

Jorg Bettmer

List of Publications by Year in descending order

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84
papers

2,897
citations

159525

30
h-index

182361

51
g-index

84
all docs

84
docs citations

84
times ranked

3063
citing authors

#	ARTICLE	IF	CITATIONS
1	Gold nanoparticles: Distribution, bioaccumulation and toxicity. In vitro and in vivo studies. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2018, 14, 1-12.	1.7	224
2	The emerging role of ICP-MS in proteomic analysis. <i>Journal of Proteomics</i> , 2009, 72, 989-1005.	1.2	149
3	Speciation of Silver Nanoparticles and Silver(I) by Reversed-Phase Liquid Chromatography Coupled to ICPMS. <i>Analytical Chemistry</i> , 2013, 85, 1316-1321.	3.2	133
4	Elemental mass spectrometry for quantitative proteomics. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 390, 3-16.	1.9	124
5	Quantitative Evaluation of Cisplatin Uptake in Sensitive and Resistant Individual Cells by Single-Cell ICP-MS (SC-ICP-MS). <i>Analytical Chemistry</i> , 2017, 89, 11491-11497.	3.2	105
6	Size characterisation of Au nanoparticles by ICP-MS coupling techniques. <i>Journal of Analytical Atomic Spectrometry</i> , 2006, 21, 431.	1.6	93
7	ICP-MS for absolute quantification of proteins for heteroatom-tagged, targeted proteomics. <i>TrAC - Trends in Analytical Chemistry</i> , 2012, 40, 52-63.	5.8	80
8	High spatial resolution trace element analysis by LA-ICP-MS using a novel ablation cell for multiple or large samples. <i>International Journal of Mass Spectrometry</i> , 2011, 307, 39-45.	0.7	73
9	Evaluation of the biological effect of Ti generated debris from metal implants: ions and nanoparticles. <i>Metallomics</i> , 2014, 6, 1702-1708.	1.0	72
10	ElaC Encodes a Novel Binuclear Zinc Phosphodiesterase. <i>Journal of Biological Chemistry</i> , 2002, 277, 29078-29085.	1.6	70
11	Elemental tagging in inorganic mass spectrometric bioanalysis. <i>Analytical and Bioanalytical Chemistry</i> , 2006, 386, 7-11.	1.9	66
12	Validation of the determination of copper and zinc in blood plasma and urine by ICP MS with cross-flow and direct injection nebulization. <i>Talanta</i> , 1997, 44, 1389-1396.	2.9	57
13	Complementary mass spectrometric techniques for the quantification of the protein corona: a case study on gold nanoparticles and human serum proteins. <i>Nanoscale</i> , 2015, 7, 14324-14331.	2.8	57
14	Application of isotope dilution ICP-MS techniques to quantitative proteomics. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 397, 3495-3502.	1.9	56
15	Analysis of gold nanoparticles using ICP-MS-based hyphenated and complementary ESI-MS techniques. <i>International Journal of Mass Spectrometry</i> , 2011, 307, 92-98.	0.7	56
16	Single cell ICP-MS using on line sample introduction systems: Current developments and remaining challenges. <i>TrAC - Trends in Analytical Chemistry</i> , 2020, 132, 116042.	5.8	55
17	Protein labelling with mercury tags: fundamental studies on ovalbumin derivatised with p-hydroxymercuribenzoic acid (pHMB). <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 1359.	1.6	53
18	Single particle analysis of TiO ₂ in candy products using triple quadrupole ICP-MS. <i>Talanta</i> , 2018, 180, 309-315.	2.9	53

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19	^{34}S LC coupled to ICP-SFMS with post-column isotope dilution analysis of sulfur for absolute protein quantification. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 537-543.	1.9	47
20	Absolute and Relative Protein Quantification with the Use of Isotopically Labeled p-Hydroxymercuribenzoic Acid and Complementary MALDI-MS and ICPMS Detection. <i>Analytical Chemistry</i> , 2009, 81, 9172-9177.	3.2	44
21	Separation and quantification of silver nanoparticles and silver ions using reversed phase high performance liquid chromatography coupled to inductively coupled plasma mass spectrometry in combination with isotope dilution analysis. <i>Journal of Chromatography A</i> , 2016, 1468, 102-108.	1.8	43
22	Addressing the presence of biogenic selenium nanoparticles in yeast cells: analytical strategies based on ICP-TQ-MS. <i>The Analyst</i> , 2020, 145, 1457-1465.	1.7	43
23	Determination of the MRI contrast agent Gd-DTPA by SEC-ICP-MS. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 379, 1050-4.	1.9	42
24	Combined single cell and single particle ICP-TQ-MS analysis to quantitatively evaluate the uptake and biotransformation of tellurium nanoparticles in bacteria. <i>Analytica Chimica Acta</i> , 2020, 1128, 116-128.	2.6	40
25	Stable isotope labelling and FPLC-ICP-SFMS for the accurate determination of clinical iron status parameters in human serum. <i>The Analyst</i> , 2008, 133, 379.	1.7	39
26	Quantitative Analysis of Transferrin Receptor 1 (TfR1) in Individual Breast Cancer Cells by Means of Labeled Antibodies and Elemental (ICP-MS) Detection. <i>Analytical Chemistry</i> , 2019, 91, 15532-15538.	3.2	38
27	Microwave-induced plasma-optical emission spectrometry – fundamental aspects and applications in metal speciation analysis. <i>TrAC - Trends in Analytical Chemistry</i> , 2000, 19, 138-156.	5.8	36
28	On-Line Coupling of Gel Electrophoresis and Inductively Coupled Plasma-Sector Field-Mass Spectrometry for the Determination of dsDNA Fragments. <i>Analytical Chemistry</i> , 2005, 77, 5072-5075.	3.2	36
29	In vitro and in situ experiments to evaluate the biodistribution and cellular toxicity of ultrasmall iron oxide nanoparticles potentially used as oral iron supplements. <i>Nanotoxicology</i> , 2020, 14, 388-403.	1.6	36
30	Ultrasmall iron oxide nanoparticles cisplatin (IV) prodrug nanoconjugate: ICP-MS based strategies to evaluate the formation and drug delivery capabilities in single cells. <i>Analytica Chimica Acta</i> , 2021, 1159, 338356.	2.6	33
31	On-line removal of mass interferences in palladium determination by ICP-MS using modified capillaries coupled to micro-flow nebulizers. <i>Journal of Analytical Atomic Spectrometry</i> , 2001, 16, 481-486.	1.6	31
32	Determination of phytic acid and its degradation products by ion-pair chromatography (IPC) coupled to inductively coupled plasma-sector field-mass spectrometry (ICP-SF-MS). <i>Journal of Analytical Atomic Spectrometry</i> , 2004, 19, 1330.	1.6	30
33	Plant protein phosphorylation monitored by capillary liquid chromatography-element mass spectrometry. <i>Biochemical and Biophysical Research Communications</i> , 2007, 355, 89-96.	1.0	29
34	Combination of single particle ICP-QMS and isotope dilution analysis for the determination of size, particle number and number size distribution of silver nanoparticles. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 2045-2052.	1.6	29
35	Fragmentation of Proteins in the Corona of Gold Nanoparticles As Observed in Live Cell Surface-Enhanced Raman Scattering. <i>Analytical Chemistry</i> , 2020, 92, 8553-8560.	3.2	29
36	Speciation of gold nanoparticles and low-molecular gold species in Wistar rat tissues by HPLC coupled to ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 193-199.	1.6	28

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37	Lead speciation in rainwater samples by modified fused silica capillaries coupled to a direct injection nebulizer (DIN) for sample introduction in ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2001, 16, 1028-1034.	1.6	27
38	Gel Electrophoresis Coupled to Inductively Coupled Plasma ^{MS} Mass Spectrometry Using Species-Specific Isotope Dilution for Iodide and Iodate Determination in Aerosols. <i>Analytical Chemistry</i> , 2007, 79, 1714-1719.	3.2	27
39	Synthesis, purification and mass spectrometric characterisation of a fluorescent Au ₉ @BSA nanocluster and its enzymatic digestion by trypsin. <i>Nanoscale</i> , 2014, 6, 716-721.	2.8	27
40	A novel approach for analysis of oligonucleotide ^{cisplatin} interactions by continuous elution gel electrophoresis coupled to isotope dilution inductively coupled plasma mass spectrometry and matrix ^{assisted laser desorption/ionization} mass spectrometry. <i>Electrophoresis</i> , 2008, 29, 1451-1459.	1.3	26
41	Application of SEC-ICP-MS for comparative analyses of metal-containing species in cancerous and healthy human thyroid samples. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 380, 198-203.	1.9	25
42	DNA quantification approach by GE-ICP-SFMS and complementary total phosphorus determination by ICP-SFMS. <i>Journal of Analytical Atomic Spectrometry</i> , 2006, 21, 1271-1276.	1.6	25
43	Metallomics investigations on potential binding partners of methylmercury in tuna fish muscle tissue using complementary mass spectrometric techniques. <i>Metallomics</i> , 2012, 4, 807.	1.0	24
44	Systematic studies on the determination of Hg-labelled proteins using laser ablation-ICPMS and isotope dilution analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 2691-2698.	1.9	23
45	Biosynthesis of Cd-bound phytochelatins by <i>Phaeodactylum tricornutum</i> and their speciation by size-exclusion chromatography and ion-pair chromatography coupled to ICP ^{MS} . <i>Analytical and Bioanalytical Chemistry</i> , 2005, 383, 398-403.	1.9	21
46	Development of a new method for the separation of vanadium species and chloride interference removal using modified silica capillaries-DIN-ICP-MS. <i>Microchemical Journal</i> , 2004, 76, 161-171.	2.3	20
47	Ultra-Small Iron Nanoparticles Target Mitochondria Inducing Autophagy, Acting on Mitochondrial DNA and Reducing Respiration. <i>Pharmaceutics</i> , 2021, 13, 90.	2.0	20
48	Determination of organic ionic lead and mercury species with high-performance liquid chromatography using sulphur reagents. <i>Journal of Chromatography A</i> , 1993, 654, 177-182.	1.8	19
49	Initial results on the coupling of sedimentation field-flow fractionation (SdFFF) to inductively coupled plasma-tandem mass spectrometry (ICP-MS/MS) for the detection and characterization of TiO ₂ nanoparticles. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 1549-1555.	1.6	19
50	Complementary techniques (spICP-MS, TEM, and HPLC-ICP-MS) reveal the degradation of 40 ^{nm} citrate-stabilized Au nanoparticles in rat liver after intraperitoneal injection. <i>Journal of Trace Elements in Medicine and Biology</i> , 2019, 55, 1-5.	1.5	19
51	Determination of phosphorylation degrees in caseins by on-line gel electrophoresis coupled to ICP-SFMS. <i>Journal of Analytical Atomic Spectrometry</i> , 2007, 22, 1296.	1.6	18
52	The behaviour of different organometallic compounds in the presence of inorganic mercury(II): transalkylation of mercury species and their analysis by the GC-MIP-PED system. <i>Applied Organometallic Chemistry</i> , 1997, 11, 721-725.	1.7	17
53	Feasibility studies on the suppression of HfO ⁺ mass interferences on platinum determination by inductively coupled plasma mass spectrometry (ICP-MS) by modification of the sample introduction system. <i>Journal of Analytical Atomic Spectrometry</i> , 2000, 15, 507-512.	1.6	17
54	Metalloproteomics: a challenge for analytical chemists. <i>Analytical and Bioanalytical Chemistry</i> , 2005, 383, 370-371.	1.9	17

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55	Quantitative assessment of the metabolic products of iron oxide nanoparticles to be used as iron supplements in cell cultures. <i>Analytica Chimica Acta</i> , 2018, 1039, 24-30.	2.6	17
56	Relating the composition and interface interactions in the hard corona of gold nanoparticles to the induced response mechanisms in living cells. <i>Nanoscale</i> , 2020, 12, 17450-17461.	2.8	17
57	Direct μ -flow injection isotope dilution ICP-MS for the determination of heavy metals in oil samples. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 269-275.	1.9	16
58	Simultaneous determination of organic ionic lead and mercury species using HPLC. <i>Fresenius' Journal of Analytical Chemistry</i> , 1994, 350, 30-33.	1.5	15
59	Rapid separation of elemental species by multicapillary GC. <i>Analytical and Bioanalytical Chemistry</i> , 2002, 373, 461-465.	1.9	15
60	Sensitive detection of ionic organolead compounds by coupling hydride generation (HG) with transversely heated graphite atomizer-atomic absorption spectrometry (THGA-AAS). <i>Fresenius' Journal of Analytical Chemistry</i> , 1994, 349, 738-742.	1.5	13
61	Modification of capillaries coupled to micro-flow nebulizers: a new strategy for on-line interference removal in inductively coupled plasma mass spectrometry. <i>Journal of Mass Spectrometry</i> , 2000, 35, 891-896.	0.7	13
62	Analysis of hepcidin, a key peptide for Fe homeostasis, via sulfur detection by capillary liquid chromatography-inductively coupled plasma mass spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 334-340.	1.6	13
63	Enhanced Detection of DNA Sequences Using End-Point PCR Amplification and Online Gel Electrophoresis (GE)-ICP-MS: Determination of Gene Copy Number Variations. <i>Analytical Chemistry</i> , 2014, 86, 11028-11032.	3.2	13
64	The Plasma Emission Detector – A Suitable Detector for Speciation and Sum Parameter Analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 1997, 12, 993-996.	1.6	12
65	Initial studies on quantitative DNA induced oxidation by gel electrophoresis (GE)-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 195-200.	1.6	12
66	On-line Chloride Interference Removal for Arsenic Determination in Waste Water and Urine by ICP-MS Using a Modified Capillary. <i>International Journal of Environmental Analytical Chemistry</i> , 2002, 82, 795-804.	1.8	11
67	The fate of iron nanoparticles used for treatment of iron deficiency in blood using mass-spectrometry based strategies. <i>Mikrochimica Acta</i> , 2017, 184, 3673-3680.	2.5	11
68	Mass spectrometric approach for the analysis of the hard protein corona of nanoparticles in living cells. <i>Journal of Proteomics</i> , 2020, 212, 103582.	1.2	11
69	GC-MIP-PED as an element-specific system for the determination of organomercury compounds. <i>Applied Organometallic Chemistry</i> , 1995, 9, 541-545.	1.7	10
70	Targeting HER2 protein in individual cells using ICP-MS detection and its potential as prognostic and predictive breast cancer biomarker. <i>Talanta</i> , 2021, 235, 122773.	2.9	10
71	Screening-method for organotin by elimination of the inorganic tin matrix using a coupling of hydride generation (HG) and transversely heated graphite atomizer-atomic absorption spectrometry (THGA-AAS). <i>Fresenius' Journal of Analytical Chemistry</i> , 1997, 359, 239-243.	1.5	9
72	Removal of interfering elements in ICP-QMS for the determination of Pt, Rh, and Pd by chemically modified sample introduction capillaries. <i>Fresenius' Journal of Analytical Chemistry</i> , 2001, 370, 488-491.	1.5	9

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73	Elemental speciation. Analytical and Bioanalytical Chemistry, 2002, 372, 33-34.	1.9	9
74	Determination of specific DNA sequences and their hybridisation processes by elemental labelling followed by SEC-ICP-MS detection. Analyst, The, 2014, 139, 3423.	1.7	8
75	Evaluation of the uptake, storage and cell effects of nano-iron in enterocyte-like cell models. Journal of Trace Elements in Medicine and Biology, 2018, 49, 98-104.	1.5	7
76	Transversely heated graphite atomizer-atomic absorption spectrometry (thga aas) in combination with flow injection analysis system-hydride generation (fias hg) as a reliable screening method for organolead compounds. Applied Organometallic Chemistry, 1994, 8, 615-620.	1.7	6
77	The Use of Stable Isotopic Tracers in Metallomics Studies. Advances in Experimental Medicine and Biology, 2018, 1055, 111-137.	0.8	5
78	Evaluation of nanodebris produced by in vitro degradation of titanium-based dental implants in the presence of bacteria using single particle and single cell inductively coupled plasma mass spectrometry. Journal of Analytical Atomic Spectrometry, 2021, 36, 2007-2016.	1.6	5
79	Evaluation of copper uptake in individual spores of <i>Streptomyces coelicolor</i> and endogenic nanoparticles formation to modulate the secondary metabolism. Metallomics, 2022, 14, .	1.0	3
80	Elemental and molecular mass spectrometric strategies for probing interactions between DNA and new Ru(II) complexes containing phosphane ligands and either a tris(pyrazol-1-yl)borate or a pyridine bis(oxazoline) ligand. Journal of Analytical Atomic Spectrometry, 2015, 30, 172-179.	1.6	2
81	Determination and speciation of cadmium in microcosms with <i>Bunodosoma caissarum</i> and <i>Perna perna</i> using isotopically enriched ¹¹⁶ Cd. Marine Pollution Bulletin, 2017, 115, 362-368.	2.3	2
82	The use of high performance liquid chromatography–inductively coupled plasma-mass spectrometry in the analysis of inorganic nanomaterials. Comprehensive Analytical Chemistry, 2021, , 285-301.	0.7	2
83	Labelling of biopolymers: current status and future trends. Analytical and Bioanalytical Chemistry, 2010, 397, 3431-3432.	1.9	1
84	In honor of Professor Klaus G. Heumann. Analytical and Bioanalytical Chemistry, 2016, 408, 7885-7887.	1.9	0