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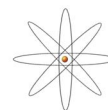
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2023 atomic spectrometry update – a review of advances in X-ray fluorescence spectrometry and its special applications

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



Atomic
Spectrometry
Updates

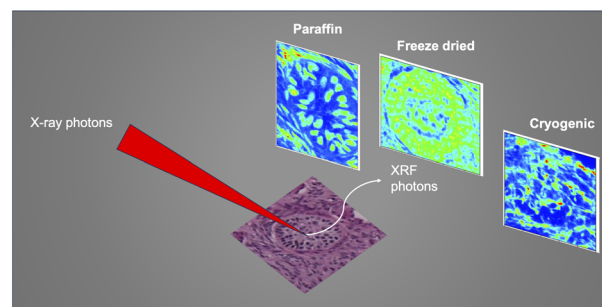


COMMUNICATION

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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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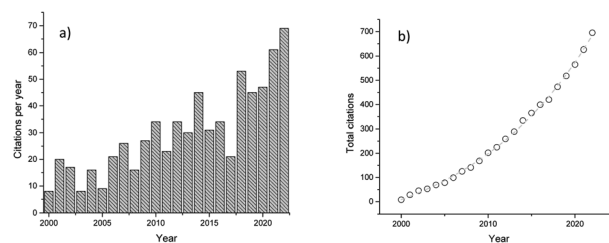


CRITICAL REVIEW

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Catching up on calibration-free LIBS

Francesco Poggialini, Beatrice Campanella,
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and Stefano Legnaioli

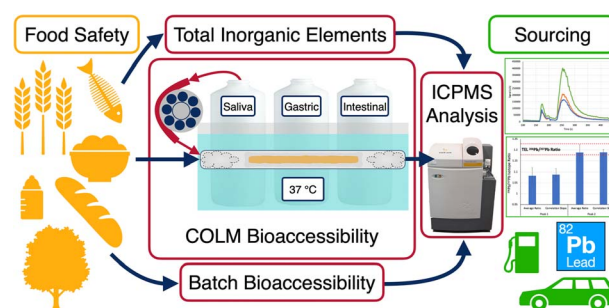


TUTORIAL REVIEW

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

Alastair Kierulf and Diane Beauchemin*

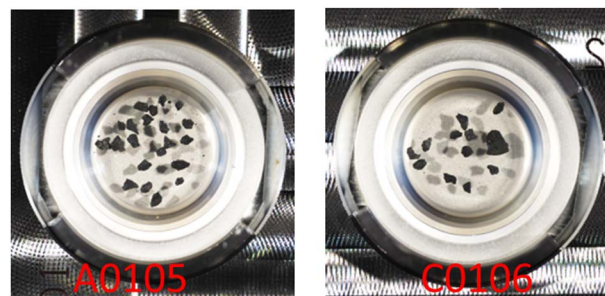


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Noble gas mass-spectrometry for extraterrestrial
micro-samples: analyses of asteroid matter returned
by Hayabusa2 JAXA mission

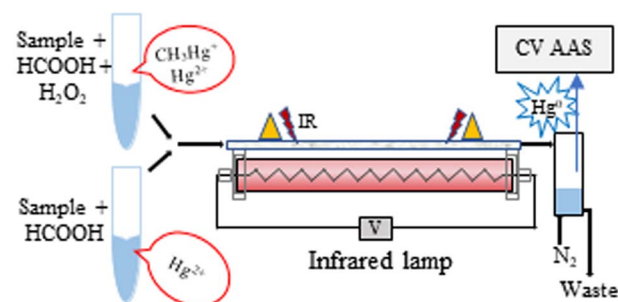
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Hayabusa2 Initial Analysis Volatile Team



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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*



1808

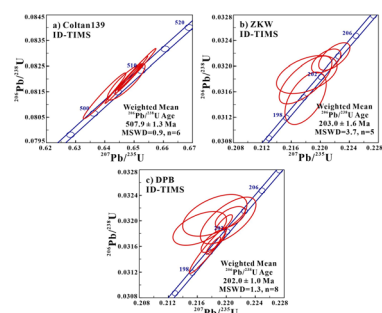
Time	RD ^a	Sample		Sample + spike	Recovery	
min	$\mu\text{g kg}^{-1}$	RD*DF ^b	RSD	$\mu\text{g kg}^{-1}$	%	RSD
0	1.09	109	1.3	11.01	1.3	99.2
30	0.95	95	6.1	10.30	6.1	93.5
60	0.97	97	5.4	10.65	5.4	96.7
90	1.03	103	5.2	10.61	5.2	95.8
120	0.91	91	5.6	9.94	5.6	90.4
150	1.00	100	3.3	10.13	3.3	91.2
180	1.06	106	0.5	10.95	0.5	98.9

^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*

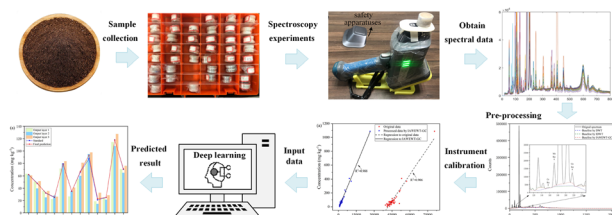
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Characterization of reference materials for *in situ* U–Pb dating of columbite group minerals by LA-ICP-MS

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

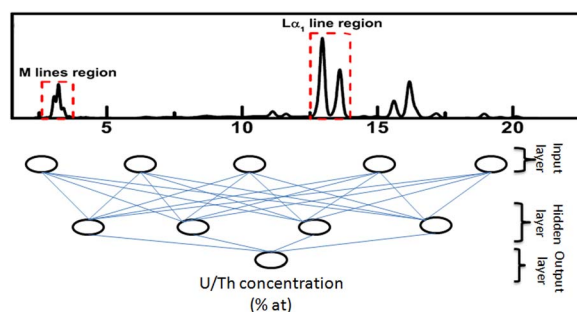
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Quantitative analysis of heavy metals in soil via hierarchical deep neural networks with X-ray fluorescence spectroscopy

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

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An X-ray fluorescence and machine learning based methodology for the direct non-destructive compositional analysis of $(\text{Th}_{1-x}\text{U}_x)\text{O}_2$ fuel pellets

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

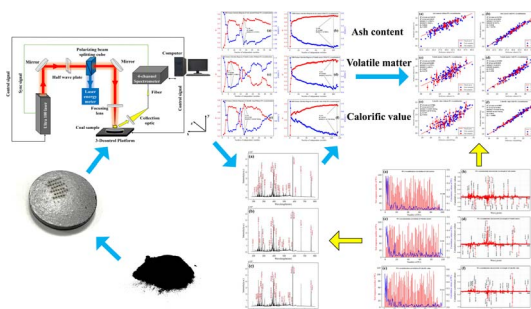


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Determination of ash content, volatile matter, and calorific value in coal by OLS combined with laser-induced breakdown spectroscopy based on PC recombination

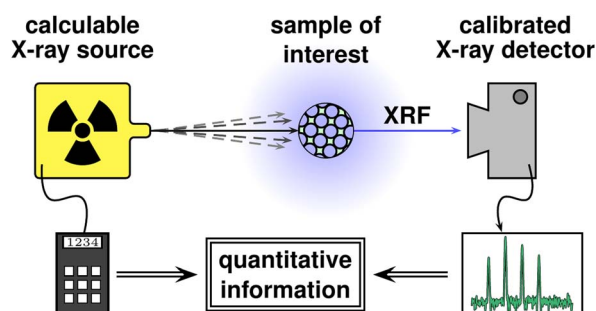
Shengen Zhu, Wenhao Zhang,* Guangdong Song,* Yadong Li, Binxin Hu, Feng Zhu, Hua Zhang, Yubin Wei, Tengfei Sun and Jing Tang



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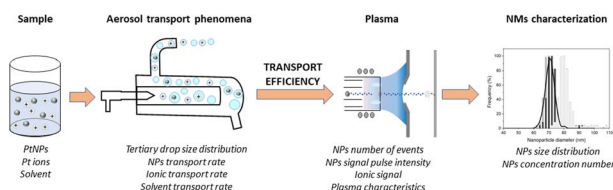
André Wählich,* Malte Wansleben, Rainer Unterumsberger, Yves Kayser and Burkhard Beckhoff



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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



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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 Schöler, Yves Kayser, Philipp Hönicke and Burkhard Beckhoff

