

# Zhili Zhang

## List of Publications by Year in descending order

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91  
papers

1,107  
citations

394421

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454955

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all docs

91  
docs citations

91  
times ranked

730  
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-camera stereoscopic 3D multiplexed structured image capture for quantitative fuel-to-air ratio mapping. Optics and Lasers in Engineering, 2022, 152, 106945.	3.8	5
2	Characterization of a Plasma Jet Flow Using Emission Spectroscopy and Laser-Induced Breakdown Velocimetry. , 2022, , .		1
3	1D Temperature Measurements by Air REMPI Thermometry (ART). , 2022, , .		0
4	Air resonance enhanced multiphoton ionization tagging velocimetry. Applied Optics, 2022, 61, 3748.	1.8	4
5	One-dimensional air temperature measurements by air resonance enhanced multiphoton ionization thermometry (ART). Optics Express, 2022, 30, 18539.	3.4	2
6	3D fuel-to-air Ratio Mapping of Methane/Air Flame using Stereoscopic Multiplexed Structured Image Capture. , 2021, , .		0
7	Picosecond laser electronic excitation tagging velocimetry using a picosecond burst-mode laser. Applied Optics, 2021, 60, C60.	1.8	11
8	Emissions in short-gated ns/ps/fs-LIBS for fuel-to-air ratio measurements in methane-air flames. Applied Optics, 2021, 60, C114.	1.8	12
9	Design and implementation of a portable diagnostic system for Thomson scattering and optical emission spectroscopy measurements. Review of Scientific Instruments, 2021, 92, 063002.	1.3	3
10	Two-phase accurate multiplexed structured image capture (2pAc-MUSIC). Optics and Lasers in Engineering, 2021, 142, 106621.	3.8	5
11	Coherent microwave scattering from resonance enhanced multi-photon ionization (radar REMPI): a review. Plasma Sources Science and Technology, 2021, 30, 103001.	3.1	12
12	Time-Gated Single-Shot Picosecond Laser-Induced Breakdown Spectroscopy (ps-LIBS) for Equivalence-Ratio Measurements. Applied Spectroscopy, 2020, 74, 340-346.	2.2	15
13	Single-Shot Detection of 2-D Chemiluminescence Emissions by Compressed Hyperspectral Imaging. , 2020, , .		0
14	Coherent microwave scattering from xenon resonance-enhanced multiphoton ionization-initiated plasma in air. Journal of Applied Physics, 2020, 127, .	2.5	7
15	Compressed single-shot hyperspectral imaging for combustion diagnostics. Applied Optics, 2020, 59, 5226.	1.8	7
16	Radar REMPI for Quantitative Combustion and Plasma Diagnostics. , 2020, , .		0
17	Pulse-burst laser-based 10 kHz Thomson scattering measurements. Plasma Science and Technology, 2019, 21, 105603.	1.5	7
18	Radar resonance-enhanced multiphoton ionization for measurement of atomic oxygen in non-equilibrium pulsed plasmas. Journal of Applied Physics, 2019, 125, .	2.5	4

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19	Simultaneous Species Concentration and Flow Velocity Imaging Using 2D Raman Scattering at Elevated Pressure. , 2019, , .		1
20	Multiplexed structured image capture to increase the field of view for a single exposure. OSA Continuum, 2019, 2, 225.	1.8	11
21	Acoustic Measurements of O <sub>2</sub> REMPI in Air. , 2018, , .		0
22	Ultrafast Laser-Induced-Breakdown Spectroscopy (LIBS) for F/A-Ratio Measurement of Hydrocarbon Flames. , 2018, , .		2
23	High-Speed, Two-dimensional, Multi-species Raman Imaging for Combustion and Flow Diagnostics. , 2018, , .		0
24	High-pressure 1D fuel/air-ratio measurements with LIBS. Combustion and Flame, 2018, 198, 120-129.	5.2	33
25	High-speed flame chemiluminescence imaging using time-multiplexed structured detection. Applied Optics, 2018, 57, 2923.	1.8	17
26	Simultaneous LIBS signal and plasma density measurement for quantitative insight into signal instability at elevated pressure. Optics Express, 2018, 26, 25750.	3.4	23
27	Single-shot nanosecond-resolution multiframe passive imaging by multiplexed structured image capture. Optics Express, 2018, 26, 28441.	3.4	20
28	<i>See-through-wall</i> Radar REMPI for Spatially Localized Temperature Measurements in a Well-Stirred Reactor. , 2017, , .		1
29	Atomic Oxygen Measurements in a Low Pressure DC and Pulsed Discharge via Radar REMPI. , 2017, , .		1
30	Time-resolved correlated measurement of laser-induced-breakdown spectroscopy and electron number density: application to high-pressure hydrocarbon flames. Proceedings of SPIE, 2017, , .	0.8	1
31	Spatially localized, see-through-wall temperature measurements in a flow reactor using radar REMPI. Optics Letters, 2017, 42, 53.	3.3	8
32	Acoustic detection of resonance-enhanced multiphoton ionization for spatially resolved temperature measurement. Optics Letters, 2017, 42, 3415.	3.3	10
33	High-speed 2D Raman imaging at elevated pressures. Optics Letters, 2017, 42, 3678.	3.3	40
34	Bonding and Anti-bonding Modes of Plasmon Coupling Effects in TiO <sub>2</sub> -Ag Core-shell Dimers. Scientific Reports, 2016, 6, 19433.	3.3	35
35	Quantitative measurement of electron number in nanosecond and picosecond laser-induced air breakdown. Journal of Applied Physics, 2016, 119, .	2.5	26
36	Temperature sensitivity of molecular oxygen resonant-enhanced multiphoton ionization spectra involving the C 3 <sup>1</sup> g intermediate state. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	9

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37	High-repetition-rate laser ignition of fuel-air mixtures. Optics Letters, 2016, 41, 1570.	3.3	18
38	Plasmon Evolution in Core-Shell Nanospheroids. Journal of Physical Chemistry C, 2016, 120, 8891-8899.	3.1	2
39	Quantitative O <sub>2</sub> Measurements in Flames at Elevated Pressures by Laser-induced Breakdown Spectroscopy. , 2016, , .		1
40	Sensitivity, stability, and precision of quantitative Ns-LIBS-based fuel-air-ratio measurements for methane-air flames at 1-11 bar. Applied Optics, 2016, 55, 8042.	2.1	48
41	Oxygen Rotational Temperature Determination Using Empirical Analyses of C <sup>3</sup> (v = 2) and X <sup>3</sup> (v = 0) Transitions. Applied Spectroscopy, 2015, 69, 1036-1041.	2.2	8
42	Reduction of breakdown threshold by metal nanoparticle seeding in a DC microdischarge. Nanoscale Research Letters, 2015, 10, 15.	5.7	4
43	Two-dimensional quantitative measurements of methyl radicals in methane/air flame. Applied Optics, 2015, 54, 157.	1.8	8
44	In situ Measurements of Ethylene and Methyl Radical by using the Radar REMPI technique. , 2015, , .		1
45	Quantitative Measurements of Electron Number Density and Threshold for Laser Induced Breakdown in Air. , 2015, , .		0
46	Reducing the Breakdown Threshold in DC Microdischarges via Metal Nanoparticle Seeding. , 2015, , .		0
47	O <sub>2</sub> rotational temperature measurements using 2+1 radar resonance-enhanced multiphoton ionization. , 2014, , .		0
48	Resonant- and avalanche-ionization amplification of laser-induced plasma in air. Journal of Applied Physics, 2014, 116, .	2.5	12
49	Sodium Cluster Ion Recombination Rate Measurements by Radar REMPI. , 2014, , .		0
50	Plasmonic resonance-enhanced local photothermal energy deposition by aluminum nanoparticles. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	17
51	Temperature Measurements by Radar REMPI in methane/air flames at atmospheric pressure. , 2013, , .		1
52	Quantitative Radar REMPI measurements of methyl radicals in flames at atmospheric pressure. Applied Physics B: Lasers and Optics, 2013, 111, 391-397.	2.2	23
53	Spatial and temporal control of on-demand propane-air flame ignition by active photothermal effect of aluminum nanoenergetics. Combustion and Flame, 2013, 160, 1842-1847.	5.2	10
54	One-step synthesis of dendritic gold nanoflowers with high surface-enhanced Raman scattering (SERS) properties. RSC Advances, 2013, 3, 10139.	3.6	56

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55	Two-Dimensional Methyl Radical Concentration Measurements in Flames using Radar REMPI. , 2013, , .		0
56	Spatially resolved measurement of singlet delta oxygen by radar resonance-enhanced multiphoton ionization. Optics Letters, 2013, 38, 2286.	3.3	13
57	Photothermally activated motion and ignition using aluminum nanoparticles. Applied Physics Letters, 2013, 102, .	3.3	27
58	O2 rotational temperature measurements in an atmospheric air microdischarge by radar resonance-enhanced multiphoton ionization. Journal of Applied Physics, 2013, 113, .	2.5	17
59	Singlet Molecular Oxygen Measurement by Radar REMPI. , 2013, , .		0
60	Spatial and Temporal Evolutions of Microwave Scattering from Laser Spark in Air. , 2013, , .		0
61	Standoff detection of large organic molecules using Rydberg fingerprint spectroscopy and microwave Rayleigh scattering. Optics Letters, 2012, 37, 145.	3.3	11
62	Flame temperature measurements by radar resonance-enhanced multiphoton ionization of molecular oxygen. Applied Optics, 2012, 51, 6864.	1.8	27
63	Measurement of sodium-argon cluster ion recombination by coherent microwave scattering. Applied Physics Letters, 2012, 100, .	3.3	8
64	Molecular Oxygen Rotational Temperature Measurement by Radar REMPI. , 2012, , .		1
65	Quantitative Radar REMPI Measurement of Methyl Radical in 1-D McKenna Flame. , 2012, , .		0
66	Microwave scattering from laser spark in air. Journal of Applied Physics, 2012, 112, 063101.	2.5	4
67	Nanosecond component in a femtosecond laser pulse. Physics of Plasmas, 2012, 19, 113115.	1.9	0
68	Sodium Ion Kinetic Measurements by Coherent Microwave Scattering. , 2012, , .		0
69	High-speed microscopic imaging of flagella motility and swimming in <i>Giardia lamblia</i> trophozoites. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E550-8.	7.1	47
70	Direct measurement of methyl radicals in a methane/air flame at atmospheric pressure by radar REMPI. Optics Express, 2011, 19, 23997.	3.4	35
71	Quantitative Microplasma Electron Number Density Measurement by Coherent Microwave Rayleigh Scattering. IEEE Transactions on Plasma Science, 2011, 39, 593-595.	1.3	2
72	O2 rotational temperature measurements by coherent microwave scattering from REMPI. Chemical Physics Letters, 2011, 513, 191-194.	2.6	33

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73	Broadband Tunable and Double Dipole Surface Plasmon Resonance by TiO <sub>2</sub> Core/Ag Shell Nanoparticles. <i>Plasmonics</i> , 2011, 6, 779-784.	3.4	8
74	Far-field plasmonic resonance enhanced nanoparticle image velocimetry within a microchannel. <i>Review of Scientific Instruments</i> , 2011, 82, 023117.	1.3	3
75	Ultraviolet Extinction and Visible Transparency by Ivy Nanoparticles. <i>Nanoscale Research Letters</i> , 2010, 5, 1487-1491.	5.7	17
76	Naturally occurring nanoparticles from English ivy: an alternative to metal-based nanoparticles for UV protection. <i>Journal of Nanobiotechnology</i> , 2010, 8, 12.	9.1	49
77	Localized surface plasmon resonance effects by naturally occurring Chinese yam particles. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	11
78	Measurement of plasma decay processes in mixture of sodium and argon by coherent microwave scattering. <i>Physics of Plasmas</i> , 2010, 17, 033108.	1.9	11
79	Pre-Ionization Controlled Laser Plasma Formation for Ignition Applications. , 2010, , .		2
80	Measurement of Recombination Rates of Sodium by Coherent Microwave Scattering. , 2010, , .		0
81	Microplasma Electron Number Density Measurement by Resonant Coherent Microwave Rayleigh Scattering. , 2010, , .		3
82	Measurement of Plasma Decay Processes in Mixture of Sodium and Argon by Radar REMPI. , 2009, , .		3
83	Radar REMPI Detection of NO <sub>2</sub> by NO Photo-Fragments. , 2009, , .		2
84	Simultaneous Resonant Enhanced Multi-Photon Ionization and Electron Avalanche Ionization in Gas Mixtures. , 2008, , .		1
85	Temperature Measurement of Flame by RADAR REMPI of Nitric Oxide. , 2008, , .		3
86	Ultra High Sensitivity Detection of NO Photo-fragments by Radar REMPI. , 2008, , .		0
87	Simultaneous resonant enhanced multiphoton ionization and electron avalanche ionization in gas mixtures. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	27
88	Microwave Scattering from Laser Ionized Molecules: A New Approach to Nonintrusive Diagnostics. <i>AIAA Journal</i> , 2007, 45, 513-515.	2.6	52
89	Plasma induced by resonance enhanced multiphoton ionization in inert gas. <i>Journal of Applied Physics</i> , 2007, 102, 123103.	2.5	26
90	Coherent Microwave Rayleigh Scattering from Resonance-Enhanced Multiphoton Ionization in Argon. <i>Physical Review Letters</i> , 2007, 98, 265005.	7.8	79

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91	Microwave diagnostics of laser-induced avalanche ionization in air. Journal of Applied Physics, 2006, 100, 074912.	2.5	43