Waruna D Kulatilaka

List of Publications by Year
in descending order

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133	1,872	257450	315739
papers	citations	24 h-index	38 g-index

133	133	133	784
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hypervelocity impact response of monolithic UHMWPE and HDPE plates. International Journal of Impact Engineering, 2022, 161, 104081.	5.0	13
2	Emission Spectra of Hydrocarbon Flames Doped with Phosphorus-Containing Compounds. , 2022, , .		0
3	Resolving flame thickness using high-speed chemiluminescence imaging of OH* and CH* in spherically expanding methaneâ€“air flames. Proceedings of the Combustion Institute, 2021, 38, 2101-2108.	3.9	9
4	Highâ€sensitivity impulsive stimulated Raman spectrometer with fast data acquisition. Journal of Raman Spectroscopy, 2021, 52, 664-669.	2.5	2
5	Simultaneous imaging of H and OH in flames using a single broadband femtosecond laser source. Proceedings of the Combustion Institute, 2021, 38, 1813-1821.	3.9	6
6	Effect of particle morphology on dust cloud dynamics. Powder Technology, 2021, 379, 89-95.	4.2	16
7	Combustible Dust Cloud Characterization Using Multiple Laser Diagnostic Methods. , 2021, , .		3
8	High-Speed OH PLIF Imaging in Flames Using Third Harmonic of an Amplified Femtosecond Laser. , 2021, , .		0
9	Investigation of particle density on dust cloud dynamics in a minimum ignition energy apparatus using digital in-line holography. Powder Technology, 2021, 384, 297-303.	4.2	10
10	OH, PAH, and sooting imaging in piloted liquid-spray flames of diesel and diesel surrogate. Combustion and Flame, 2021, 231, 111479.	5.2	6
11	Application of high-speed, species-specific chemiluminescence imaging for laminar flame speed and Markstein length measurements in spherically expanding flames. Experimental Thermal and Fluid Science, 2021, 129, 110477.	2.7	15
12	Study of Impulsive Stimulated Raman Scattering Effects Using the Femtosecond Pumpâ€“Probe Z-Scan Technique. Applied Sciences (Switzerland), 2021, 11, 11667.	2.5	0
13	Piloted Liquid Spray Flames: A Numerical and Experimental Study. Combustion Science and Technology, 2020, 192, 1887-1909.	2.3	4
14	High-speed digital in-line holography for in-situ dust cloud characterization in a minimum ignition energy device. Powder Technology, 2020, 376, 612-621.	4.2	14
15	Ignition delay time and laminar flame speed measurements of mixtures containing diisopropyl-methylphosphonate (DIMP). Combustion and Flame, 2020, 215, 66-77.	5.2	9
16	Investigation of Flow-Flame Interactions in Kerosene Piloted Liquid-Spray Flames Using Simultaneous OH and PAH PLIF. , 2020, , .		0
17	Simultaneous measurement of CO and OH in flames using a single broadband, femtosecond laser pulse. Combustion and Flame, 2020, 214, 358-360.	5.2	10
18	Femtosecond pump-probe studies of atomic hydrogen superfluorescence in flames. Applied Physics Letters, 2020, 116, 201102.	3.3	4

#	Article	IF	Citations
19	Hydroxyl radical planar laser-induced fluorescence imaging in flames using frequency-tripled femtosecond laser pulses. Optics Letters, 2020, 45, 4690.	3.3	5
20	Chemical Species Imaging in Flames Using Frequency-Tripled Tunable Amplified Femtosecond Laser Pulses. , 2020, , .		0
21	Femtosecond Pure Rotational Chirped-Probe-Pulse CARS for singleshot thermometry in flames. , 2020, , .		0
22	Shock-tube studies of Sarin surrogates. Shock Waves, 2019, 29, 441-449.	1.9	8
23	Laminar flame speeds of DEMP, DMMP, and TEP added to H2- and CH4-air mixtures. Proceedings of the Combustion Institute, 2019, 37, 3775-3781.	3.9	27
24	Effect of H-atom concentration on soot formation in premixed ethylene/air flames. Proceedings of the Combustion Institute, 2019, 37, 1289-1296.	3.9	16
25	Hydroxyl radical planar imaging in flames using femtosecond laser pulses. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	13
26	CO Imaging in piloted liquid-spray flames using femtosecond two-photon LIF. Proceedings of the Combustion Institute, 2019, 37, 1305-1312.	3.9	11
27	High-Speed OH* and CH* Chemiluminescence Imaging and OH Planar Laser-Induced Fluorescence (PLIF) in Spherically Expanding Flames. , 2019, , .		2
28	Laminar Flame Speed Measurements from Chemiluminescence of OH* and CH* in CH4-Air Flames. , 2019, , .		1
29	Spectroscopic investigation of high-pressure femtosecond two-photon laser-induced fluorescence of carbon monoxide up to 20â€‰â€‰bar. Applied Optics, 2019, 58, C23.	1.8	6
30	Ultrashort-pulse laser-induced breakdown spectroscopy for detecting airborne metals during energetic reactions. Applied Optics, 2019, 58, C79.	1.8	5
31	Three-photon-excited laser-induced fluorescence detection of atomic hydrogen in flames. Optics Letters, 2019, 44, 5945.	3.3	8
32	Experimental and modeling study on the effects of dimethyl methylphosphonate (DMMP) addition on H2, CH4, and C2H4 ignition. Combustion and Flame, 2018, 191, 320-334.	5.2	27
33	Detection of carbon monoxide (CO) in sooting hydrocarbon flames using femtosecond two-photon laser-induced fluorescence (fs-TPLIF). Applied Physics B: Lasers and Optics, 2018, 124, 1.	2.2	6
34	Investigation of Soot Formation Near Flame-Wall Interaction Region in Rich Ethylene/Air Flames. , 2018, , .		0
35	Ultrashort-Pulse LIBS for Detecting Airborne Metal Particles from Energetic Material Reactions. , 2018, , .		1
36	Investigation of Multi-Photon Excitation Schemes for Detecting Atomic Hydrogen in Flames. , 2018, , .		0

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37	Laser-induced-breakdown-spectroscopy-based detection of metal particles released into the air during combustion of solid propellants. Applied Optics, 2018, 57, 1910.	1.8	20
38	Structure and Dynamics of Liquid-Fueled Piloted Spray Flames. , 2018, , .		1
39	Investigation of Femtosecond Two-Photon LIF of CO at Elevated Pressures. , 2018, , .		0
40	Two- and Three-Photon LIF Detection of Atomic Hydrogen Using Femtosecond Laser Pulses. , 2018, , .		0
41	Laminar Flame Speeds of Dilute Triethyl Phosphate in H 2- and CH 4-Air Mixtures. , 2017, , .		0
42	Shock-Tube Studies of Tri-Ethyl-Phosphate (TEP) Kinetics at High Temperatures. , 2017, , .		1
43	Mixture Fraction Imaging Using Femtosecond TPLIF of Krypton. , 2017, , .		0
44	Characterization of Emissions from Metalized Energetic Formulations Using Laser-Induced Breakdown Spectroscopy. , 2017, , .		1
45	Spectroscopic Characterization of Reactions Involving Counter-WMD Simulants. , 2017, , .		1
46	Femtosecond, two-photon-absorption, laser-induced-fluorescence (fs-TALIF) imaging of atomic hydrogen and oxygen in non-equilibrium plasmas. Journal Physics D: Applied Physics, 2017, 50, 015204.	2.8	64
47	Two-photon-absorption line strengths for nitric oxide: Comparison of theory and sub-Doppler, laser-induced fluorescence measurements. Journal of Chemical Physics, 2017, 146, 124311.	3.0	0
48	Spatially Resolved Atomic Hydrogen Concentration Measurements in Sooting Hydrocarbon Flames Using Femtosecond Two-Photon LIF. , 2017, , .		0
49	Laser applications to chemical, security, and environmental analysis: introduction to the feature issue. Applied Optics, 2017, 56, LAC1.	2.1	2
50	Femtosecond two-photon laser-induced fluorescence of krypton for high-speed flow imaging. Optics Letters, 2017, 42, 711.	3.3	21
51	Optical ray tracing method for simulating beam-steering effects during laser diagnostics in turbulent media. Applied Optics, 2017, 56, E106.	2.1	6
52	FLEET velocimetry for combustion and flow diagnostics. Applied Optics, 2017, 56, 8632.	1.8	35
53	Two-Photon Laser Induced Fluorescence of Krypton Using Femtosecond Pulses. , 2017, , .		0
54	An Optical Ray Tracing Method for Analyzing Beam-Steering Effects During Laser Diagnostics in Turbulent Media. , 2016, , .		0

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55	Collisionâ€independent detection of molecular twoâ€photon excitation by timeâ€resolved parametric fourâ€wave mixing. Journal of Raman Spectroscopy, 2016, 47, 1124-1129.	2.5	5
56	Photolytic-interference-free, femtosecond, two-photon laser-induced fluorescence imaging of atomic oxygen in flames. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	37
57	Femtosecond, two-photon laser-induced-fluorescence imaging of atomic oxygen in an atmospheric-pressure plasma jet. Plasma Sources Science and Technology, 2015, 24, 032004.	3.1	19
58	Minor-species structure of premixed cellular tubular flames. Proceedings of the Combustion Institute, 2015, 35, 1107-1114.	3.9	17
59	Quantitative atomic hydrogen measurements in premixed hydrogen tubular flames. Combustion and Flame, 2014, 161, 2924-2932.	5.2	24
60	Femtosecond two-photon LIF imaging of atomic species using a frequency-quadrupled Ti:sapphire laser. Applied Physics B: Lasers and Optics, 2014, 116, 7-13.	2.2	39
61	Femtosecond TALIF Imaging of Atomic Hydrogen in Pulsed, Non-Equilibrium Plasmas. , 2014, , .		1
62	Femtosecond Laser Electronic Excitation Tagging (FLEET) Fundamental Pulse Energy and Spectral Response. , 2014, , .		19
63	Noninvasive Ultrafast Imaging Diagnostics in Low-Temperature Plasmas. , 2014, , .		0
64	Fs-TALIF imaging of atomic species in non-equilibrium plasmas at moderate pressures. , 2014, , .		1
65	Minor Species Measurements in Premixed Cellular Tubular Flames. , 2014, , .		0
66	Spatially and temporally resolved temperature and shock-speed measurements behind a laser-induced blast wave of energetic nanoparticles. Journal of Applied Physics, 2013, 113, 184310.	2.5	27
67	Direct measurements of collisionally broadened Raman linewidths of CO2â€ˆS-branch transitions. Journal of Chemical Physics, 2013, 138, 024201.	3.0	31
68	Chirped-probe-pulse femtosecond coherent anti-Stokes Raman scattering concentration measurements. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 188.	2.1	18
69	Investigation of optical fibers for high-repetition-rate, ultraviolet planar laser-induced fluorescence of OH. Applied Optics, 2013, 52, 3108.	1.8	6
70	Singleâ€shot thermometry using fiberâ€based picosecond coherent antiâ€stokes Raman scattering (CARS) spectroscopy. Journal of Raman Spectroscopy, 2013, 44, 1330-1335.	2.5	13
71	Timeâ€resolved femtosecond CARS from 10 to 50 Bar: collisional sensitivity. Journal of Raman Spectroscopy, 2013, 44, 1344-1348.	2.5	35
72	An Efficient Frequency-Quadrupling Scheme for Generating Femtosecond UV Radiation Near 200 nm. , 2013, , .		0

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73	Photolytic-interference-free, femtosecond two-photon fluorescence imaging of atomic hydrogen. Optics Letters, 2012, 37, 3051.	3.3	85
74	Detailed calculation of hydroxyl (OH) radical two-photon absorption via broadband ultrafast excitation. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 40.	2.1	10
75	Investigation of optical fibers for gas-phase, ultraviolet laser-induced-fluorescence (UV-LIF) spectroscopy. Applied Optics, 2012, 51, 4047.	1.8	13
76	High-speed imaging of OH radicals in flames using fiber-coupled UV-PLIF. , 2012, , .		0
77	Development of an All-Fiber-Coupled, Pulsed, Ultraviolet Laser-Induced-Fluorescence (UV-LIF) Detection System for OH Radicals in Practical Combustion Devices. , 2012, , .		0
78	Advances in Single-Laser-Shot Femtosecond Coherent Anti-Stokes Raman Scattering Concentration and Temperature Measurements. , 2012, , .		0
79	Fiber-Coupled High-Speed OH-PLIF Imaging in Turbulent Flames. , 2012, , .		0
80	High-Data-Rate One-Dimensional Thermometry Using Femtosecond CARS. , 2012, , .		0
81	Multi-Photon Fluorescence Imaging of Flame Species Using Femtosecond Excitation. , 2012, , .		0
82	Space- and Time-Resolved Temperature Measurement Behind a Blast Wave Produced by Laser Ignition of Energetic Nanomaterials. , 2012, , .		0
83	Kilohertz-Rate Femtosecond-Multi-Photon-Excited Fluorescence Imaging of Atomic Species in Gas-Phase Reacting Flows. , 2012, , .		0
84	Advances in Fiber-Coupled Laser Diagnostics for Practical Combustion Measurements. , 2012, , .		0
85	Interference-Free, High-Repetition-Rate Imaging of Atomic-Hydrogen in Flames Using Femtosecond, Two-Photon-Excited, Laser-Induced Fluorescence (fs-TPLIF). , 2012, , .		0
86	Concentration Measurements in CO/N2 and Ar/N2 Gas Mixtures using Femtosecond Coherent Anti-Stokes Raman Scattering. , 2011, , .		0
87	Gas-phase thermometry using delayed-probe-pulse picosecond coherent anti-Stokes Raman scattering spectra of H_2. Applied Optics, 2011, 50, A38.	2.1	16
88	Laser-induced fluorescence detection of hydroxyl (OH) radical by femtosecond excitation. Optics Letters, 2011, 36, 1776.	3.3	23
89	Point and planar ultraviolet excitation/detection of hydroxyl-radical laser-induced fluorescence through long optical fibers. Optics Letters, 2011, 36, 1818.	3.3	20
90	One-dimensional single-shot thermometry in flames using femtosecond-CARS line imaging. Optics Letters, 2011, 36, 4182.	3.3	53

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91	High-Bandwidth, Spatially Resolved Thermometry in Reacting Flows Using Femtosecond-CARS Line Imaging. , 2011, , .		0
92	Advances in Fiber-Based Picosecond Coherent Anti-Stokes Raman Scattering Thermometry in Reacting Flows. , 2011, , .		0
93	Effects of O2â€“CO2 polarization beating on femtosecond coherent anti-Stokes Raman scattering (fs-CARS) spectroscopy of O2. Applied Physics B: Lasers and Optics, 2011, 102, 141-147.	2.2	17
94	Theoretical modeling of single-laser-shot, chirped-probe-pulse femtosecond coherent anti-Stokes Raman scattering thermometry. Applied Physics B: Lasers and Optics, 2011, 104, 699-714.	2.2	62
95	Single-laser-shot femtosecond coherent anti-Stokes Raman scattering thermometry at 1000Hz in unsteady flames. Proceedings of the Combustion Institute, 2011, 33, 839-845.	3.9	14
96	Kilohertz-Rate, One-Dimensional Thermometry in Reacting Flows Using Femtosecond-CARS Line Imaging. , 2011, , .		0
97	Investigation of optical fibers for coherent anti-Stokes Raman scattering (CARS) spectroscopy in reacting flows. Experiments in Fluids, 2010, 49, 969-984.	2.4	27
98	Direct measurement of rotationally resolved H2 Q-branch Raman coherence lifetimes using time-resolved picosecond coherent anti-Stokes Raman scattering. Applied Physics Letters, 2010, 97, 081112.	3.3	56
99	Electronic-resonance-enhanced coherent anti-Stokes Raman scattering of nitric oxide: Saturation and Stark effects. Journal of Chemical Physics, 2010, 133, 084310.	3.0	6
100	Picosecond Laser-Based Fiber-Coupled CARS Spectroscopy for Gas-Phase Thermometry. , 2010, , .		1
101	Temperature Measurements in Flames at 1000 Hz Using Femtosecond Coherent Anti-Stokes Raman Spectroscopy. , 2010, , .		0
102	Electronic-Resonance-Enhanced Coherent Anti-Stokes Raman Scattering of Nitric Oxide: Non-Perturbative Time- Dependent Modeling. , 2010, , .		0
103	Effects of Molecular Interference on Femtosecond-CARS Spectroscopy. , 2010, , .		0
104	Chirped-Probe-Pulse Femtosecond Coherent Anti-Stokes Raman Scattering for Single-Laser-Pulse Flame Temperature Measurements. , 2010, , .		0
105	Theory of Chirped-Probe Pulse Single-Shot Femtosecond Coherent Anti-Stokes Raman Scattering Thermometry in Flames at 1000 Hz. , 2010, , .		0
106	Pressure, Temperature and Velocity Measurements in Underexpanded Free Jets using Laser-Induced Fluorescence Imaging. AIAA Journal, 2009, 47, 839-849.	2.6	28
107	Interference-free two-photon LIF imaging of atomic hydrogen in flames using picosecond excitation. Proceedings of the Combustion Institute, 2009, 32, 955-962.	3.9	38
108	Visible emission of hydrogen flames. Combustion and Flame, 2009, 156, 1234-1241.	5.2	113

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109	Analysis of 205-nm photolytic production ofÂatomic hydrogen inÂmethane flames. Applied Physics B: Lasers and Optics, 2009, 97, 227-242.	2.2	32
110	Structure and mixing of a transient flow of helium injected into an established flow of nitrogen: two dimensional measurement and simulation. Experiments in Fluids, 2009, 46, 559-575.	2.4	6
111	Gas-phase single-shot thermometry at 1 kHz using fs-CARS spectroscopy. Optics Letters, 2009, 34, 3857.	3.3	94
112	Perturbative theory and modeling of electronic-resonance-enhanced coherent anti-Stokes Raman scattering spectroscopy of nitric oxide. Journal of Chemical Physics, 2008, 128, 174308.	3.0	23
113	Development of High-Spectral-Resolution Planar Laser-Induced Fluorescence Imaging Diagnostics for High-Speed Gas Flow. , 2008, , .		0
114	Comparison of nanosecond and picosecond excitation for interference-free two-photon laser-induced fluorescence detection of atomic hydrogen in flames. Applied Optics, 2008, 47, 4672.	2.1	46
115	Development of High-Spectral-Resolution Planar Laser-Induced Fluorescence Imaging Diagnostics for High-Speed Gas Flows. AIAA Journal, 2008, 46, 17-20.	2.6	12
116	Interference-Free Laser-Induced Fluorescence Imaging of Atomic Hydrogen in Flames. , 2008, , .		0
117	Detection of atomic hydrogen in flames using picosecond two-color two-photon-resonant six-wave-mixing spectroscopy. Applied Optics, 2007, 46, 3921.	2.1	23
118	Electronic-Resonance-Enhanced (ERE) Coherent Anti- Stokes Raman Scattering (CARS) Detection of Minor Species in Reacting Flows. , 2007, , .		0
119	Laser Imaging of Transient Injection and Mixing in a Simulated Rocket Chamber. , 2007, , .		0
120	Effects of pressure variations on electronic-resonance-enhanced coherent anti-Stokes Raman scattering of nitric oxide. Optics Communications, 2007, 274, 441-446.	2.1	18
121	Nitric oxide concentration measurements in atmospheric pressure flames using electronic-resonance-enhanced coherent anti-Stokes Raman scattering. Applied Physics B: Lasers and Optics, 2007, 88, 141-150.	2.2	29
122	Detection of acetylene by electronic resonance-enhanced coherent anti-Stokes Raman scattering. Applied Physics B: Lasers and Optics, 2007, 87, 731-737.	2.2	24
123	Laser Imaging of Transient Mixing in Simulated Rocket Chambers. , 2006, , .		0
124	Effects of quenching on electronic-resonance-enhanced coherent anti-Stokes Raman scattering of nitric oxide. Applied Physics Letters, 2006, 89, 104105.	3.3	27
125	Measurement of nitric oxide concentrations in flames by using electronic-resonance-enhanced coherent anti-Stokes Raman scattering. Optics Letters, 2006, 31, 3357.	3.3	23
126	Investigation of Two-Color Laser-Induced Fluorescence (TC-LIF) and Two-Color Six-Wave Mixing Spectroscopy (TC-SWM) for Detection of Atomic Hydrogen. , 2006, , .		0

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127	Development of injection-seeded, pulsed optical parametric generator/oscillator systems for high-resolution spectroscopy. Applied Physics B: Lasers and Optics, 2005, 80, 669-680.	2.2	45
128	Two-color, two-photon laser-induced polarization spectroscopy (LIPS) measurements of atomic hydrogen in near-adiabatic, atmospheric pressure hydrogen/air flames. Combustion and Flame, 2004, 137, 523-537.	5.2	52
129	Electronic-resonance-enhanced coherent anti-Stokes Raman spectroscopy of nitric oxide. Applied Physics Letters, 2003, 83, 1887-1889.	3.3	48
130	Temperature profile measurements in the near-substrate region of low-pressure diamond-forming flames. Combustion and Flame, 2002, 130, 261-276.	5.2	16
131	The Effects of Turbulent Jet Characteristics on Engine Performance Using a Pre-Chamber Combustor. , 0, , .		67
132	High-Speed Hydroxyl and Methylidyne Chemiluminescence Imaging Diagnostics in Spherically Expanding Flames. AIAA Journal, 0, , 1-9.	2.6	4
133	Emission Spectra of Hydrocarbon Flames Doped with Phosphorus-Containing Compounds. Journal of Thermophysics and Heat Transfer, 0, , 1-9.	1.6	0