

Beatriz Fernandez

List of Publications by Year in descending order

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85
papers

1,971
citations

236925

25
h-index

276875

41
g-index

86
all docs

86
docs citations

86
times ranked

1652
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct analysis of solid samples by fs-LA-ICP-MS. <i>TrAC - Trends in Analytical Chemistry</i> , 2007, 26, 951-966.	11.4	181
2	Critical revision of GD-MS, LA-ICP-MS and SIMS as inorganic mass spectrometric techniques for direct solid analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2009, 24, 1145.	3.0	153
3	Laser ablation ICP-MS for quantitative biomedical applications. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 403, 2113-2125.	3.7	113
4	Glow-discharge spectrometry for direct analysis of thin and ultra-thin solid films. <i>TrAC - Trends in Analytical Chemistry</i> , 2006, 25, 11-18.	11.4	103
5	Laser ablation ICP-MS for simultaneous quantitative imaging of iron and ferroportin in hippocampus of human brain tissues with Alzheimer's disease. <i>Talanta</i> , 2019, 197, 413-421.	5.5	64
6	Inorganic mass spectrometry as a tool for characterisation at the nanoscale. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 15-29.	3.7	55
7	Gold internal standard correction for elemental imaging of soft tissue sections by LA-ICP-MS: element distribution in eye microstructures. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 3091-3096.	3.7	53
8	Elemental fractionation effects in high repetition rate IR femtosecond laser ablation ICP-MS analysis of glasses. <i>Journal of Analytical Atomic Spectrometry</i> , 2009, 24, 891.	3.0	50
9	Quantitative bioimaging of trace elements in the human lens by LA-ICP-MS. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 2343-2348.	3.7	50
10	Direct Determination of Trace Elements in Powdered Samples by In-Cell Isotope Dilution Femtosecond Laser Ablation ICPMS. <i>Analytical Chemistry</i> , 2008, 80, 6981-6994.	6.5	47
11	Iron and Zinc in the Embryo and Endosperm of Rice (<i>Oryza sativa</i> L.) Seeds in Contrasting $\delta^{15}\text{N}$ -Deoxymugineic Acid/Nicotianamine Scenarios. <i>Frontiers in Plant Science</i> , 2018, 9, 1190.	3.6	47
12	Solid-spiking isotope dilution laser ablation ICP-MS for the direct and simultaneous determination of trace elements in soils and sediments. <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 367-377.	3.0	43
13	Investigations of the effect of hydrogen, nitrogen or oxygen on the in-depth profile analysis by radiofrequency argon glow discharge-optical emission spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2003, 18, 151-156.	3.0	42
14	The influence of hydrogen, nitrogen or oxygen additions to radiofrequency argon glow discharges for optical emission spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2002, 17, 1549-1555.	3.0	39
15	The Zinc-Metallothionein Redox System Reduces Oxidative Stress in Retinal Pigment Epithelial Cells. <i>Nutrients</i> , 2018, 10, 1874.	4.1	39
16	Absolute Quantification of Human Serum Transferrin by Species-Specific Isotope Dilution Laser Ablation ICP-MS. <i>Analytical Chemistry</i> , 2011, 83, 5353-5360.	6.5	38
17	Design and evaluation of a new Peltier-cooled laser ablation cell with on-sample temperature control. <i>Analytica Chimica Acta</i> , 2014, 809, 88-96.	5.4	36
18	Depth profile analysis with glow discharge spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 920-930.	3.0	33

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19	Glow discharge analysis of nanostructured materials and nanolayersâ€”A review. <i>Analytica Chimica Acta</i> , 2010, 679, 7-16.	5.4	31
20	Radio Frequency Glow Discharge-Optical Emission Spectrometry For Direct Quantitative Analysis of Glass. <i>Analytical Chemistry</i> , 2004, 76, 1039-1044.	6.5	27
21	Critical evaluation of the potential of radiofrequency pulsed glow dischargeâ€”time-of-flight mass spectrometry for depth-profile analysis of innovative materials. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 5655-5662.	3.7	27
22	Bioimaging of metallothioneins in ocular tissue sections by laser ablation-ICP-MS using bioconjugated gold nanoclusters as specific tags. <i>Mikrochimica Acta</i> , 2018, 185, 64.	5.0	27
23	Quantitative mapping of specific proteins in biological tissues by laser ablationâ€”ICP-MS using exogenous labels: aspects to be considered. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 549-558.	3.7	27
24	Silicon induced Fe deficiency affects Fe, Mn, Cu and Zn distribution in rice (<i>Oryza sativa</i> L.) growth in calcareous conditions. <i>Plant Physiology and Biochemistry</i> , 2018, 125, 153-163.	5.8	26
25	Quantitative Imaging of Specific Proteins in the Human Retina by Laser Ablation ICPMS using Bioconjugated Metal Nanoclusters as Labels. <i>Analytical Chemistry</i> , 2018, 90, 12145-12151.	6.5	26
26	Pulsed Radiofrequency Glow Discharge Time-of-Flight Mass Spectrometry for Nanostructured Materials Characterization. <i>Analytical Chemistry</i> , 2011, 83, 329-337.	6.5	25
27	Nanoparticles as labels of specific-recognition reactions for the determination of biomolecules by inductively coupled plasma-mass spectrometry. <i>Analytica Chimica Acta</i> , 2020, 1128, 251-268.	5.4	23
28	The effect of glow discharge sputtering on the analysis of metal oxide films. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2009, 64, 155-166.	2.9	22
29	Opportunities and challenges of isotopic analysis by laser ablation ICP-MS in biological studies. <i>TrAC - Trends in Analytical Chemistry</i> , 2018, 105, 380-390.	11.4	22
30	Pulsed radiofrequency glow discharge optical emission spectrometry for the direct characterisation of photovoltaic thin film silicon solar cells. <i>Journal of Analytical Atomic Spectrometry</i> , 2010, 25, 370.	3.0	21
31	Elemental analyses of soil and sediment fused with lithium borate using isotope dilution laser ablation-inductively coupled plasma-mass spectrometry. <i>Analytica Chimica Acta</i> , 2013, 793, 72-78.	5.4	21
32	Detection of transgenerational barium dual-isotope marks in salmon otoliths by means of LA-ICP-MS. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 2901-2909.	3.7	20
33	On-line double isotope dilution laser ablation inductively coupled plasma mass spectrometry for the quantitative analysis of solid materials. <i>Analytica Chimica Acta</i> , 2014, 851, 64-71.	5.4	20
34	Quantitative study of zinc and metallothioneins in the human retina and RPE cells by mass spectrometry-based methodologies. <i>Talanta</i> , 2018, 178, 222-230.	5.5	20
35	Multiplex bioimaging of proteins-related to neurodegenerative diseases in eye sections by laser ablation - Inductively coupled plasma â€” Mass spectrometry using metal nanoclusters as labels. <i>Talanta</i> , 2021, 221, 121489.	5.5	19
36	The effect of thin conductive layers on glass on the performance of radiofrequency glow discharge optical emission spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2005, 20, 462-466.	3.0	18

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37	Quantitative depth profiling of boron and arsenic ultra low energy implants by pulsed rf-GD-ToFMS. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 542-549.	3.0	18
38	Characterization of the aerosol produced by infrared femtosecond laser ablation of polyacrylamide gels for the sensitive inductively coupled plasma mass spectrometry detection of selenoproteins. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2009, 64, 649-658.	2.9	15
39	Depth profile characterization of Zn-TiO ₂ nanocomposite films by pulsed radiofrequency glow discharge-optical emission spectrometry. <i>Talanta</i> , 2011, 84, 572-578.	5.5	15
40	Pulsed glow discharge time of flight mass spectrometry for the screening of polymer-based coatings containing brominated flame retardants. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 318-326.	3.0	14
41	Pulsed radiofrequency glow discharge time of flight mass spectrometry for coated glass analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1108-1116.	3.0	14
42	Fluorescent silver nanoclusters as antibody label in a competitive immunoassay for the complement factor H. <i>Mikrochimica Acta</i> , 2019, 186, 429.	5.0	14
43	In-depth profile analysis of oxide films by radiofrequency glow discharge optical emission spectrometry (rf-GD-OES): possibilities of depth-resolved solid-state speciation. <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 1378.	3.0	13
44	Quantitative depth profile analysis of metallic coatings by pulsed radiofrequency glow discharge optical emission spectrometry. <i>Analytica Chimica Acta</i> , 2011, 684, 47-53.	5.4	13
45	Quantitative distribution of Zn, Fe and Cu in the human lens and study of the Zn-metallothionein redox system in cultured lens epithelial cells by elemental MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 1746-1756.	3.0	13
46	A Possible Growth Mechanism for ZnO-TiO ₂ Composite Nanostructured Films Prepared by Electrodeposition. <i>Journal of the Electrochemical Society</i> , 2014, 161, D125-D133.	2.9	12
47	In-depth profile analysis of thin films deposited on non-conducting glasses by radiofrequency glow-discharge optical emission spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2006, 384, 876-886.	3.7	11
48	Analytical performance of pulsed radiofrequency glow discharge optical emission spectrometry for bulk and in-depth profile analysis of conductors and insulators. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 776-783.	3.0	11
49	RF-pulsed glow discharge time-of-flight mass spectrometry for glass analysis: Investigation of the ion source design. <i>Analytica Chimica Acta</i> , 2012, 756, 30-36.	5.4	11
50	A path towards a better characterisation of silicon thin-film solar cells: depth profile analysis by pulsed radiofrequency glow discharge optical emission spectrometry. <i>Progress in Photovoltaics: Research and Applications</i> , 2014, 22, 1246-1255.	8.1	11
51	Characterization of thin film tandem solar cells by radiofrequency pulsed glow discharge Time of flight mass spectrometry. <i>Talanta</i> , 2017, 165, 289-296.	5.5	11
52	Determination of phosphorus and carbon in phosphorylated deoxynucleotides via particle beam/hollow cathode glow discharge optical emission spectroscopy (PB/HC-OES). <i>Journal of Analytical Atomic Spectrometry</i> , 2005, 20, 924.	3.0	10
53	Bimodal determination of immunoglobulin E by fluorometry and ICP-MS by using platinum nanoclusters as a label in an immunoassay. <i>Mikrochimica Acta</i> , 2019, 186, 705.	5.0	10
54	Isotopically Enriched Tracers and Inductively Coupled Plasma Mass Spectrometry Methodologies to Study Zinc Supplementation in Single-Cells of Retinal Pigment Epithelium in Vitro. <i>Analytical Chemistry</i> , 2019, 91, 4488-4495.	6.5	10

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55	Imaging of proteins in biological tissues by fluorescence microscopy and laser ablation-ICP-MS using natural and isotopically enriched silver nanoclusters. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 1868-1879.	3.0	10
56	Endogenous and exogenous hydrogen influence on amorphous silicon thin films analysis by pulsed radiofrequency glow discharge optical emission spectrometry. <i>Analytica Chimica Acta</i> , 2012, 714, 1-7.	5.4	9
57	Synthesis of amino-functionalized silica nanoparticles for preparation of new laboratory standards. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 138, 1-7.	2.9	9
58	Influence of the hydrogen contained in amorphous silicon thin films on a pulsed radiofrequency argon glow discharge coupled to time of flight mass spectrometry. Comparison with the addition of hydrogen as discharge gas. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 71-79.	3.0	8
59	Depth Profile Analysis of Amorphous Silicon Thin Film Solar Cells by Pulsed Radiofrequency Glow Discharge Time of Flight Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2015, 26, 305-314.	2.8	8
60	Iridium nanoclusters as high sensitive-tunable elemental labels for immunoassays: Determination of IgE and APOE in aqueous humor by inductively coupled plasma-mass spectrometry. <i>Talanta</i> , 2022, 244, 123424.	5.5	8
61	Nitrogen effects in multi-matrix calibrations by radiofrequency glow discharge " optical emission spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 389, 743-752.	3.7	7
62	Studies on the Stability of Zn and ZnTiO ₂ Nanocomposite Coatings Prepared by Pulse Reverse Current. <i>Journal of the Electrochemical Society</i> , 2011, 158, C63.	2.9	7
63	Challenging identifications of polymer coatings by radiofrequency pulsed glow discharge-time of flight mass spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 1054.	3.0	7
64	Capabilities of radiofrequency pulsed glow discharge-time of flight mass spectrometry for molecular screening in polymeric materials: positive versus negative ion mode. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 212-219.	3.0	7
65	Atomic Absorption Spectrometry: Fundamentals, Instrumentation and Capabilities. , 2018, , 137-137.		7
66	Gold nanoclusters as elemental label for the sequential quantification of apolipoprotein E and metallothionein 2A in individual human cells of the retinal pigment epithelium using single cell-ICP-MS. <i>Analytica Chimica Acta</i> , 2022, 1203, 339701.	5.4	7
67	Investigation of glow-discharge-induced morphology modifications on silicon wafers and chromium conversion coatings by AFM and rugosimetry. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 2841-2853.	3.7	6
68	Application of radiofrequency glow discharge-optical emission spectrometry for direct analysis of main components of glass samples. <i>Journal of Analytical Atomic Spectrometry</i> , 2006, 21, 1412-1418.	3.0	5
69	Isotope dilution mass spectrometry for quantitative elemental analysis of powdered samples by radiofrequency pulsed glow discharge time of flight mass spectrometry. <i>Talanta</i> , 2013, 115, 657-664.	5.5	5
70	Elemental and molecular imaging by LA-ICP-MS. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 547-548.	3.7	5
71	Real matrix-matched standards for quantitative bioimaging of cytosolic proteins in individual cells using metal nanoclusters as immunoprobes-label: A case study using laser ablation ICP-MS detection. <i>Analytica Chimica Acta</i> , 2022, 1221, 340128.	5.4	5
72	P, S and Cl trace detection by laser ablation double-focusing sector field ICP-MS to identify local defects in coated glasses. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 1526.	3.0	4

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73	Characterization of Doped Amorphous Silicon Thin Films through the Investigation of Dopant Elements by Glow Discharge Spectrometry: A Correlation of Conductivity and Bandgap Energy Measurements. <i>International Journal of Molecular Sciences</i> , 2011, 12, 2200-2215.	4.1	4
74	Rapid evaluation of different perovskite absorber layers through the application of depth profile analysis using glow discharge " Time of flight mass spectrometry. <i>Talanta</i> , 2019, 192, 317-324.	5.5	3
75	Pulsed radiofrequency glow discharge time-of-flight mass spectrometry: Depth profile analysis of multilayers on conductive and non-conductive substrates. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 168, 105865.	2.9	2
76	Depth profile analysis: coatings and thin layers. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 2723-2724.	3.7	1
77	Plasma immersion ion implantation for reducing metal ion release. , 2012, , .		1
78	Plasma profiling-time of flight mass spectrometry: considerations to exploit its analytical performance for materials characterization. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 702-707.	3.0	1
79	Microcentrifuge tubes as disposable immunoelectrochemical cells for the on-site detection of GFAP, biomarker of hemorrhagic stroke. , 2020, 60, .		1
80	Improving pulsed radiofrequency glow discharge for time-of-flight mass spectrometry simultaneous elemental and molecular analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 7431-7443.	3.7	0
81	Elemental Direct Solid Analysis (GD-OES, LIBS, GD-MS and LA-ICP-MS). , 2018, , 1-1.		0
82	Atomic Mass Spectrometry/LA-ICP-MS. , 2018, , 218-218.		0
83	Synthesis of Iridium and Palladium Nanoclusters for Biomedical Applications. <i>Materials Proceedings</i> , 2021, 4, 49.	0.2	0
84	Synthesis of Size Monodisperse Water-Soluble Metal Nanoclusters for Protein Quantification by Elemental Mass Spectrometry. <i>Materials Proceedings</i> , 2020, 4, .	0.2	0
85	General purification methods of metal nanoclusters. , 2022, , 161-186.		0