Zhe Wang

List of Publications by Year in Descending Order

128 papers	3,828 citations	37 h-index	57 g-index
134 ext. papers	4,801 ext. citations	4.3 avg, IF	5.88 L-index

#	Paper	IF	Citations
128	Optimization of a 30 kW SOFC combined heat and power system with different cycles and hydrocarbon fuels. *International Journal of Hydrogen Energy*, **2022**, 47, 4109-4119	6.7	4
127	Application of laser-induced breakdown spectroscopy and chemometrics for rapid identification of fire-retardant/resistant coatings from fire residues. *Construction and Building Materials*, **2022**, 325, 126773	6.7	1
126	Compensation for the variation of total number density to improve signal repeatability for laser-induced breakdown spectroscopy.. *Analytica Chimica Acta*, **2022**, 1205, 339752	6.6	1
125	Fast measurement of coking properties of coal using laser induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2022**, 191, 106406	3.1	0
124	Smartphone detection of minced beef adulteration. *Microchemical Journal*, **2021**, 164, 106088	4.8	7
123	Improved signal stability using an auxiliary flow-based chamber for aerosol laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2021**, 180, 106204	3.1	1
122	A data preprocessing method based on matrix matching for coal analysis by laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2021**, 180, 106212	3.1	1
121	Validated ensemble variable selection of laser-induced breakdown spectroscopy data for coal property analysis. *Journal of Analytical Atomic Spectrometry*, **2021**, 36, 111-119	3.7	3
120	Mechanism of signal uncertainty generation for laser-induced breakdown spectroscopy. *Frontiers of Physics*, **2021**, 16, 1	3.7	31
119	Evaluation of femtosecond laser-induced breakdown spectroscopy system as an offline coal analyzer. *Scientific Reports*, **2021**, 11, 15968	4.9	1
118	Conceptual design of the grazing-incidence focusing small-angle neutron scattering (gif-SANS) instrument at CPHS. *Journal of Neutron Research*, **2021**, 23, 201-205	0.5	1
117	Investigation of a cost-effective strategy for polymer electrolyte membrane fuel cells: High power density operation. *International Journal of Hydrogen Energy*, **2021**, 46, 35448-35458	6.7	3
116	Recent advances in laser-induced breakdown spectroscopy quantification: From fundamental understanding to data processing. *TrAC - Trends in Analytical Chemistry*, **2021**, 143, 116385	14.6	27
115	Improvement of sample discrimination using laser-induced breakdown spectroscopy with multiple-setting spectra. *Analytica Chimica Acta*, **2021**, 1184, 339053	6.6	0
114	Industrial at-line analysis of coal properties using laser-induced breakdown spectroscopy combined with machine learning. *Fuel*, **2021**, 306, 121667	7.1	6
113	Classification of ginseng according to plant species, geographical origin, and age using laser-induced breakdown spectroscopy and hyperspectral imaging. *Journal of Analytical Atomic Spectrometry*, **2021**, 36, 1704-1711	3.7	7
112	Development in the application of laser-induced breakdown spectroscopy in recent years: A review. *Frontiers of Physics*, **2021**, 16, 1	3.7	37

111	Coal analysis **2020**, 473-498		1
110	Way-out for laser-induced breakdown spectroscopy. *Plasma Science and Technology*, **2020**, 22, 070101	1.5	13
109	Quantification of extra virgin olive oil adulteration using smartphone videos. *Talanta*, **2020**, 216, 120920	6.2	18
108	Insights into Enhanced Repeatability of Femtosecond Laser-Induced Plasmas. *ACS Omega*, **2020**, 5, 30425-30435	3.7	5
107	Effect of laser beam shaping on the determination of manganese and chromium elements in steel samples using laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2020**, 163, 105747	3.1	7
106	Improvement of laser induced breakdown spectroscopy signal using gas mixture. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2020**, 174, 105992	3.1	7
105	Plasma modulation using beam shaping to improve signal quality for laser induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*, **2020**, 35, 1671-1677	3.7	8
104	A comparative study of nanoparticle-enhanced laser-induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*, **2020**, 35, 2274-2281	3.7	7
103	Plasma imaging for physical variations in laser-induced aerosol plasma with particle size increase. *Journal of Analytical Atomic Spectrometry*, **2020**, 35, 2649-2655	3.7	2
102	Materials, technological status, and fundamentals of PEM fuel cells – A review. *Materials Today*, **2020**, 32, 178-203	21.8	300
101	Correction of self-absorption effect in calibration-free laser-induced breakdown spectroscopy (CF-LIBS) with blackbody radiation reference. *Analytica Chimica Acta*, **2019**, 1058, 39-47	6.6	35
100	Calibration-free analysis of immersed metal alloys using long-pulse-duration laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2019**, 157, 84-90	3.1	17
99	Mechanisms and efficient elimination approaches of self-absorption in LIBS. *Plasma Science and Technology*, **2019**, 21, 034016	1.5	11
98	Investigation of intrinsic origins of the signal uncertainty for laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2019**, 155, 67-78	3.1	15
97	Analysis of element content in cement by Gaussian and flattop laser-induced breakdown spectroscopy. *Journal Physics D: Applied Physics*, **2019**, 52, 405102	3	4
96	Dynamic Equivalence between Soft Star Polymers and Hard Spheres. *ACS Macro Letters*, **2019**, 8, 1467-1473	6.6	1
95	Coal analysis by laser-induced breakdown spectroscopy: a tutorial review. *Journal of Analytical Atomic Spectrometry*, **2019**, 34, 1047-1082	3.7	66
94	Understanding the laser-induced aerosol ablation of sub-micron liquid particles via size-resolved spectral and image analyses. *Journal of Analytical Atomic Spectrometry*, **2019**, 34, 2385-2393	3.7	8

93	From big to strong: growth of the Asian laser-induced breakdown spectroscopy community. *Plasma Science and Technology*, **2019**, 21, 030101	1.5	6
92	Cross impact of CO2 phase and impurities on the corrosion behavior for stainless steel and carbon steel in water-containing dense CO2 environments. *International Journal of Greenhouse Gas Control*, **2018**, 71, 194-211	4.2	5
91	Heteroatom-Doped Carbon Dots (CDs) as a Class of Metal-Free Photocatalysts for PET-RAFT Polymerization under Visible Light and Sunlight. *Angewandte Chemie*, **2018**, 130, 12213-12218	3.6	24
90	Heteroatom-Doped Carbon Dots (CDs) as a Class of Metal-Free Photocatalysts for PET-RAFT Polymerization under Visible Light and Sunlight. *Angewandte Chemie - International Edition*, **2018**, 57, 12037-12042	16.4	89
89	Heat and power load dispatching considering energy storage of district heating system and electric boilers. *Journal of Modern Power Systems and Clean Energy*, **2018**, 6, 992-1003	4	24
88	Spatial-Temporal Characteristics of Confined Polymer Motion Determine Proton Conduction of Polyoxometalate-Poly(ethylene glycol) Hybrid Nanocomposites. *Journal of Physical Chemistry Letters*, **2018**, 9, 5772-5777	6.4	17
87	Impacts of a collection system on laser-induced breakdown spectroscopy signal detection. *Applied Optics*, **2018**, 57, 6120-6127	1.7	9
86	Local elasticity in nonlinear rheology of interacting colloidal glasses revealed by neutron scattering and rheometry. *Physical Chemistry Chemical Physics*, **2018**, 21, 38-45	3.6	4
85	Provenance classification of nephrite jades using multivariate LIBS: a comparative study. *Analytical Methods*, **2018**, 10, 281-289	3.2	17
84	On the improvement of signal repeatability in laser-induced air plasmas. *Frontiers of Physics*, **2018**, 13, 1	3.7	14
83	Microplasma Anode Meeting Molten Salt Electrochemistry: Charge Transfer and Atomic Emission Spectral Analysis. *Analytical Chemistry*, **2018**, 90, 13163-13166	7.8	2
82	Analysis of Small-Angle Neutron Scattering Spectra from Deformed Polymers with the Spherical Harmonic Expansion Method and a Network Model. *Macromolecules*, **2018**, 51, 9011-9018	5.5	4
81	Effect of High-Concentration O2on Corrosion Behavior of X70 Steel in Water-Containing Supercritical CO2with SO2. *Corrosion*, **2017**, 73, 290-302	1.8	12
80	Visualization of Adsorption: Luminescent Mesoporous Silica-Carbon Dots Composite for Rapid and Selective Removal of U(VI) and in Situ Monitoring the Adsorption Behavior. *ACS Applied Materials & Interfaces*, **2017**, 9, 7392-7398	9.5	80
79	Performance and Mechanism of Uranium Adsorption from Seawater to Poly(dopamine)-Inspired Sorbents. *Environmental Science & Technology*, **2017**, 51, 4606-4614	10.3	110
78	Nano Endoscopy with Plasmon-Enhanced Fluorescence for Sensitive Sensing Inside Ultrasmall Volume Samples. *Analytical Chemistry*, **2017**, 89, 1045-1048	7.8	8
77	Rapid Analysis of Platinum and Nafion Loadings Using Laser Induced Breakdown Spectroscopy. *Journal of the Electrochemical Society*, **2017**, 164, F1294-F1300	3.9	4
76	Techno-economic Performance of Wind and Coal-fired Power with CCS Joint Planning. *Energy Procedia*, **2017**, 114, 6677-6684	2.3	3

75	Quantitative analysis of common elements in steel using a handheld LIBS instrument. *Journal of Analytical Atomic Spectrometry*, **2017**, 32, 1905-1915	3.7	40
74	Microplasma-assisted rapid, chemical oxidant-free and controllable polymerization of dopamine for surface modification. *Polymer Chemistry*, **2017**, 8, 4388-4392	4.9	30
73	A multi-region load dispatch model for the long-term optimum planning of China's electricity sector. *Applied Energy*, **2017**, 185, 556-572	10.7	45
72	Homogeneous-material-based calibration method for correcting laser-induced breakdown spectroscopy measurement-error bias in the case of dust pollution. *Applied Optics*, **2017**, 56, 9644-9648	1.7	
71	Noninvasive blood glucose detection using a miniature wearable Raman spectroscopy system. *Chinese Optics Letters*, **2017**, 15, 083001	2.2	7
70	Impact of surface roughness and humidity on X70 steel corrosion in supercritical CO2 mixture with SO2, H2O, and O2. *Journal of Supercritical Fluids*, **2016**, 107, 286-297	4.2	20
69	Effect of pressure on corrosion behavior of X60, X65, X70, and X80 carbon steels in water-unsaturated supercritical CO2 environments. *International Journal of Greenhouse Gas Control*, **2016**, 51, 357-368	4.2	27
68	Laser-induced breakdown spectroscopy in Asia. *Frontiers of Physics*, **2016**, 11, 1	3.7	36
67	Macrocyclic ligand decorated ordered mesoporous silica with large-pore and short-channel characteristics for effective separation of lithium isotopes: synthesis, adsorptive behavior study and DFT modeling. *Dalton Transactions*, **2016**, 45, 16492-16504	4.3	17
66	Experimental and computational investigation of confined laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2016**, 126, 44-52	3.1	29
65	Cement raw material quality analysis using laser-induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*, **2016**, 31, 2384-2390	3.7	14
64	Physical insights of cavity confinement enhancing effect in laser-induced breakdown spectroscopy. *Optics Express*, **2016**, 24, 3055-66	3.3	39
63	A hybrid quantification model and its application for coal analysis using laser induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*, **2016**, 31, 722-736	3.7	71
62	Accurate density measurements on a binary mixture (carbon dioxide + methane) at the vicinity of the critical point in the supercritical state by a single-sinker densimeter. *Fluid Phase Equilibria*, **2016**, 418, 94-99	2.5	10
61	Single nanoporous gold nanowire as a tunable one-dimensional platform for plasmon-enhanced fluorescence. *Chemical Communications*, **2016**, 52, 1808-11	5.8	24
60	Atmospheric-pressure microplasma as anode for rapid and simple electrochemical deposition of copper and cuprous oxide nanostructures. *RSC Advances*, **2015**, 5, 62619-62623	3.7	13
59	Quantitative carbon analysis in coal by combining data processing and spatial confinement in laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2015**, 111, 102-107	3.1	27
58	Direct polymerization of a novel sulfonated poly(arylene ether ketone sulfone)/sulfonated poly(vinylalcohol) crosslinked membrane for direct methanol fuel cell applications. *Journal of Membrane Science*, **2015**, 492, 505-517	9.6	56

57	Density measurements on binary mixtures (nitrogen + carbon dioxide and argon + carbon dioxide) at temperatures from (298.15 to 423.15) K with pressures from (11 to 31) MPa using a single-sinker densimeter. *Journal of Chemical Thermodynamics*, **2015**, 91, 17-29	2.9	21
56	Wavelength Dependence in the Analysis of Carbon Content in Coal by Nanosecond 266 nm and 1064 nm Laser Induced Breakdown Spectroscopy. *Plasma Science and Technology*, **2015**, 17, 621-624	1.5	23
55	A Rising Force for the World-Wide Development of Laser-Induced Breakdown Spectroscopy. *Plasma Science and Technology*, **2015**, 17, 617-620	1.5	48
54	Effects of moisture content on coal analysis using laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2015**, 112, 23-33	3.1	34
53	A multi-region optimization planning model for China□ power sector. *Applied Energy*, **2015**, 137, 413-426	10.7	82
52	Quantitative Analysis of Carbon Content in Bituminous Coal by Laser-Induced Breakdown Spectroscopy Using UV Laser Radiation. *Plasma Science and Technology*, **2015**, 17, 928-932	1.5	12
51	DISCHARGE OXIDE STORAGE CAPACITY AND VOLTAGE LOSS IN LI-AIR BATTERY. *Electrochimica Acta*, **2015**, 180, 382-393	6.7	9
50	Microplasma-assisted rapid synthesis of luminescent nitrogen-doped carbon dots and their application in pH sensing and uranium detection. *Nanoscale*, **2015**, 7, 20743-8	7.7	69
49	Accurate Density Measurements on Ternary Mixtures (Carbon Dioxide + Nitrogen + Argon) at Temperatures from (323.15 to 423.15) K with Pressures from (3 to 31) MPa using a Single-Sinker Densimeter. *Journal of Chemical & Engineering Data*, **2015**, 60, 3353-3357	2.8	12
48	Development of a Laboratory Cement Quality Analysis Apparatus Based on Laser-Induced Breakdown Spectroscopy. *Plasma Science and Technology*, **2015**, 17, 897-903	1.5	9
47	Application of spatial confinement for gas analysis using laser-induced breakdown spectroscopy to improve signal stability. *Journal of Analytical Atomic Spectrometry*, **2015**, 30, 922-928	3.7	35
46	A model combining spectrum standardization and dominant factor based partial least square method for carbon analysis in coal using laser-induced breakdown spectroscopy. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2014**, 99, 82-86	3.1	40
45	Spatially and temporally resolved spectral emission of laser-induced plasmas confined by cylindrical cavities. *Journal of Analytical Atomic Spectrometry*, **2014**, 29, 2127-2135	3.7	28
44	Thermodynamic analysis of a hybrid thermal-compressed air energy storage system for the integration of wind power. *Applied Thermal Engineering*, **2014**, 66, 519-527	5.8	65
43	Application of a spectrum standardization method for carbon analysis in coal using laser-induced breakdown spectroscopy (LIBS). *Applied Spectroscopy*, **2014**, 68, 955-62	3.1	49
42	Combination of cylindrical confinement and spark discharge for signal improvement using laser induced breakdown spectroscopy. *Optics Express*, **2014**, 22, 12909-14	3.3	55
41	A partial least squares and wavelet-transform hybrid model to analyze carbon content in coal using laser-induced breakdown spectroscopy. *Analytica Chimica Acta*, **2014**, 807, 29-35	6.6	68
40	Laser-induced breakdown spectroscopy in China. *Frontiers of Physics*, **2014**, 9, 419-438	3.7	153

39	A mechanistic model for pipeline steel corrosion in supercritical CO2SO2O2H2O environments. *Journal of Supercritical Fluids*, **2013**, 82, 1-12	4.2	27
38	Improving data stability and prediction accuracy in laser-induced breakdown spectroscopy by utilizing a combined atomic and ionic line algorithm. *Journal of Analytical Atomic Spectrometry*, **2013**, 28, 107-113	3.7	26
37	Modeling of an oxygen-staged membrane wall gasifier: effects of secondary oxygen. *Chemical Engineering and Processing: Process Intensification*, **2013**, 74, 131-141	3.7	4
36	A partial least squares based spectrum normalization method for uncertainty reduction for laser-induced breakdown spectroscopy measurements. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2013**, 88, 180-185	3.1	38
35	Coal property analysis using laser-induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*, **2013**, 28, 1045	3.7	76
34	Effect of Exposure Time on the Corrosion Rates of X70 Steel in Supercritical CO2/SO2/O2/H2O Environments. *Corrosion*, **2013**, 69, 251-258	1.8	31
33	Mechanism of the Impact of Particle Size Distribution to Bed-Inventory Overturn for Pant-Leg Circulating Fluidized Bed. *Flow, Turbulence and Combustion*, **2013**, 90, 885-895	2.5	1
32	Use of a Reactor Network Model in the Design and Operation of a New Type of Membrane Wall Entrained Flow Gasifier. *Energy & Fuels*, **2013**, 27, 6322-6332	4.1	12
31	A nonlinearized multivariate dominant factor-based partial least squares (PLS) model for coal analysis by using laser-induced breakdown spectroscopy. *Applied Spectroscopy*, **2013**, 67, 291-300	3.1	41
30	Effect of temperature on corrosion behaviour of X70 steel in high pressure CO2/SO2/O2/H2O environments. *Corrosion Engineering Science and Technology*, **2013**, 48, 121-129	1.7	30
29	Signal quality improvement using cylindrical confinement for laser induced breakdown spectroscopy. *Optics Express*, **2013**, 21, 15974-9	3.3	62
28	Long term corrosion of X70 steel and iron in humid supercritical CO2 with SO2 and O2 impurities. *Corrosion Engineering Science and Technology*, **2013**, 48, 395-398	1.7	16
27	Economic evaluation of CO2 pipeline transport in China. *Energy Conversion and Management*, **2012**, 55, 127-135	10.6	30
26	A spectrum standardization approach for laser-induced breakdown spectroscopy measurements. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2012**, 68, 58-64	3.1	76
25	The upper limit of moisture content for supercritical CO2 pipeline transport. *Journal of Supercritical Fluids*, **2012**, 67, 14-21	4.2	60
24	Major elements analysis in bituminous coals under different ambient gases by laser-induced breakdown spectroscopy with PLS modeling. *Frontiers of Physics*, **2012**, 7, 708-713	3.7	63
23	Utilization of moderate cylindrical confinement for precision improvement of laser-induced breakdown spectroscopy signal. *Optics Express*, **2012**, 20 Suppl 6, A1011-8	3.3	64
22	Quantitative carbon measurement in anthracite using laser-induced breakdown spectroscopy with binder. *Applied Optics*, **2012**, 51, B22-9	1.7	45

21	Utilization of moderate cylindrical confinement for precision improvement of laser-induced breakdown spectroscopy signal. *Optics Express*, **2012**, 20, A1011-8	3.3	
20	Effect of a floating electrode on an atmospheric-pressure non-thermal arc discharge. *Journal of Applied Physics*, **2011**, 110, 033308	2.5	11
19	Reply to Comment on A multivariate model based on dominant factor for laser-induced breakdown spectroscopy measurements by Vincenzo Palleschi, J. Anal. At. Spectrom., 2011, DOI: 10.1039/c1ja10197h. *Journal of Analytical Atomic Spectrometry*, **2011**, 26, 2302	3.7	2
18	A multivariate model based on dominant factor for laser-induced breakdown spectroscopy measurements. *Journal of Analytical Atomic Spectrometry*, **2011**, 26, 2289	3.7	52
17	Bed-inventory overturn mechanism for pant-leg circulating fluidized bed boilers. *Powder Technology*, **2011**, 214, 469-476	5.2	9
16	A PLS model based on dominant factor for coal analysis using laser-induced breakdown spectroscopy. *Analytical and Bioanalytical Chemistry*, **2011**, 400, 3261-71	4.4	83
15	A simplified spectrum standardization method for laser-induced breakdown spectroscopy measurements. *Journal of Analytical Atomic Spectrometry*, **2011**, 26, 2274	3.7	68
14	A non-linearized PLS model based on multivariate dominant factor for laser-induced breakdown spectroscopy measurements. *Journal of Analytical Atomic Spectrometry*, **2011**, 26, 2175	3.7	48
13	Dynamic Model for an Oxygen-Staged Slagging Entrained Flow Gasifier. *Energy & Fuels*, **2011**, 25, 3646-3656	4.1	33
12	Impact of SO2 concentration on the corrosion rate of X70 steel and iron in water-saturated supercritical CO2 mixed with SO2. *Journal of Supercritical Fluids*, **2011**, 58, 286-294	4.2	83
11	Evaluation of the Two-Dimensional Temperature Field and Instability of a Dual-Jet DC Arc Plasma Based on the Image Chain Coding Technique. *IEEE Transactions on Plasma Science*, **2011**, 39, 2884-2885	1.3	14
10	Temperature Measurements of Diesel Fuel Combustion With Multicolor Pyrometry. *Journal of Heat Transfer*, **2010**, 132,	1.8	38
9	Improvements to the three-color optical CCD-based pyrometer system **2010**, 49, 5997		20
8	Volt-Ampere and Thermal Features of a Direct-Current Dual-Jet Plasma Generator With a Cold Gas Injection. *IEEE Transactions on Plasma Science*, **2010**, 38, 2906-2913	1.3	10
7	Study for entrained-flow gasifier modeling and measurement. *Frontiers of Chemical Engineering in China*, **2010**, 4, 400-403		
6	Study to reduce laser-induced breakdown spectroscopy measurement uncertainty using plasma characteristic parameters. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2010**, 65, 549-556	3.1	67
5	Iron carburization in CO-H2-He gases, Part II: Numerical model. *International Journal of Chemical Kinetics*, **2009**, 41, 337-348	1.4	2
4	Iron carburization in CO-H2-He gases, Part I: Experiment. *International Journal of Chemical Kinetics*, **2009**, 41, 327-336	1.4	3

3	Syngas composition study. *Frontiers of Energy and Power Engineering in China*, **2009**, 3, 369-372		18
2	Efficient intermolecular iron-catalyzed amidation of C-H bonds in the presence of N-bromosuccinimide. *Organic Letters*, **2008**, 10, 1863-6	6.2	163
1	Online compositional analysis in coal gasification environment using laser-induced plasma technology **2006**, 6314, 230		1