

IN THIS ISSUE

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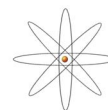
1730

2023 atomic spectrometry update – a review of advances in X-ray fluorescence spectrometry and its special applications

Christine Vanhoof, Jeffrey R. Bacon, Ursula E. A. Fittschen and Laszlo Vincze



Atomic
Spectrometry
Updates

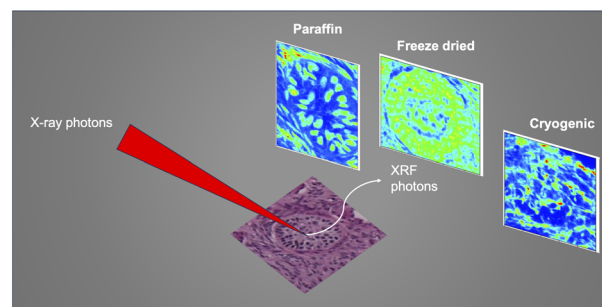


COMMUNICATION

1744

Difficulties and artefacts in cryo-fixation of ovarian tissues for X-ray fluorescence analyses

Alessandra Gianoncelli,* Katarina Vogel- Mikuš, Murielle Salomé, Ernesto Pascotto, Giuseppe Ricci and Lorella Pascolo



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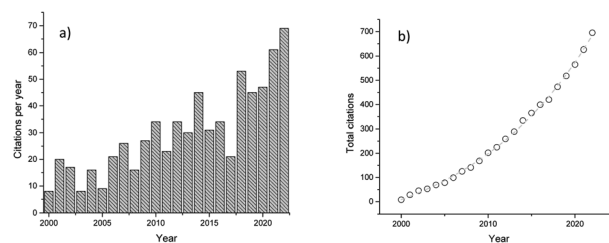


CRITICAL REVIEW

1751

Catching up on calibration-free LIBS

Francesco Poggialini, Beatrice Campanella,
Bruno Cocciaro, Giulia Lorenzetti, Vincenzo Palleschi*
and Stefano Legnaioli

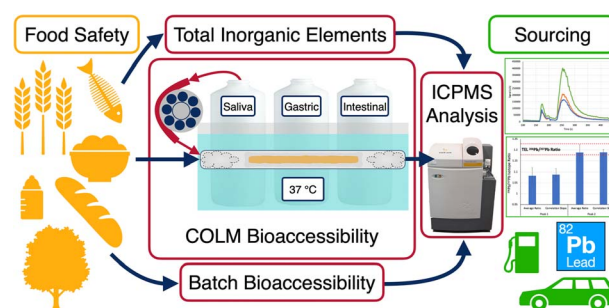


TUTORIAL REVIEW

1772

The continuous on-line leaching method coupled to inductively coupled plasma mass spectrometry for risk assessment of food safety and for sourcing of elements: a tutorial review

Alastair Kierulf and Diane Beauchemin*

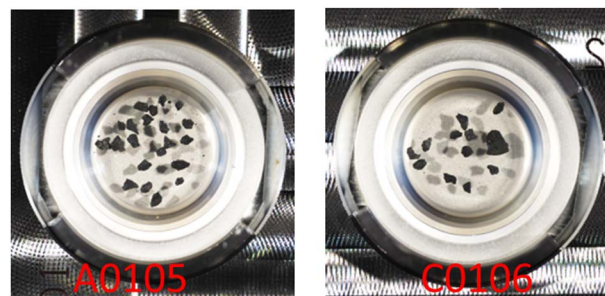


PAPERS

1785

Noble gas mass-spectrometry for extraterrestrial micro-samples: analyses of asteroid matter returned by Hayabusa2 JAXA mission

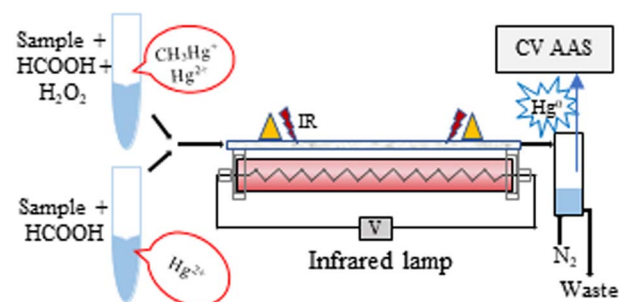
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Satoshi Tanaka, Fuyuto Terui, Satoru Nakazawa,
Seiichi Watanabe, Yuichi Tsuda and
Hayabusa2 Initial Analysis Volatile Team



1798

Infrared radiation-assisted thermochemical vapor generation for mercury speciation by atomic absorption spectrometry

Victor Marques Campos, Jane Kelly Sousa Brito, Wladiana
Oliveira Matos, Lívia Paulia D. Ribeiro and Gisele
Simone Lopes*



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1808

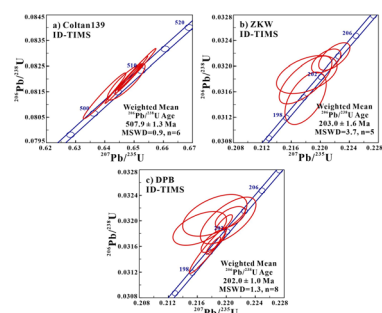
Time min	RD ^a μg kg ⁻¹	Sample RD*DF ^b μg kg ⁻¹	RSD	Sample + spike μg kg ⁻¹	RSD	Recovery %	RSD
0	1.09	109	1.3	11.01	1.3	99.2	2.9
30	0.95	95	6.1	10.30	6.1	93.5	0.5
60	0.97	97	5.4	10.65	5.4	96.7	1.9
90	1.03	103	5.2	10.61	5.2	95.8	3.7
120	0.91	91	5.6	9.94	5.6	90.4	1.9
150	1.00	100	3.3	10.13	3.3	91.2	1.1
180	1.06	106	0.5	10.95	0.5	98.9	1.2

^a Raw data, ^b dilution factor

Determination of chlorine in Hf precursors by high-resolution inductively coupled plasma mass spectrometry

Hanul Lee, Seongkyong Joo and Dongchul Suh*

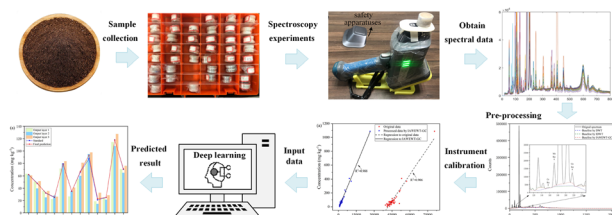
1816



Characterization of reference materials for *in situ* U–Pb dating of columbite group minerals by LA-ICP-MS

Ming Yang, Yue-Heng Yang,* Rolf L. Romer, Xu-Dong Che, Ru-Cheng Wang, Fu-Yuan Wu, Guang-Chun Fei, Yun Deng and Tao Wu

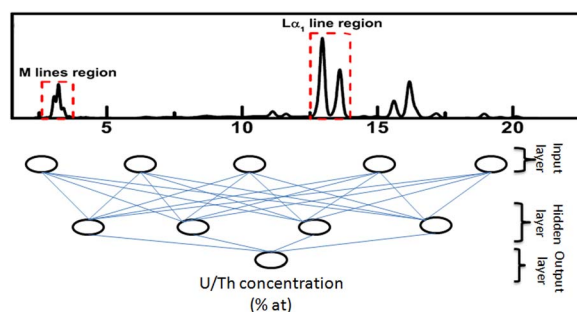
1830



Quantitative analysis of heavy metals in soil via hierarchical deep neural networks with X-ray fluorescence spectroscopy

Wanqi Yang, Fusheng Li,* Shubin Lyu, Qinglun Zhang and Yanchun Zhao

1841



An X-ray fluorescence and machine learning based methodology for the direct non-destructive compositional analysis of (Th_{1-x}U_x)O₂ fuel pellets

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

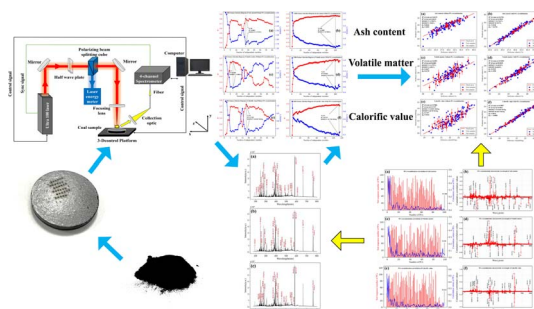


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Determination of ash content, volatile matter, and calorific value in coal by OLS combined with laser-induced breakdown spectroscopy based on PC recombination

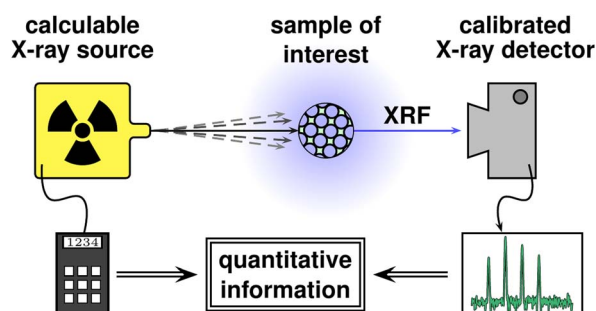
Shengen Zhu, Wenhao Zhang,* Guangdong Song,* Yadong Li, Binxin Hu, Feng Zhu, Hua Zhang, Yubin Wei, Tengfei Sun and Jing Tang



1865

Reference-free X-ray fluorescence analysis using well-known polychromatic synchrotron radiation

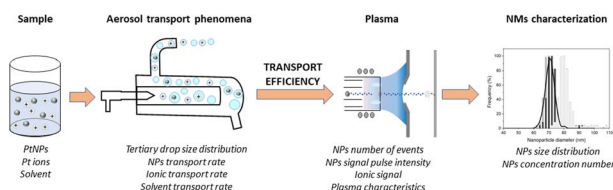
André Wählich,* Malte Wansleben, Rainer Unterumsberger, Yves Kayser and Burkhard Beckhoff



1874

Unraveling the role of aerosol transport on nanomaterial characterization by means single particle inductively coupled plasma mass spectrometry

Daniel Torregrosa, Guillermo Grindlay, Luis Gras and Juan Mora



1885

Titanium and titanium oxides at the K- and L-edges: comparing theoretical calculations to X-ray absorption and X-ray emission measurements

Karina Bzheumikhova,* John Vinson, Rainer Unterumsberger, Malte Wansleben, Claudia Zech, Kai Schüler, Yves Kayser, Philipp Hönicke and Burkhard Beckhoff

