

Jack J Yoh

List of Publications by Year in descending order

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114
papers

1,262
citations

394421

19
h-index

552781

26
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114
all docs

114
docs citations

114
times ranked

950
citing authors

#	ARTICLE	IF	CITATIONS
1	Er:YAG laser pulse for small-dose splashback-free microjet transdermal drug delivery. Optics Letters, 2012, 37, 3894.	3.3	46
2	Temperature-dependent absorptance of painted aluminum, stainless steel 304, and titanium for 1.07 μ m and 10.6 μ m laser beams. Optics and Lasers in Engineering, 2012, 50, 114-121.	3.8	44
3	A laser based reusable microjet injector for transdermal drug delivery. Journal of Applied Physics, 2010, 107, .	2.5	39
4	Thrust enhancement via gel-type liquid confinement of laser ablation of solid metal propellant. Applied Physics A: Materials Science and Processing, 2010, 98, 147-151.	2.3	35
5	Dynamics of laser-induced bubble collapse visualized by time-resolved optical shadowgraph. Journal of Visualization, 2011, 14, 331-337.	1.8	32
6	A particle level-set based Eulerian method for multi-material detonation simulation of high explosive and metal confinements. Proceedings of the Combustion Institute, 2013, 34, 2025-2033.	3.9	31
7	A reactive flow model for heavily aluminized cyclotrimethylene-trinitramine. Journal of Applied Physics, 2014, 116, .	2.5	31
8	Standoff Detection of Geological Samples of Metal, Rock, and Soil at Low Pressures Using Laser-Induced Breakdown Spectroscopy. Applied Spectroscopy, 2016, 70, 1411-1419.	2.2	30
9	Ablation-induced explosion of metal using a high-power Nd:YAG laser. Journal of Applied Physics, 2008, 103, .	2.5	27
10	A new particle method for simulating breakup of liquid jets. Journal of Computational Physics, 2012, 231, 1650-1674.	3.8	27
11	A Smoothed Particle Hydrodynamics method with approximate Riemann solvers for simulation of strong explosions. Computers and Fluids, 2013, 88, 418-429.	2.5	24
12	Laser-induced microjet injection into preablated skin for more effective transdermal drug delivery. Journal of Biomedical Optics, 2014, 19, 118002.	2.6	24
13	Deformable wall effects on the detonation of combustible gas mixture in a thin-walled tube. International Journal of Hydrogen Energy, 2015, 40, 3006-3014.	7.1	24
14	A numerical investigation of the effects of hydrogen addition on combustion instability inside a partially-premixed swirl combustor. Applied Thermal Engineering, 2020, 176, 115478.	6.0	24
15	Extended measurement of crater depths for aluminum and copper at high irradiances by nanosecond visible laser pulses. Applied Surface Science, 2008, 255, 2777-2781.	6.1	23
16	Simultaneous optical ignition and spectroscopy of a two-phase spray flame. Combustion and Flame, 2016, 165, 334-345.	5.2	23
17	Towards clinical use of a laser-induced microjet system aimed at reliable and safe drug delivery. Journal of Biomedical Optics, 2014, 19, 058001.	2.6	22
18	Towards a two-dimensional laser induced breakdown spectroscopy mapping of liquefied petroleum gas and electrolytic oxy-hydrogen flames. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 88, 63-68.	2.9	21

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19	Effect of multi-bend geometry on deflagration to detonation transition of a hydrocarbon-air mixture in tubes. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 11446-11457.	7.1	21
20	Towards understanding the effects of heat and humidity on ageing of a NASA standard pyrotechnic igniter. <i>Scientific Reports</i> , 2019, 9, 10203.	3.3	21
21	Towards controlled flyer acceleration by a laser-driven mini flyer. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 115, 971-978.	2.3	19
22	Shock compression of condensed matter using Eulerian multimaterial method: Applications to multidimensional shocks, deflagration, detonation, and laser ablation. <i>Journal of Applied Physics</i> , 2008, 103, 113507.	2.5	17
23	Shock compression of condensed matter using multimaterial reactive ghost fluid method. <i>Journal of Mathematical Physics</i> , 2008, 49, .	1.1	17
24	The application of magnetic field at low pressure for optimal laser-induced plasma spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2015, 110, 7-12.	2.9	16
25	Forensic Discrimination of Latent Fingerprints Using Laser-Induced Breakdown Spectroscopy (LIBS) and Chemometric Approaches. <i>Applied Spectroscopy</i> , 2018, 72, 1047-1056.	2.2	16
26	Toward understanding the aging effect of energetic materials via advanced isoconversional decomposition kinetics. <i>Journal of Thermal Analysis and Calorimetry</i> , 2018, 133, 737-744.	3.6	16
27	Kinetics deconvolution study of multi-component pyrotechnics. <i>Thermochimica Acta</i> , 2018, 667, 27-34.	2.7	16
28	Numerical analysis of the effect of the hydrogen composition on a partially premixed gas turbine combustor. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6278-6286.	7.1	16
29	Reconstruction of chemical fingerprints from an individual's time-delayed, overlapped fingerprints via laser-induced breakdown spectrometry (LIBS) and Raman spectroscopy. <i>Microchemical Journal</i> , 2018, 139, 386-393.	4.5	15
30	Melt-through characteristics in continuous beam irradiation of flying metal samples in flow speeds up to 85m/s. <i>Optics and Laser Technology</i> , 2013, 45, 250-255.	4.6	14
31	Advancing the experimental design for simultaneous acquisition of laser induced plasma and Raman signals using a single pulse. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2016, 123, 1-5.	2.9	14
32	Geometrically nonlinear quadratic solid/solid shell element based on consistent corotational approach for structural analysis under prescribed motion. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 112, 434-458.	2.8	14
33	Towards reconstruction of overlapping fingerprints using plasma spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 134, 25-32.	2.9	14
34	Characterization of display pyrotechnic propellants: Colored light. <i>Applied Thermal Engineering</i> , 2017, 110, 1066-1074.	6.0	14
35	Investigation of aging induced processes on thermo-kinetic and combustion characteristics of tungsten pyrotechnic delay composition. <i>Combustion and Flame</i> , 2021, 228, 114-127.	5.2	14
36	Laser-induced plasma peculiarity at low pressures from the elemental lifetime perspective. <i>Optics Express</i> , 2011, 19, 23097.	3.4	13

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37	An optimal configuration for spark-induced breakdown spectroscopy of bulk minerals aimed at planetary analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 1103-1114.	3.0	13
38	Quantitative laser-induced breakdown spectroscopy of standard reference materials of various categories. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 379-388.	2.2	12
39	An Enhanced Particle Reseeding Algorithm for the Hybrid Particle Level Set Method in Compressible Flows. <i>Journal of Scientific Computing</i> , 2015, 65, 431-453.	2.3	12
40	Performance characterization of a miniaturized exploding foil initiator via modified VISAR interferometer and shock wave analysis. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	12
41	Modeling the shock-induced multiple reactions in a random bed of metallic granules in an energetic material. <i>Combustion and Flame</i> , 2019, 210, 54-70.	5.2	12
42	Real-time monitoring of toxic components from fine dust air pollutant samples by utilizing spark-induced plasma spectroscopy. <i>Chemosphere</i> , 2020, 257, 127237.	8.2	12
43	Novel utilization of the molecular band signal in metal oxides: understanding the aging process of pyrotechnic substances by using laser induced plasma emissions. <i>Optical Materials Express</i> , 2019, 9, 410.	3.0	12
44	Polarized reflectance of aluminum and nickel to 532, 355 and 266nm Nd:YAG laser beams for varying surface finish. <i>Optics and Laser Technology</i> , 2012, 44, 1823-1828.	4.6	11
45	Laser-induced microjet: wavelength and pulse duration effects on bubble and jet generation for drug injection. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 417-421.	2.2	11
46	Characterization of display pyrotechnic propellants: Burning rate. <i>Applied Thermal Engineering</i> , 2017, 121, 761-767.	6.0	11
47	Towards simplified monitoring of instantaneous fuel concentration in both liquid and gas fueled flames using a combustor injectable LIBS plug. <i>Energy</i> , 2018, 160, 225-232.	8.8	11
48	Predictive model of onset of pipe failure due to a detonation of hydrogen-air and hydrocarbon-air mixtures. <i>International Journal of Hydrogen Energy</i> , 2009, 34, 1613-1619.	7.1	10
49	Analysis on shock attenuation in gap test configuration for characterizing energetic materials. <i>Journal of Applied Physics</i> , 2016, 119, 145902.	2.5	10
50	Accuracy Enhancement of Raman Spectroscopy Using Complementary Laser-Induced Breakdown Spectroscopy (LIBS) with Geologically Mixed Samples. <i>Applied Spectroscopy</i> , 2017, 71, 678-685.	2.2	10
51	A full-scale hydrodynamic simulation of energetic component system. <i>Computers and Fluids</i> , 2017, 156, 368-383.	2.5	10
52	Slow and rapid thermal decomposition characteristics of enhanced blast explosives for burning in fuel-rich, oxygen-rich conditions. <i>Thermochimica Acta</i> , 2019, 678, 178300.	2.7	10
53	Understanding the effects of hygrothermal aging on thermo-chemical behaviour of Zr-Ni based pyrotechnic delay composition. <i>Fuel</i> , 2020, 281, 118776.	6.4	10
54	A two-phase model for aluminized explosives on the ballistic and brisance performance. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	9

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55	The hygrothermal aging effects of titanium hydride potassium perchlorate for pyrotechnic combustion. <i>Thermochimica Acta</i> , 2018, 665, 102-110.	2.7	9
56	Double-pulse laser synchronization aimed at simultaneous detection of enhanced atomic and molecular signals at low pressure conditions. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2019, 157, 12-21.	2.9	9
57	Critical changes in the ignition and combustion characteristics of aged titanium-based initiators. <i>Combustion and Flame</i> , 2020, 221, 74-85.	5.2	9
58	Multiscale modeling of transients in the shock-induced detonation of heterogeneous energetic solid fuels. <i>Combustion and Flame</i> , 2020, 221, 401-415.	5.2	9
59	Stand-off laser-induced breakdown spectroscopy of aluminum and geochemical reference materials at pressure below 1 torr. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 101, 335-341.	2.9	8
60	A reduced order model for prediction of the burning rates of multicomponent pyrotechnic propellants. <i>Applied Thermal Engineering</i> , 2018, 130, 492-500.	6.0	8
61	A non-calorimetric approach for investigating the moisture-induced ageing of a pyrotechnic delay material using spectroscopies. <i>Scientific Reports</i> , 2019, 9, 15228.	3.3	8
62	Thermochemical characterization of Zr/Fe ₂ O ₃ pyrotechnic mixture under natural aging conditions. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	8
63	Thermal decomposition behaviour and chemical kinetics of tungsten based electrically controlled solid propellants. <i>Combustion and Flame</i> , 2022, 238, 111752.	5.2	8
64	Metal and polymer melt jet formation by the high-power laser ablation. <i>Applied Surface Science</i> , 2010, 256, 2423-2427.	6.1	7
65	Understanding the anisotropic initiation sensitivity of shocked pentaerythritol tetranitrate single crystals. <i>Applied Physics Letters</i> , 2013, 103, 131912.	3.3	7
66	A high velocity impact experiment of micro-scale ice particles using laser-driven system. <i>Journal of Applied Physics</i> , 2014, 116, 173508.	2.5	7
67	Simulating sympathetic detonation using the hydrodynamic models and constitutive equations. <i>Journal of Mechanical Science and Technology</i> , 2016, 30, 5491-5502.	1.5	7
68	Isoconversional Method for Extracting Reaction Kinetics of Aluminized Cyclotrimethylene-Trinitramine for Propulsion. <i>Journal of Propulsion and Power</i> , 2016, 32, 777-784.	2.2	7
69	Synchronization of skin ablation and microjet injection for an effective transdermal drug delivery. <i>Applied Physics A: Materials Science and Processing</i> , 2016, 122, 1.	2.3	7
70	Skin pre-ablation and laser assisted microjet injection for deep tissue penetration. <i>Lasers in Surgery and Medicine</i> , 2017, 49, 387-394.	2.1	7
71	Ignition and combustion behavior of zirconium-based pyrotechnic igniters and pyrotechnic delays under aging. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 4373-4381.	3.9	7
72	Insights into aging mechanism of Ti-metal based pyrotechnics and changes in thermo-kinetic characteristics. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 4441-4449.	3.9	7

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73	Novel control of plasma expansion direction aimed at very low pressure laser-induced plasma spectroscopy. <i>Optics Express</i> , 2015, 23, 6336.	3.4	6
74	A multi-scale simulation of hot spot initiation of detonation utilizing experimental measurements. <i>AIP Advances</i> , 2018, 8, 105217.	1.3	6
75	Electronegative microchannel guided streamer propagation for in-liquid spark breakdown applications. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	6
76	Two-dimensional measurement of hydrocarbon fuel concentration using multiple laser-induced plasma-forming regions. <i>Optics Express</i> , 2019, 27, 5144.	3.4	6
77	Interaction of beam and coated metals at high power continuous irradiation. <i>Optics and Lasers in Engineering</i> , 2011, 49, 780-784.	3.8	5
78	Characterization of laser-induced ultrasound signal by reduced graphene oxide thickness and laser intensity. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 389-393.	2.2	5
79	Analysis of melt-through process of 1.07 μ m continuous wave high power laser irradiation on metal. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 1745-1752.	1.5	5
80	A check valve controlled laser-induced microjet for uniform transdermal drug delivery. <i>AIP Advances</i> , 2017, 7, 125206.	1.3	5
81	Formation of double front detonations of a condensed-phase explosive with powdered aluminium. <i>Combustion Theory and Modelling</i> , 2018, 22, 378-393.	1.9	5
82	Modeling the effects of aluminum and ammonium perchlorate addition on the detonation of the high explosives C ₄ H ₈ O ₈ N ₈ (HMX) and C ₃ H ₆ O ₆ N ₆ (RDX). <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	5
83	Chemical kinetics of multi-component pyrotechnics and mechanistic deconvolution of variable activation energy. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 3193-3201.	3.9	5
84	Accurate real-time monitoring of fine dust using a densely connected convolutional networks with measured plasma emissions. <i>Chemosphere</i> , 2022, 293, 133604.	8.2	5
85	Shock to detonation transition analysis using experiments and models. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 2699-2707.	3.9	4
86	All Eulerian method of computing elastic response of explosively pressurised metal tube. <i>Combustion Theory and Modelling</i> , 2017, 21, 293-308.	1.9	4
87	Analytical Methods to Distinguish the Positive and Negative Spectra of Mineral and Environmental Elements Using Deep Ablation Laser-Induced Breakdown Spectroscopy (LIBS). <i>Applied Spectroscopy</i> , 2018, 72, 896-907.	2.2	4
88	Onsite real-time detection of covid-like-virus transmission through air using spark-induced plasma spectroscopy. <i>Science of the Total Environment</i> , 2021, 770, 144725.	8.0	4
89	Observation of gunpowder-like thermochemical responses of a thermal energy storage system based on KNO ₃ /NaNO ₃ /Graphite exposed to a heat transfer fluid. <i>Applied Thermal Engineering</i> , 2022, 207, 118215.	6.0	4
90	Numerical Simulation of Fluid-Structure Interaction Problem Associated with Vertical Launching System. <i>Journal of Spacecraft and Rockets</i> , 2018, 55, 948-958.	1.9	3

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91	A liquid breakdown driven non-invasive microjet injection system. <i>Medical Engineering and Physics</i> , 2021, 92, 54-63.	1.7	3
92	Development of a compact all-in-one chemical sensing module for in situ detection of fine dust components based on spark-induced plasma spectroscopy. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 192, 110860.	5.0	3
93	Performance analysis of a new biolistic gun using high power laser irradiation. <i>Applied Physics A: Materials Science and Processing</i> , 2010, 101, 417-422.	2.3	2
94	Synthesis of Anatase Phase Titanium Dioxide Using High-Power Nd:YAG Laser Focused on Titanium Wire in Water. <i>Materials Transactions</i> , 2012, 53, 244-247.	1.2	2
95	A direction sensitive detonation model for granular to continuum scale for shock initiation of pentaerythritol tetranitrate single crystal in multi-dimensions. <i>AIP Advances</i> , 2015, 5, .	1.3	2
96	A reactive flow simulation for the anisotropic ignition of an explosive crystal using adaptive mesh refinement. <i>Journal of Applied Physics</i> , 2018, 124, 145903.	2.5	2
97	Understanding the effects of blast loads on open spaces and enclosed structures in simulations and experiments. <i>Shock Waves</i> , 2020, 30, 843-854.	1.9	2
98	A STUDY OF PHASE EXPLOSION OF METAL USING HIGH POWER Nd:YAG LASER ABLATION. , 2008, , .		1
99	Simulation of the deflagration-to-detonation impact on a copper-based furnace injector. <i>Combustion, Explosion and Shock Waves</i> , 2011, 47, 457-463.	0.8	1
100	Spectroscopic detection of carbon particulates from a high speed jet stream with extended plasma visualization. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2012, 74-75, 144-150.	2.9	1
101	Modeling of afterburning from the particle hydrodynamics of explosive product interface motion. <i>Journal of Mechanical Science and Technology</i> , 2014, 28, 4781-4787.	1.5	1
102	Ignition characteristics of laser-ablated aluminum at shock pressures up to 2â€‰GPa. <i>Journal of Applied Physics</i> , 2014, 115, 013503.	2.5	1
103	A detailed numerical calibration of shock pressure in the gap test configuration for characterizing non-ideal energetic materials. , 2015, , .		1
104	Numerical Investigation of Kerosene-Based Pulse-Detonation Loading on the Metal Tubes. <i>Journal of Propulsion and Power</i> , 2016, 32, 1146-1152.	2.2	1
105	Burning Characteristics of Pyrotechnic Time-Delay Composition Subjected to Moisture and Heat. <i>Journal of Propulsion and Power</i> , 2021, 37, 868-875.	2.2	1
106	INNOVATIVE DRUG INJECTION VIA LASER INDUCED PLASMA. , 2010, , .		0
107	Simulation of the vapor explosion of tin and aluminum oxide fragments in water. <i>Combustion, Explosion and Shock Waves</i> , 2012, 48, 455-464.	0.8	0
108	On the elasto-plastic response of combustion tube subjected to kerosene-air detonation loading. , 2015, , .		0

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109	Ignition sensitivity study of an energetic train configuration using experiments and simulation. Journal of Applied Physics, 2018, 123, 225901.	2.5	0
110	Parametric study of a VLS based on 2-D FSI analysis. Aerospace Science and Technology, 2019, 84, 530-542.	4.8	0
111	On a New Correlation between Reaction Mechanism and the Ignition Delay Time for Titanium-based Pyrotechnic Initiators Exposed to Various Aging Conditions. , 2020, , .		0
112	Addressing the complex geometric effects on the three-dimensional transition to detonation in hydrocarbon-air mixtures using a parametrized level-set algorithm. International Journal of Hydrogen Energy, 2021, 46, 27827-27840.	7.1	0
113	A reactive hydrodynamic simulation of noise propagation for a concrete-confined detonation. AIP Advances, 2021, 11, 085009.	1.3	0
114	Development and Application of Constant Flow Generating Injector with Pulse Energy Source as Driving Force. Journal of the Korean Society for Precision Engineering, 2019, 36, 497-503.	0.2	0