

Zhili Zhang

List of Publications by Year in descending order

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91
papers

1,107
citations

394421

19
h-index

454955

30
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91
docs citations

91
times ranked

730
citing authors

#	ARTICLE	IF	CITATIONS
1	Coherent Microwave Rayleigh Scattering from Resonance-Enhanced Multiphoton Ionization in Argon. <i>Physical Review Letters</i> , 2007, 98, 265005.	7.8	79
2	One-step synthesis of dendritic gold nanoflowers with high surface-enhanced Raman scattering (SERS) properties. <i>RSC Advances</i> , 2013, 3, 10139.	3.6	56
3	Microwave Scattering from Laser Ionized Molecules: A New Approach to Noninvasive Diagnostics. <i>AIAA Journal</i> , 2007, 45, 513-515.	2.6	52
4	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
5	Sensitivity, stability, and precision of quantitative Ns-LIBS-based fuel-air-ratio measurements for methane-air flames at 11 bar. <i>Applied Optics</i> , 2016, 55, 8042.	2.1	48
6	High-speed microscopic imaging of flagella motility and swimming in <i>Giardia lamblia</i> trophozoites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, E550-8.	7.1	47
7	Microwave diagnostics of laser-induced avalanche ionization in air. <i>Journal of Applied Physics</i> , 2006, 100, 074912.	2.5	43
8	High-speed 2D Raman imaging at elevated pressures. <i>Optics Letters</i> , 2017, 42, 3678.	3.3	40
9	Direct measurement of methyl radicals in a methane/air flame at atmospheric pressure by radar REMPI. <i>Optics Express</i> , 2011, 19, 23997.	3.4	35
10	Bonding and Anti-bonding Modes of Plasmon Coupling Effects in TiO ₂ -Ag Core-shell Dimers. <i>Scientific Reports</i> , 2016, 6, 19433.	3.3	35
11	O ₂ rotational temperature measurements by coherent microwave scattering from REMPI. <i>Chemical Physics Letters</i> , 2011, 513, 191-194.	2.6	33
12	High-pressure 1D fuel/air-ratio measurements with LIBS. <i>Combustion and Flame</i> , 2018, 198, 120-129.	5.2	33
13	Simultaneous resonant enhanced multiphoton ionization and electron avalanche ionization in gas mixtures. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	27
14	Flame temperature measurements by radar resonance-enhanced multiphoton ionization of molecular oxygen. <i>Applied Optics</i> , 2012, 51, 6864.	1.8	27
15	Photothermally activated motion and ignition using aluminum nanoparticles. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	27
16	Plasma induced by resonance enhanced multiphoton ionization in inert gas. <i>Journal of Applied Physics</i> , 2007, 102, 123103.	2.5	26
17	Quantitative measurement of electron number in nanosecond and picosecond laser-induced air breakdown. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	26
18	Quantitative Radar REMPI measurements of methyl radicals in flames at atmospheric pressure. <i>Applied Physics B: Lasers and Optics</i> , 2013, 111, 391-397.	2.2	23

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19	Simultaneous LIBS signal and plasma density measurement for quantitative insight into signal instability at elevated pressure. <i>Optics Express</i> , 2018, 26, 25750.	3.4	23
20	Single-shot nanosecond-resolution multiframe passive imaging by multiplexed structured image capture. <i>Optics Express</i> , 2018, 26, 28441.	3.4	20
21	High-repetition-rate laser ignition of fuel-air mixtures. <i>Optics Letters</i> , 2016, 41, 1570.	3.3	18
22	Ultraviolet Extinction and Visible Transparency by Ivy Nanoparticles. <i>Nanoscale Research Letters</i> , 2010, 5, 1487-1491.	5.7	17
23	Plasmonic resonance-enhanced local photothermal energy deposition by aluminum nanoparticles. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	17
24	O ₂ rotational temperature measurements in an atmospheric air microdischarge by radar resonance-enhanced multiphoton ionization. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	17
25	High-speed flame chemiluminescence imaging using time-multiplexed structured detection. <i>Applied Optics</i> , 2018, 57, 2923.	1.8	17
26	Time-Gated Single-Shot Picosecond Laser-Induced Breakdown Spectroscopy (ps-LIBS) for Equivalence-Ratio Measurements. <i>Applied Spectroscopy</i> , 2020, 74, 340-346.	2.2	15
27	Spatially resolved measurement of singlet delta oxygen by radar resonance-enhanced multiphoton ionization. <i>Optics Letters</i> , 2013, 38, 2286.	3.3	13
28	Resonant- and avalanche-ionization amplification of laser-induced plasma in air. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	12
29	Emissions in short-gated ns/ps/fs-LIBS for fuel-to-air ratio measurements in methane-air flames. <i>Applied Optics</i> , 2021, 60, C114.	1.8	12
30	Coherent microwave scattering from resonance enhanced multi-photon ionization (radar REMPI): a review. <i>Plasma Sources Science and Technology</i> , 2021, 30, 103001.	3.1	12
31	Localized surface plasmon resonance effects by naturally occurring Chinese yam particles. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	11
32	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
33	Standoff detection of large organic molecules using Rydberg fingerprint spectroscopy and microwave Rayleigh scattering. <i>Optics Letters</i> , 2012, 37, 145.	3.3	11
34	Picosecond laser electronic excitation tagging velocimetry using a picosecond burst-mode laser. <i>Applied Optics</i> , 2021, 60, C60.	1.8	11
35	Multiplexed structured image capture to increase the field of view for a single exposure. <i>OSA Continuum</i> , 2019, 2, 225.	1.8	11
36	Spatial and temporal control of on-demand propane-air flame ignition by active photothermal effect of aluminum nanoenergetics. <i>Combustion and Flame</i> , 2013, 160, 1842-1847.	5.2	10

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37	Acoustic detection of resonance-enhanced multiphoton ionization for spatially resolved temperature measurement. <i>Optics Letters</i> , 2017, 42, 3415.	3.3	10
38	Temperature sensitivity of molecular oxygen resonant-enhanced multiphoton ionization spectra involving the C 3I g intermediate state. <i>Applied Physics B: Lasers and Optics</i> , 2016, 122, 1.	2.2	9
39	Broadband Tunable and Double Dipole Surface Plasmon Resonance by TiO ₂ Core/Ag Shell Nanoparticles. <i>Plasmonics</i> , 2011, 6, 779-784.	3.4	8
40	Measurement of sodium-argon cluster ion recombination by coherent microwave scattering. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	8
41	Oxygen Rotational Temperature Determination Using Empirical Analyses of C ³ Î(vâ€² = 2) â†• X ³ Î£(vâ€³ = 0) Transitions. <i>Applied Spectroscopy</i> , 2015, 69, 1036-1041.	2.2	8
42	Two-dimensional quantitative measurements of methyl radicals in methane/air flame. <i>Applied Optics</i> , 2015, 54, 157.	1.8	8
43	Spatially localized, see-through-wall temperature measurements in a flow reactor using radar REMPI. <i>Optics Letters</i> , 2017, 42, 53.	3.3	8
44	Pulse-burst laser-based 10 kHz Thomson scattering measurements. <i>Plasma Science and Technology</i> , 2019, 21, 105603.	1.5	7
45	Coherent microwave scattering from xenon resonance-enhanced multiphoton ionization-initiated plasma in air. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	7
46	Compressed single-shot hyperspectral imaging for combustion diagnostics. <i>Applied Optics</i> , 2020, 59, 5226.	1.8	7
47	Two-phase accurate multiplexed structured image capture (2pAc-MUSIC). <i>Optics and Lasers in Engineering</i> , 2021, 142, 106621.	3.8	5
48	Single-camera stereoscopic 3D multiplexed structured image capture for quantitative fuel-to-air ratio mapping. <i>Optics and Lasers in Engineering</i> , 2022, 152, 106945.	3.8	5
49	Microwave scattering from laser spark in air. <i>Journal of Applied Physics</i> , 2012, 112, 063101.	2.5	4
50	Reduction of breakdown threshold by metal nanoparticle seeding in a DC microdischarge. <i>Nanoscale Research Letters</i> , 2015, 10, 15.	5.7	4
51	Radar resonance-enhanced multiphoton ionization for measurement of atomic oxygen in non-equilibrium pulsed plasmas. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	4
52	Air resonance enhanced multiphoton ionization tagging velocimetry. <i>Applied Optics</i> , 2022, 61, 3748.	1.8	4
53	Temperature Measurement of Flame by RADAR REMPI of Nitric Oxide. , 2008, , .		3
54	Measurement of Plasma Decay Processes in Mixture of Sodium and Argon by Radar REMPI. , 2009, , .		3

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55	Microplasma Electron Number Density Measurement by Resonant Coherent Microwave Rayleigh Scattering. , 2010, , .		3
56	Far-field plasmonic resonance enhanced nanoparticle image velocimetry within a microchannel. Review of Scientific Instruments, 2011, 82, 023117.	1.3	3
57	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
58	Radar REMPI Detection of NO ₂ by NO Photo-Fragments. , 2009, , .		2
59	Pre-ionization Controlled Laser Plasma Formation for Ignition Applications. , 2010, , .		2
60	Quantitative Microplasma Electron Number Density Measurement by Coherent Microwave Rayleigh Scattering. IEEE Transactions on Plasma Science, 2011, 39, 593-595.	1.3	2
61	Plasmon Evolution in Core-Shell Nanospheroids. Journal of Physical Chemistry C, 2016, 120, 8891-8899.	3.1	2
62	Ultrafast Laser-Induced-Breakdown Spectroscopy (LIBS) for F/A-Ratio Measurement of Hydrocarbon Flames. , 2018, , .		2
63	One-dimensional air temperature measurements by air resonance enhanced multiphoton ionization thermometry (ART). Optics Express, 2022, 30, 18539.	3.4	2
64	Simultaneous Resonant Enhanced Multi-Photon Ionization and Electron Avalanche Ionization in Gas Mixtures. , 2008, , .		1
65	Molecular Oxygen Rotational Temperature Measurement by Radar REMPI. , 2012, , .		1
66	Temperature Measurements by Radar REMPI in methane/air flames at atmospheric pressure. , 2013, , .		1
67	In situ Measurements of Ethylene and Methyl Radical by using the Radar REMPI technique. , 2015, , .		1
68	Quantitative O ₂ Measurements in Flames at Elevated Pressures by Laser-induced Breakdown Spectroscopy. , 2016, , .		1
69	<i>See-through-wall</i> Radar REMPI for Spatially Localized Temperature Measurements in a Well-Stirred Reactor. , 2017, , .		1
70	Atomic Oxygen Measurements in a Low Pressure DC and Pulsed Discharge via Radar REMPI. , 2017, , .		1
71	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
72	Simultaneous Species Concentration and Flow Velocity Imaging Using 2D Raman Scattering at Elevated Pressure. , 2019, , .		1

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73	Characterization of a Plasma Jet Flow Using Emission Spectroscopy and Laser-Induced Breakdown Velocimetry. , 2022, , .		1
74	Ultra High Sensitivity Detection of NO Photo-fragments by Radar REMPI. , 2008, , .		0
75	Measurement of Recombination Rates of Sodium by Coherent Microwave Scattering. , 2010, , .		0
76	Quantitative Radar REMPI Measurement of Methyl Radical in 1-D McKenna Flame. , 2012, , .		0
77	Nanosecond component in a femtosecond laser pulse. Physics of Plasmas, 2012, 19, 113115.	1.9	0
78	Sodium Ion Kinetic Measurements by Coherent Microwave Scattering. , 2012, , .		0
79	Two-Dimensional Methyl Radical Concentration Measurements in Flames using Radar REMPI. , 2013, , .		0
80	O2 rotational temperature measurements using 2+1 radar resonance-enhanced multiphoton ionization. , 2014, , .		0
81	Sodium Cluster Ion Recombination Rate Measurements by Radar REMPI. , 2014, , .		0
82	Quantitative Measurements of Electron Number Density and Threshold for Laser Induced Breakdown in Air. , 2015, , .		0
83	Acoustic Measurements of O2 REMPI in Air. , 2018, , .		0
84	High-Speed, Two-dimensional, Multi-species Raman Imaging for Combustion and Flow Diagnostics. , 2018, , .		0
85	Single-Shot Detection of 2-D Chemiluminescence Emissions by Compressed Hyperspectral Imaging. , 2020, , .		0
86	3D fuel-to-air Ratio Mapping of Methane/Air Flame using Stereoscopic Multiplexed Structured Image Capture. , 2021, , .		0
87	Singlet Molecular Oxygen Measurement by Radar REMPI. , 2013, , .		0
88	Spatial and Temporal Evolutions of Microwave Scattering from Laser Spark in Air. , 2013, , .		0
89	Reducing the Breakdown Threshold in DC Microdischarges via Metal Nanoparticle Seeding. , 2015, , .		0
90	Radar REMPI for Quantitative Combustion and Plasma Diagnostics. , 2020, , .		0

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91	1D Temperature Measurements by Air REMPI Thermometry (ART). , 2022, , .		0