

JAAS

Journal of Analytical Atomic Spectrometry

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Cover

See Debo Wu, Chengbiao Leng *et al.*, pp. 1946–1953. Image reproduced by permission of Debo Wu from *J. Anal. At. Spectrom.*, 2025, 40, 1946.



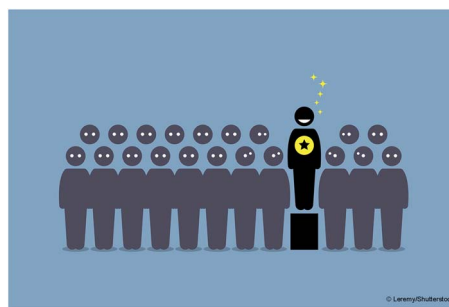
Inside cover

See Kattathu Joseph Mathew, pp. 1879–1901. Image reproduced by permission of Oak Ridge National Laboratory, US Department of Energy from *J. Anal. At. Spectrom.*, 2025, 40, 1879.

EDITORIAL

1878

Outstanding Reviewers for *Journal of Analytical Atomic Spectrometry* in 2024

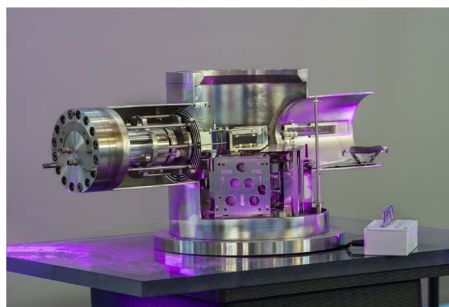


CRITICAL REVIEWS

1879

Plutonium isotope ratio measurements by total evaporation-thermal ionization mass spectrometry (TE-TIMS): an evaluation of uncertainties using traceable standards from the New Brunswick Laboratory

Kattathu Joseph Mathew



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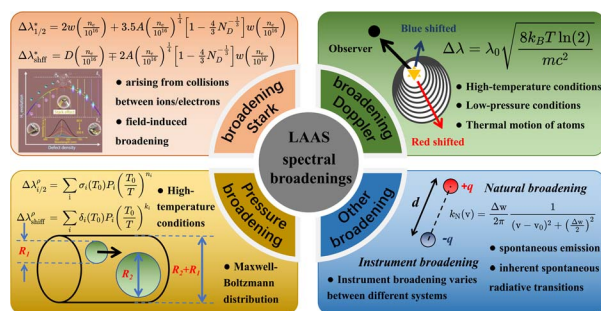
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CRITICAL REVIEWS

1902

A review of spectral broadening in laser atomic absorption spectroscopy

Erfan Chenshen, Juntao Tan, Bin Wang, Erlong Jiang, Nan Zhao,* Shaofeng Zheng, Zeren Luo, Jiaming Li* and Qingmao Zhang

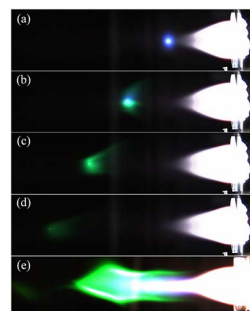


TECHNICAL NOTES

1916

Experimental study on the dynamic characteristics of an analytical inductively coupled plasma and its tail flame

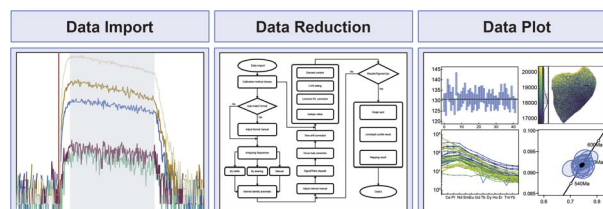
Xin Han, Yongyang Su,* Zhiming Li, Yuxuan Wang, Wei Wang, Ruiyang Xi, Shiyong Zhou, Guanyi Wei, Sui Fang, Yalong Wang, Jiang Xu and Xiaofei Lan*



1929

ICPMSDataCal-Py: a comprehensive solution for rapid and accurate LA-(MC)-ICP-MS data reduction

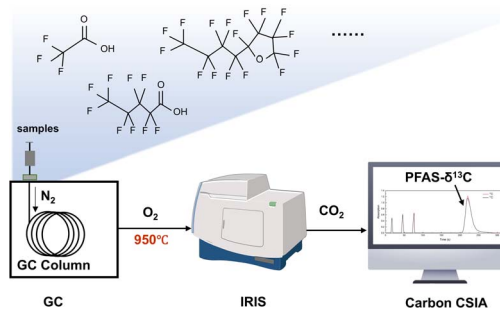
Ji Mao, Yongsheng Liu,* Wen Zhang, Keqing Zong, Ao Yang and Xinting Lü



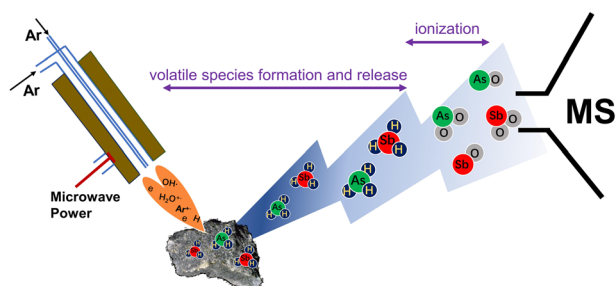
1940

Stable carbon isotope analysis of fluorinated organic compounds using infrared spectrometer coupled to gas chromatography

Xinyi Du, Biao Jin,* Hans H. Richnow, Lingling Zhang, Shutao Gao, Zhiqiang Yu and Ping'an Peng



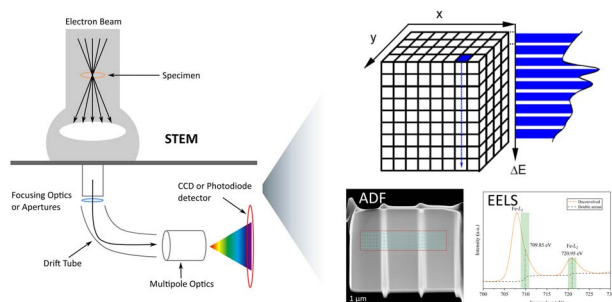
1946



Potential direct mass spectral elemental analysis of solids by microwave plasma torch surface release and ionization

Yuan Guo, Tong Shi, Debo Wu,* Li Wang, Hongyu Guo, Wei Liu and Chengbiao Leng*

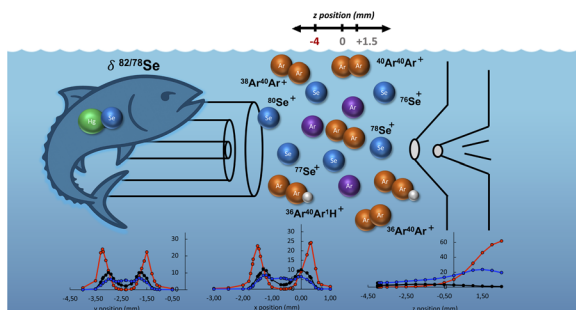
1954



Quantification of ferric iron content in minerals via the STEM-EELS-mapping method

Shan Li, Ke Wen, Yiping Yang, Xiaoju Lin, Yonghua Cao, Yao Xiao, Haiyang Xian,* Jianxi Zhu and Hongping He

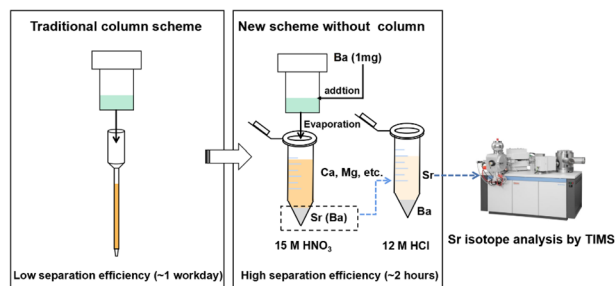
1964



Capabilities and limitations of Se isotopic analysis using hydride generation coupled to MC-ICP-MS

Lana Abou-Zeid,* Martin Wiech and Frank Vanhaecke

1977



Rapid separation of Sr from carbonates for accurate $^{87}\text{Sr}/^{86}\text{Sr}$ isotope analysis by TIMS

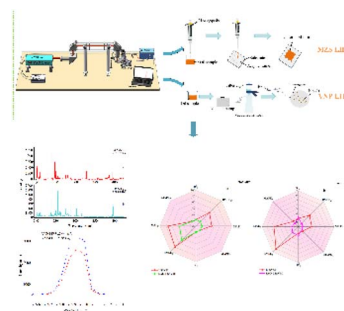
Wengang Liu, Hongming Cai,* Wei Yuan, Hongying Zhou and Jiubin Chen



1985

Quantitative study of Fe in lubricating oil by metal substrate and vacuum negative pressure assisted LIBS with SAO-LSSVM

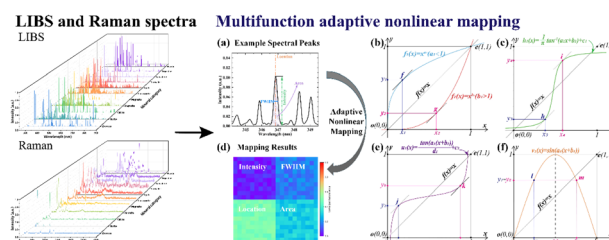
Meiling Zhao, Qiang Tan, Xiangchu Li, Jianan Xu, Ao Hu, Yan Shu, Xinxin Liu and Yu Ding*



1995

Adaptive nonlinear mapping for feature extraction and fusion in mineral classification based on laser-induced breakdown spectroscopy (LIBS) and Raman spectroscopy

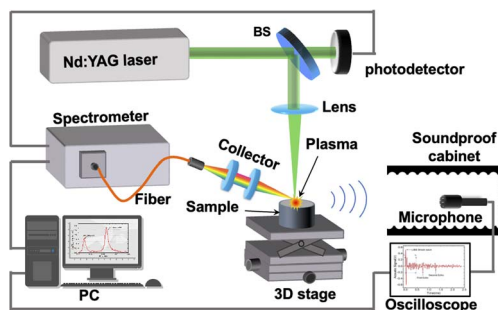
Yao Li, Mengjie Shan, Yinghao Wang, Jiajun Cong, Lei Di, Jingjun Lin, Minchao Cui* and Nan Ma*



2006

LIBS quantitative analysis method based on multi-model calibration with acoustic feature labeling

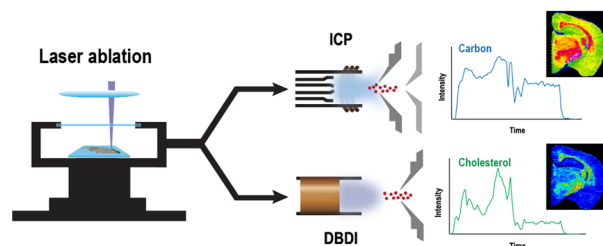
Shihang Chen, Zhongqi Hao, Yuanhang Wang, Yu Rao, Li Liu,* Jiulin Shi and Xingdao He



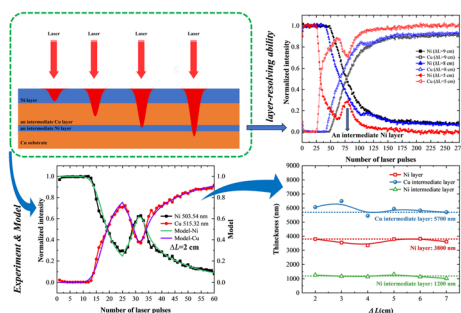
2016

Dual mass spectrometers with plasma-based ion sources for multiplex imaging of elements and biomolecules

Hui Hsin Khoo,* Ayano Kubota, Takehisa Matsukawa and Takafumi Hirata



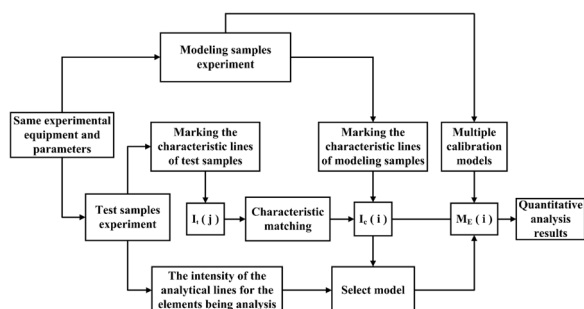
2026



Layer-resolving ability and model analysis of LIBS for multilayer samples with a four-layer structure under different focusing conditions

Shiming Liu, Cong Li,* Qi He, Boliang Men, Ding Wu, Ran Hai, Xingwei Wu and Hongbin Ding

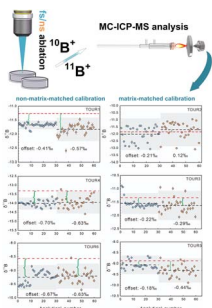
2038



LIBS quantitative analysis based on multi-model calibration marked with characteristic lines

Baining Xu, Zhongqi Hao,* Yuanhang Wang, Li Liu, Neng Zhang, Yu Rao, Lei Wang, Jiulin Shi* and Xingdao He

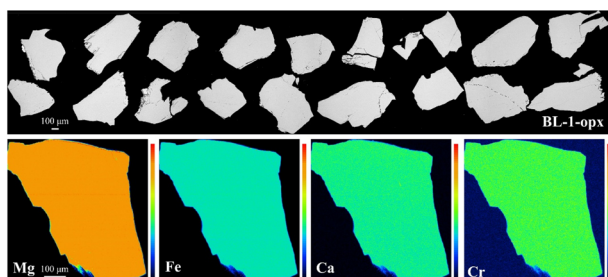
2049



Assessment of matrix effects in boron isotope analysis using 257 nm fs-LA and 193 nm ns-LA-MC-ICP-MS with new tourmaline reference materials

Xiaojuan Nie, Yan Zhang,* Zhian Bao, Kaiyun Chen, Wenqiang Yang and Honglin Yuan*

2062



A new orthopyroxene reference material (BL-1) for *in situ* microanalysis

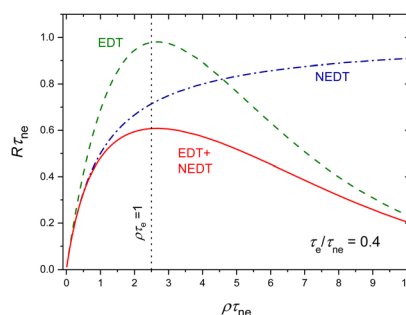
Peng-Li He,* Xiao-Long Huang, Le Zhang, Fan Yang, Lin-Li Chen and Sheng-Ling Sun



2073

A throughput model explaining non-linearity in discrete ion counters used in mass spectrometry

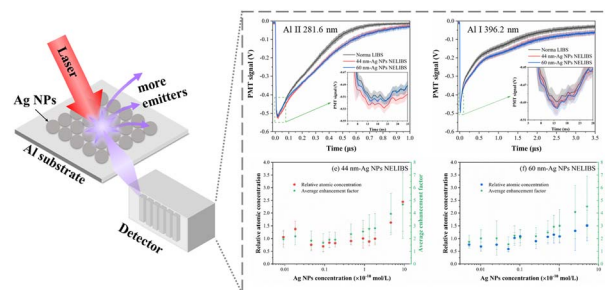
Stefaan Pommé* and Sergei F. Boulyga



2083

Impact of Ag NPs on temporal evolution of plasma emission in nanoparticle-enhanced laser-induced breakdown spectroscopy

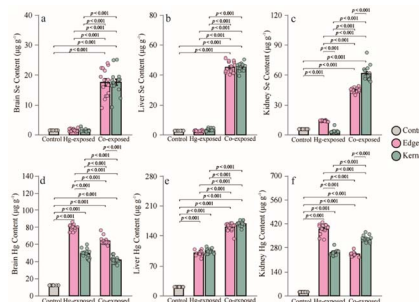
Xinxin Zhang, Xiaohui Li,* Tao Ren, Yumeng Yuan and Zihao Guo



2095

Quantitative analysis of selenium and mercury in biological samples using LA-ICP-MS

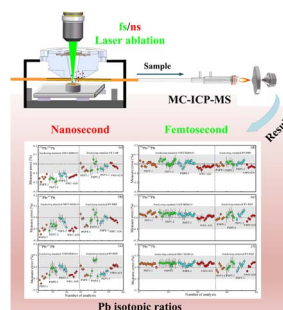
Zhihui Dai, Jiuyang Ding, Jiaojiao He, Chenglong Tu, Dengjun Wang, Dan Chen and Jingfu Wang*



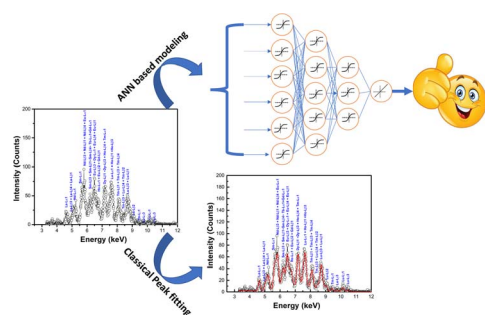
2107

NWU-GN and PY-FHP, two reference materials for *in situ* Pb isotope analysis of sulfide minerals by LA-MC-ICP-MS: an assessment of matrix effects

Zhian Bao,* Chunlei Zong, Deyi Peng and Honglin Yuan



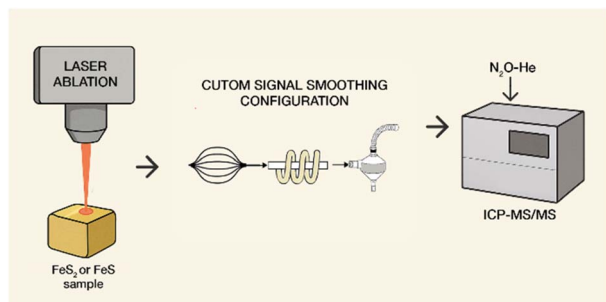
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Decoding the interfering L-lines by artificial neural network-based modeling for direct analysis of lanthanides in water samples using total reflection X-ray fluorescence spectrometry

Buddhadev Kanrar,* Kaushik Sanyal* and Rajesh V. Pai

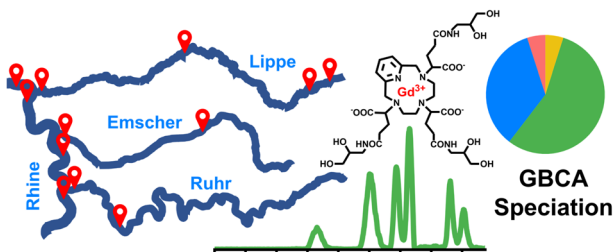
2126



In situ measurement of sulfur isotope ratios in sulfide samples with LA-ICP-MS/MS using N₂O and He reaction gas

Estida Eensoo,* Päärn Paiste, Kärt Paiste, David A. Fike and Jennifer L. Houghton

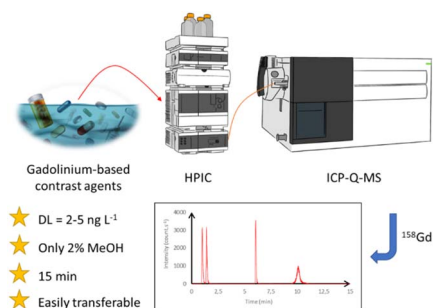
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Rapid and sensitive speciation analysis of established and emerging gadolinium-based contrast agents in the aquatic environment by IC-ICP-MS

Mathis Athmer,* Lina Marotz and Uwe Karst

2150



Development of a HPIC-ICP-MS method for the quantification and speciation of gadolinium-based contrast media in surface waters

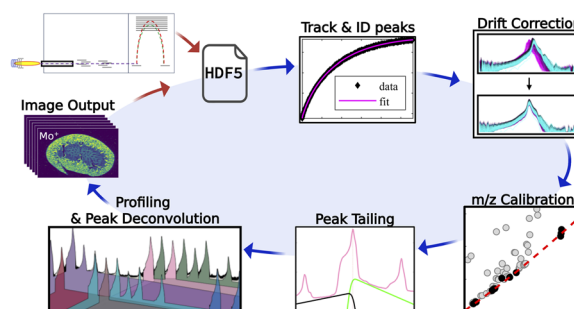
Manon Dalla Costa, David Dumoulin,* Marie Lenski, Anne Garat and Gabriel Billon



2162

AutoSpect: an all-in-one software solution for automated processing of LA-ICP-TOF-MS datasets

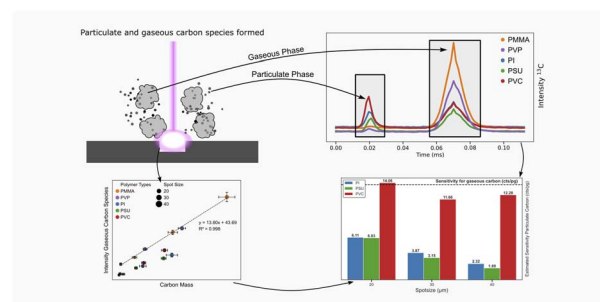
Andrew M. Crawford,* David Z. Zee, Qiaoling Jin, Aaron Sue, Niharika Sinha, Soo Hyun Ahn, Thomas V. O'Halloran* and Keith W. MacRenaris*



2179

Investigating the sensitivity difference of gaseous and particulate carbon in two-phase sample transport in LA-ICP-MS

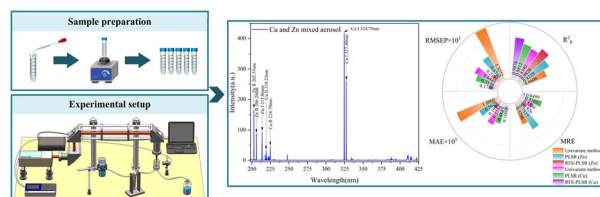
Lukas Brunnbauer,* David Ken Gibbs, Detlef Günther and Andreas Limbeck



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Spectral screening-assisted LIBS for quantitative analysis of heavy metal elements in liquid aerosols

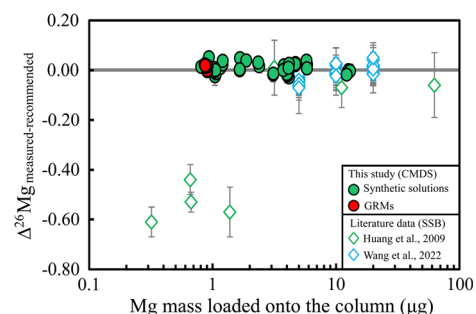
Ao Hu, Jianan Xu, Qiang Tan, Xiangchu Li, Meiling Zhao, Yan Shu, Xinxin Liu and Yu Ding*



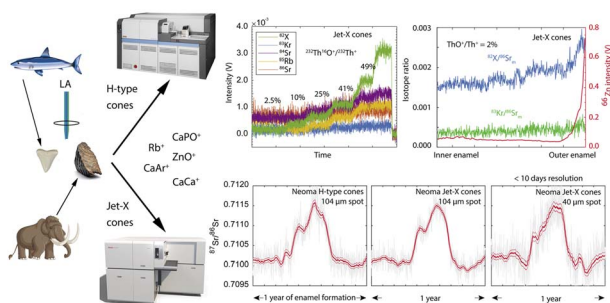
2197

Precise isotope determination of sub-microgram Mg by the critical mixture double spike technique and its application to fluid inclusions in halite

Yang Wang, Weijuan Yang, Shan Ke,* Yongsheng He* and Qishun Fan



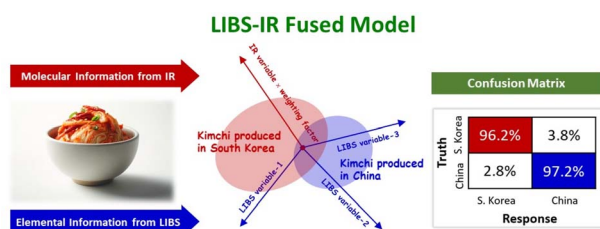
2207



Comparative high spatial resolution measurements of Sr isotopic composition in bio-apatite using different LA-MC-ICPMS configurations: application to faunal (sub)seasonal mobility studies

Robert Anczkiewicz,* Wolfgang Müller, Szymon Mianowski, Maria Dądela, Alessia Nava, Luca Bondioli, Milena Matyszczyk, Anna Jasińska, Jörg Ostendorf, Sofia Bakayeva and Taras Yanytsky

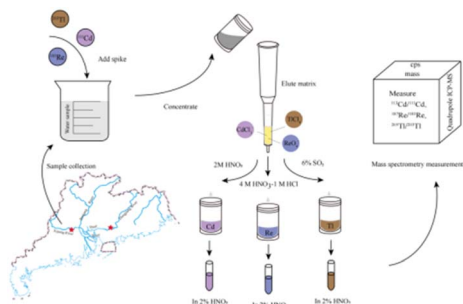
2222



Fusion of elemental and molecular fingerprints for accurate classification of kimchi by country of origin

Sandeep Kumar, Yujin Oh, Hyemin Jung, Kyung-Sik Ham, Hyun-Jin Kim, Song-Hee Han, Sang-Ho Nam* and Yonghoon Lee*

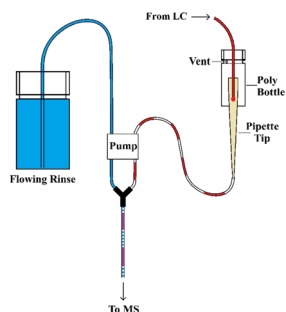
2232



Quantification of cadmium, rhenium and thallium in low-content samples via isotope dilution ICP-MS combined with single-step anion exchange preconcentration

Jia-Lu Wang, Qiao-Hui Zhong, Zhao-Yang Wang, Lu Yin, Jia-Kai Guo, Zhi-Bing Wang and Jie Li*

2243



Online collection of LC effluent as droplets for automatic injection into ICP-MS

Nick H. Erfurth,* Matthew M. Jones, Courtney M. Pincock and Emily M. Hoadley



2251

High precision analysis of mercury isotopes at ultra-low concentrations using dry cold vapor generation-MC-ICP-MS

Jiaxin Sun, Yaqiu Zhao, Bridget A. Bergquist, Pengfei Li,*
Ruoyu Sun, Yi Liu, Jiubin Chen and Wang Zheng*

