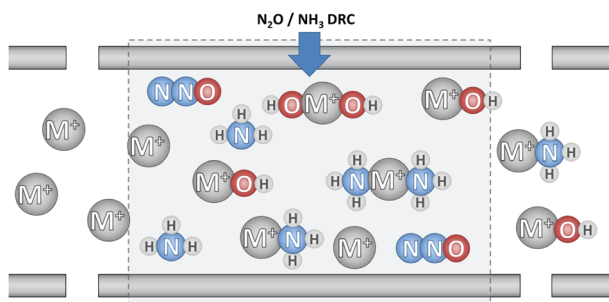
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LA-ICP-TOF-MS for quantitative mapping of biogenic carbonate samples using matrix-matched nanoparticulate pressed powder pellets

Ana Lores-Padin,* Thibaut Van Acker, Niels J. de Winter,
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Isobaric interference removal for selected radionuclides using nitrous oxide and ammonia with inductively coupled plasma tandem mass spectrometry

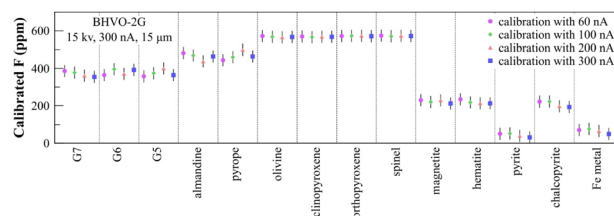
Shaun T. Lancaster,* Ben Russell, Thomas Prohaska
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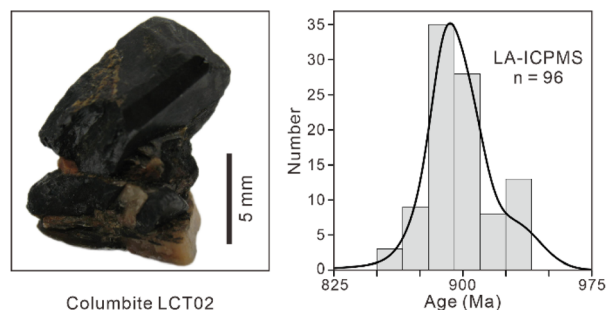
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LCT02: a new natural reference material for U–Pb isotopic microanalysis of columbite

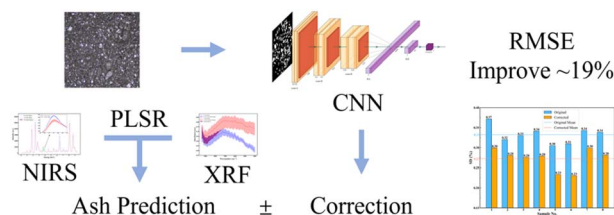
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Image deep learning-driven granularity effect correction: a novel approach to improve the accuracy of NIRS-XRF coal quality analysis

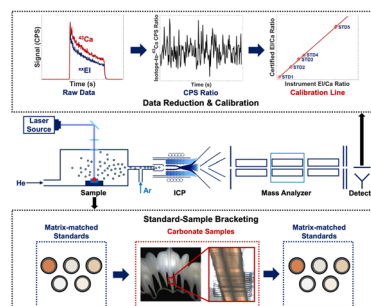
Jiaxin Yin, Rui Gao, Jiaxun Li, Yang Zhao, Zhihui Tian, Junxiao Wang, Yan Zhang, Peihua Zhang, Lei Zhang,* Wangbao Yin* and Suotang Jia



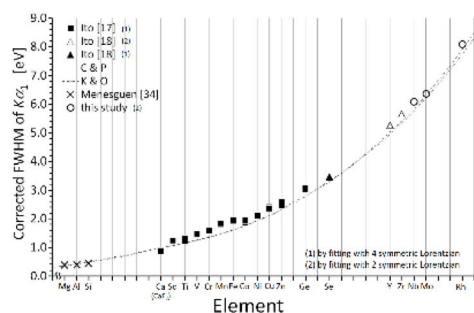
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Accurate high-resolution LA-ICP-MS determination of trace element contents in carbonates with matrix-matched standards

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



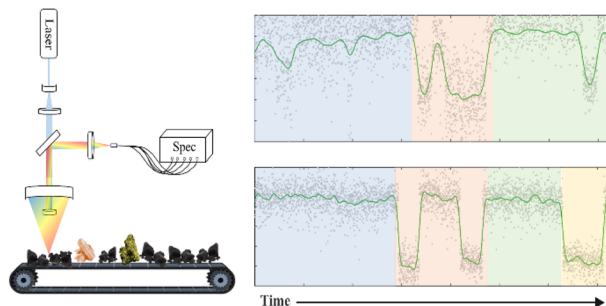
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X-ray spectroscopic evaluation of K -, L_2 -, and L_3 -level widths in Zr, Nb, Mo, and Rh

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

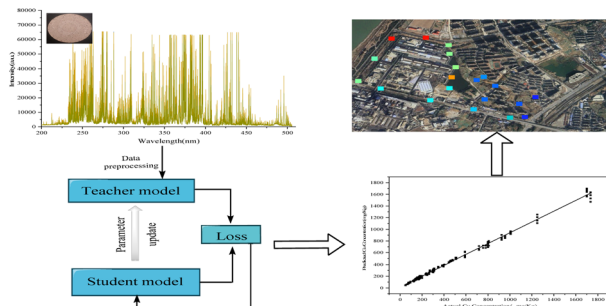
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Calibration and application of a large-scale LIBS project based on transfer learning in the online quantitative analysis of coal

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

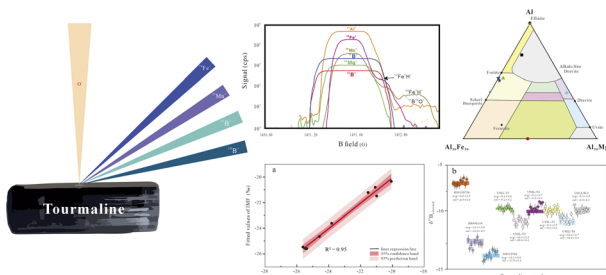
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Semi-supervised graph learning for spatial mapping of heavy metal concentrations in smelter-adjacent soils using a mobile LIBS device

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

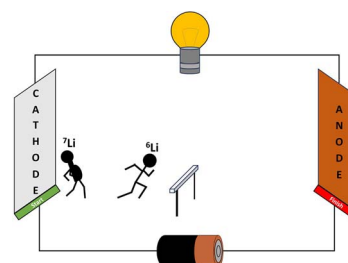
Shaohua Dong, Youwei Chen,* Jian-Feng Gao, Xianwu Bi and Ruizhong Hu



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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?
 ^6Li or ^7Li ?

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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*

