

Richard E Russo

List of Publications by Year in descending order

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76
papers

4,730
citations

81900

39
h-index

95266

68
g-index

77
all docs

77
docs citations

77
times ranked

3182
citing authors

#	ARTICLE	IF	CITATIONS
1	Laser ablation in analytical chemistry—a review. <i>Talanta</i> , 2002, 57, 425-451.	5.5	500
2	Applications of laser-induced breakdown spectroscopy for geochemical and environmental analysis: A comprehensive review. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2013, 87, 11-26.	2.9	263
3	Laser Ablation in Analytical Chemistry. <i>Analytical Chemistry</i> , 2013, 85, 6162-6177.	6.5	239
4	Femtosecond laser ablation ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2002, 17, 1072-1075.	3.0	200
5	Laser Ablation Molecular Isotopic Spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 99-104.	2.9	165
6	Delayed phase explosion during high-power nanosecond laser ablation of silicon. <i>Applied Physics Letters</i> , 2002, 80, 3072-3074.	3.3	160
7	Peer Reviewed: The Physics of Laser Ablation in Microchemical Analysis. <i>Analytical Chemistry</i> , 2002, 74, 70 A-77 A.	6.5	148
8	Comparison of Ultraviolet Femtosecond and Nanosecond Laser Ablation Inductively Coupled Plasma Mass Spectrometry Analysis in Glass, Monazite, and Zircon. <i>Analytical Chemistry</i> , 2003, 75, 6184-6190.	6.5	144
9	Effects of crater development on fractionation and signal intensity during laser ablation inductively coupled plasma mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2000, 55, 1693-1704.	2.9	109
10	Invited paper Observation of plasma shielding by measuring transmitted and reflected laser pulse temporal profiles. <i>Applied Physics A: Materials Science and Processing</i> , 1996, 64, 1-6.	2.3	104
11	Laser ablation sampling. <i>TrAC - Trends in Analytical Chemistry</i> , 1998, 17, 461-469.	11.4	102
12	Laser-induced nanostructure interactions for ion production. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 8453.	2.8	97
13	Time-resolved LIBS of atomic and molecular carbon from coal in air, argon and helium. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 2066.	3.0	96
14	Laser ablation induced vapor plume expansion into a background gas. II. Experimental analysis. <i>Journal of Applied Physics</i> , 2007, 101, 023115.	2.5	95
15	Imaging femtosecond laser-induced electronic excitation in glass. <i>Applied Physics Letters</i> , 2003, 82, 697-699.	3.3	86
16	Laser Ablation Molecular Isotopic Spectrometry: Strontium and its isotopes. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 767-775.	2.9	84
17	Elemental mapping of biological samples by the combined use of LIBS and LA-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 252-258.	3.0	84
18	UV fs double-pulse laser induced breakdown spectroscopy for high spatial resolution chemical analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 743.	3.0	80

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19	Laser Ablation Molecular Isotopic Spectrometry: Parameter influence on boron isotope measurements. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 604-609.	2.9	79
20	Simultaneous 3-dimensional elemental imaging with LIBS and LA-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 1292-1298.	3.0	72
21	Ultrafast laser induced breakdown spectroscopy for high spatial resolution chemical analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 189-192.	2.9	69
22	Carbon Isotope Separation and Molecular Formation in Laser-Induced Plasmas by Laser Ablation Molecular Isotopic Spectrometry. <i>Analytical Chemistry</i> , 2013, 85, 2899-2906.	6.5	69
23	Temperature and Emission Spatial Profiles of Laser-Induced Plasmas during Ablation Using Time-Integrated Emission Spectroscopy. <i>Applied Spectroscopy</i> , 1995, 49, 1054-1062.	2.2	68
24	Laser-induced breakdown spectroscopy in industrial and security applications. <i>Applied Optics</i> , 2010, 49, C132.	2.1	67
25	Metal particles produced by laser ablation for ICP-MS measurements. <i>Talanta</i> , 2007, 73, 567-576.	5.5	65
26	Existence of Phase Explosion during Laser Ablation and Its Effects on Inductively Coupled Plasma-Mass Spectroscopy. <i>Analytical Chemistry</i> , 2001, 73, 2288-2293.	6.5	63
27	Femtosecond laser ablation induced plasma characteristics from submicron craters in thin metal film. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	61
28	Particle Size Dependent Chemistry from Laser Ablation of Brass. <i>Analytical Chemistry</i> , 2005, 77, 6687-6691.	6.5	60
29	UV-femtosecond laser ablation-ICP-MS for analysis of alloy samples. <i>Journal of Analytical Atomic Spectrometry</i> , 2004, 19, 1165-1168.	3.0	55
30	Ultrafast laser ablation ICP-MS: role of spot size, laser fluence, and repetition rate in signal intensity and elemental fractionation. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 339-346.	3.0	49
31	Ultrafast laser induced breakdown spectroscopy of electrode/electrolyte interfaces. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	48
32	Pb/U Fractionation during Nd:YAG 213 nm and 266 nm Laser Ablation Sampling with Inductively Coupled Plasma Mass Spectrometry. <i>Applied Spectroscopy</i> , 2000, 54, 1435-1442.	2.2	47
33	UV-femtosecond and nanosecond laser ablation-ICP-MS: internal and external repeatability. <i>Journal of Analytical Atomic Spectrometry</i> , 2006, 21, 778-784.	3.0	47
34	Femtosecond laser ablation: Experimental study of the repetition rate influence on inductively coupled plasma mass spectrometry performance. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 277-286.	2.9	47
35	Laser ablation molecular isotopic spectrometry of water for 1D2/1H1 ratio analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2013, 88, 46-53.	2.9	47
36	Experimental and theoretical studies of particle generation after laser ablation of copper with a background gas at atmospheric pressure. <i>Journal of Applied Physics</i> , 2007, 101, 123105.	2.5	45

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37	Theory analysis of wavelength dependence of laser-induced phase explosion of silicon. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	44
38	Assessment of the precision and accuracy of thorium (²³² Th) and uranium (²³⁸ U) measured by quadrupole based inductively coupled plasma-mass spectrometry using liquid nebulization, nanosecond and femtosecond laser ablation. <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 229-234.	3.0	43
39	Simulation of a picosecond laser ablation plasma. <i>Applied Physics Letters</i> , 2000, 76, 3370-3372.	3.3	42
40	Analysis of arsenic in rice grains using ICP-MS and fs LA-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 1233-1237.	3.0	40
41	Glass particles produced by laser ablation for ICP-MS measurements. <i>Talanta</i> , 2007, 73, 577-582.	5.5	37
42	Spatially and temporally resolved spectral emission of laser-induced plasmas confined by cylindrical cavities. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 2127-2135.	3.0	35
43	Trace element fingerprinting of ancient Chinese gold with femtosecond laser ablation-inductively coupled mass spectrometry. <i>Journal of Archaeological Science</i> , 2009, 36, 461-466.	2.4	34
44	Optical far- and near-field femtosecond laser ablation of Si for nanoscale chemical analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 173-180.	3.7	33
45	Determination of Vanadium/Nickel Proportionality in the Asphaltene Fraction of Crude Oil Using Thin-Layer Chromatography with Femtosecond Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry. <i>Energy & Fuels</i> , 2013, 27, 2431-2436.	5.1	33
46	Elemental analysis of coal by tandem laser induced breakdown spectroscopy and laser ablation inductively coupled plasma time of flight mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2015, 109, 44-50.	2.9	33
47	Multivariate classification of edible salts: Simultaneous Laser-Induced Breakdown Spectroscopy and Laser-Ablation Inductively Coupled Plasma Mass Spectrometry Analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2016, 118, 102-111.	2.9	31
48	Heavy Metal Determination by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) and Direct Mercury Analysis (DMA) and Arsenic Mapping by Femtosecond (fs) Laser Ablation (LA) ICP-MS in Cereals. <i>Analytical Letters</i> , 2019, 52, 496-510.	1.8	31
49	Measurement of solid-liquid interface temperature during pulsed excimer laser melting of polycrystalline silicon films. <i>Applied Physics Letters</i> , 1994, 65, 1745-1747.	3.3	30
50	Scanning vs. single spot laser ablation ($\lambda=213$ nm) inductively coupled plasma mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 369-374.	2.9	30
51	Laser wavelength effects in ultrafast near-field laser nanostructuring of Si. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	30
52	Influence of preformed shock wave on the development of picosecond laser ablation plasma. <i>Journal of Applied Physics</i> , 2001, 89, 4096-4098.	2.5	29
53	Optical near-field ablation-induced plasma characteristics. <i>Applied Physics Letters</i> , 2006, 89, 254101.	3.3	27
54	Femtosecond laser ablation particle introduction to a liquid sampling-atmospheric pressure glow discharge ionization source. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 385.	3.0	27

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55	Laser Ablation Molecular Isotopic Spectrometry for Molecules Formation Chemistry in Femtosecond-Laser Ablated Plasmas. <i>Analytical Chemistry</i> , 2017, 89, 7750-7757.	6.5	27
56	Liquid sampling-atmospheric pressure glow discharge as a secondary excitation source: Assessment of plasma characteristics. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 94-95, 39-47.	2.9	26
57	Liquid sampling-atmospheric pressure glow discharge optical emission spectroscopy detection of laser ablation produced particles: A feasibility study. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2012, 76, 190-196.	2.9	24
58	Femtosecond laser ablation multicollector ICPMS analysis of uranium isotopes in NIST glass. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1100-1107.	3.0	22
59	Analysis of the absorption layer of CIGS solar cell by laser-induced breakdown spectroscopy. <i>Applied Optics</i> , 2012, 51, B115.	1.8	21
60	Comparison of matrix effects in inductively coupled plasma using laser ablation and solution nebulization for dry and wet plasma conditions. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2001, 56, 1375-1386.	2.9	20
61	Laser ablation-induced spectral plasma characteristics in optical far- and near fields. <i>Journal of Applied Physics</i> , 2008, 104, 013110.	2.5	20
62	A metric for evaluation of the image quality of chemical maps derived from LA-ICP-MS experiments. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1809-1815.	3.0	17
63	Liquid Sampling-Atmospheric Pressure Glow Discharge as a Secondary Excitation Source for Laser Ablation-Generated Aerosols: Parametric Dependence and Robustness to Particle Loading. <i>Applied Spectroscopy</i> , 2015, 69, 58-66.	2.2	15
64	Rapid bulk analysis using femtosecond laser ablation inductively coupled plasma time-of-flight mass spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 1405.	3.0	14
65	Quantitative Analysis of Carbon Content in Bituminous Coal by Laser-Induced Breakdown Spectroscopy Using UV Laser Radiation. <i>Plasma Science and Technology</i> , 2015, 17, 928-932.	1.5	14
66	Ultrafast thin-film laser-induced breakdown spectroscopy of doped oxides. <i>Applied Optics</i> , 2010, 49, C67.	2.1	13
67	Internal mixing dynamics of Cu/Sn-Pb plasmas produced by femtosecond laser ablation. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2018, 148, 92-98.	2.9	11
68	Laser ablation. , 2007, , 41-70.		10
69	Solid matrix transformation and tracer addition using molten ammonium bifluoride salt as a sample preparation method for laser ablation inductively coupled plasma mass spectrometry. <i>Analyst, The</i> , 2017, 142, 3333-3340.	3.5	10
70	Guiding and focusing of a nanosecond infrared laser within transient hollow plasma femtosecond filament channels. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 355203.	2.8	9
71	Laser Induced Breakdown Spectroscopy. , 2010, , 1281-1287.		8
72	Application of femtosecond laser ablation inductively coupled plasma mass spectrometry for quantitative analysis of thin Cu(In,Ga)Se ₂ solar cell films. <i>Thin Solid Films</i> , 2015, 577, 82-87.	1.8	8

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73	Analysis of Plant Leaves Using Laser Ablation Inductively Coupled Plasma Optical Emission Spectrometry: Use of Carbon to Compensate for Matrix Effects. <i>Applied Spectroscopy</i> , 2017, 71, 709-720.	2.2	8
74	Ablation and spectroscopic characteristics of thin CuIn _{1-x} Ga _x Se ₂ solar cell films fabricated by co-evaporation and co-sputtering processes. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2014, 1, 17-24.	4.9	7
75	Calcium fluoride as a dominating matrix for quantitative analysis by laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS): A feasibility study. <i>Analytica Chimica Acta</i> , 2020, 1129, 24-30.	5.4	2
76	Laser ablation sampling. <i>Comprehensive Analytical Chemistry</i> , 2003, , 593-609.	1.3	1