Hoi Dick Ng

List of Publications by Year
in descending order

102	3,060	109321	182427
papers	citations	35 h-index	51 g-index

106	106	106	715
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Transmission of a detonation wave across an inert layer. Combustion and Flame, 2022, 236, 111769.	5.2	14
2	Stabilization of one-dimensional pulsating detonation instability using initial density non-uniformity. AIP Conference Proceedings, 2022, , .	0.4	0
3	Design and Analysis: Servo-Tube-Powered Liquid Jet Injector for Drug Delivery Applications. Applied Sciences (Switzerland), 2022, 12, 6920.	2.5	2
4	Critical tube diameter for quasi-detonations. Combustion and Flame, 2022, 244, 112280.	5.2	6
5	Numerical simulation of deflagration-to-detonation transition via shockâ€“multiple flame kernels interactions. Computers and Mathematics With Applications, 2021, 83, 111-126.	2.7	7
6	Effects of inert gas jet on the transition from deflagration to detonation in a stoichiometric methane-oxygen mixture. Fuel, 2021, 285, 119237.	6.4	22
7	Investigation of near-limit detonation propagation in a tube with helical spiral. Fuel, 2021, 286, 119384.	6.4	5
8	Nonlinear dynamics and chaos regularization of one-dimensional pulsating detonations with small sinusoidal density perturbations. Proceedings of the Combustion Institute, 2021, 38, 3701-3708.	3.9	11
9	Velocity fluctuation and cellular structure of near-limit detonations in rough tubes. Fuel, 2021, 289, 119909.	6.4	6
10	Unsteady dynamics of wedge-induced oblique detonations under periodic inflows. Physics of Fluids, 2021, 33, .	4.0	16
11	Morphology of oblique detonation waves in a stoichiometric hydrogenâ€“air mixture. Journal of Fluid Mechanics, 2021, 913, .	3.4	33
12	Computational study of gaseous cellular detonation diffraction and re-initiation by small obstacle induced perturbations. Physics of Fluids, 2021, 33, .	4.0	11
13	Effects of slot injection on detonation wavelet characteristics in a rotating detonation engine. Acta Astronautica, 2021, 182, 274-285.	3.2	40
14	Response to â€œComment on â€˜A model for the trajectory of the transverse detonation resulting from re-initiation of a diffracted detonationâ€™ by Yuan et al.â€• Shock Waves, 2021, 31, 415-417.	1.9	1
15	Small-size rotating detonation engine: scaling and minimum mass flow rate. Shock Waves, 2021, 31, 665-674.	1.9	5
16	Numerical study of detonation wave propagation modes in annular channels. AIP Advances, 2021, 11, .	1.3	7
17	Near-field relaxation subsequent to the onset of oblique detonations with a two-step kinetic model. Physics of Fluids, 2021, 33, 096106.	4.0	12
18	A model for the trajectory of the transverse detonation resulting from re-initiation of a diffracted detonation. Shock Waves, 2020, 30, 13-27.	1.9	13

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19	Experimental study of detonation limits in methane-oxygen mixtures: Determining tube scale and initial pressure effects. Fuel, 2020, 259, 116220.	6.4	77
20	Numerical investigation of flow structures resulting from the interaction between an oblique detonation wave and an upper expansion corner. Journal of Fluid Mechanics, 2020, 903, .	3.4	30
21	Propagation of near-limit gaseous detonations in rough-walled tubes. Shock Waves, 2020, 30, 769-780.	1.9	4
22	Transitions between systems of satellite vortices in a rotating fluid. Physics of Fluids, 2020, 32, .	4.0	4
23	Pulsatile twin parallel jets through a flexible orifice with application to edge-to-edge mitral valve repair. Physics of Fluids, 2020, 32, 121702.	4.0	1
24	The effects of pre-ignition turbulence by gas jets on the explosion behavior of methane-oxygen mixtures. Fuel, 2020, 277, 118190.	6.4	27
25	Near-limit detonations of methaneâ€“oxygen mixtures in long narrow tubes. Shock Waves, 2020, 30, 713-719.	1.9	3
26	Numerical simulations of gaseous cellular detonation interaction with bluff-body obstacles. AIP Conference Proceedings, 2020, , .	0.4	0
27	A numerical study on the instability of oblique detonation waves with a two-step inductionâ€“reaction kinetic model. Proceedings of the Combustion Institute, 2019, 37, 3537-3544.	3.9	48
28	Numerical modelling of detonation initiation via shock interaction with multiple flame kernels. AIP Conference Proceedings, 2019, , .	0.4	0
29	Numerical study of wedge-induced oblique detonations in unsteady flow. Journal of Fluid Mechanics, 2019, 876, 264-287.	3.4	57
30	Controlled Release Using Gas Detonation in Needle-Free Liquid Jet Injections for Drug Delivery. Applied Sciences (Switzerland), 2019, 9, 2712.	2.5	5
31	Meso-resolved simulations of shock-to-detonation transition in nitromethane with air-filled cavities. Journal of Applied Physics, 2019, 125, .	2.5	18
32	Skeletons of patterned vortex cores. Journal of Visualization, 2019, 22, 857-865.	1.8	0
33	On the application of gas detonation-driven water jet for material surface treatment process. Manufacturing Letters, 2019, 21, 70-74.	2.2	7
34	Numerical study of cellular detonation wave reflection over a cylindrical concave wedge. Combustion and Flame, 2019, 202, 179-194.	5.2	18
35	The Effect of Chemical Reactivity on the Formation of Gaseous Oblique Detonation Waves. Aerospace, 2019, 6, 62.	2.2	9
36	Numerical investigation of oblique detonation structure in hydrogen-oxygen mixtures with Ar dilution. Fuel, 2019, 252, 496-503.	6.4	33

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37	Numerical investigation on the initiation of oblique detonation waves in stoichiometric acetyleneâ€“oxygen mixtures with high argon dilution. Combustion and Flame, 2019, 204, 391-396.	5.2	61
38	Rotating polygonal depression soliton clusters on the inner surface of a liquid ring. Physical Review E, 2019, 99, 023110.	2.1	3
39	The role of cellular instability on the critical tube diameter problem for unstable gaseous detonations. Proceedings of the Combustion Institute, 2019, 37, 3545-3553.	3.9	18
40	Modeling propellant fires radiant heat flux. Journal of Energetic Materials, 2019, 37, 110-124.	2.0	2
41	Computational methods for gas dynamics and compressible multiphase flows. Shock Waves, 2019, 29, 1-2.	1.9	3
42	Experimental investigation of near-limit gaseous detonations in small diameter spiral tubing. Proceedings of the Combustion Institute, 2019, 37, 3555-3563.	3.9	19
43	Effects of inflow Mach number on oblique detonation initiation with a two-step induction-reaction kinetic model. Combustion and Flame, 2018, 193, 246-256.	5.2	89
44	New experimental confirmation of Kelvinâ€™s equilibria. European Physical Journal Plus, 2018, 133, 1.	2.6	1
45	Effects of activation energy on the instability of oblique detonation surfaces with a one-step chemistry model. Physics of Fluids, 2018, 30, 106110.	4.0	39
46	Effect of spatial inhomogeneities on detonation propagation with yielding confinement. Shock Waves, 2018, 28, 993-1009.	1.9	24
47	Transmission of a detonation across a density interface. Shock Waves, 2018, 28, 967-979.	1.9	10
48	Transition Between Different Initiation Structures of Wedge-Induced Oblique Detonations. AIAA Journal, 2018, 56, 4016-4023.	2.6	22
49	Near-limit propagation of gaseous detonations in narrow annular channels. Shock Waves, 2017, 27, 199-207.	1.9	24
50	Flow visualization and numerical simulation of a two-dimensional fluid flow over a foil. Journal of Visualization, 2017, 20, 687-693.	1.8	3
51	Numerical study of inflow equivalence ratio inhomogeneity on oblique detonation formation in hydrogenâ€“air mixtures. Aerospace Science and Technology, 2017, 71, 256-263.	4.8	66
52	Initiation structure of oblique detonation waves behind conical shocks. Physics of Fluids, 2017, 29, .	4.0	38
53	Initiation characteristics of wedge-induced oblique detonation waves in a stoichiometric hydrogen-air mixture. Proceedings of the Combustion Institute, 2017, 36, 2735-2742.	3.9	89
54	Propagation of gaseous detonation waves in a spatially inhomogeneous reactive medium. Physical Review Fluids, 2017, 2, .	2.5	36

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55	An experimental investigation of detonation limits in hydrogenâ€“oxygenâ€“argon mixtures. International Journal of Hydrogen Energy, 2016, 41, 6076-6083.	7.1	68
56	An experimental investigation of the explosion characteristics of dimethyl ether-air mixtures. Energy, 2016, 107, 1-8.	8.8	52
57	CFD MODELING OF HIGH SPEED LIQUID JETS FROM AN AIR-POWERED NEEDLE-FREE INJECTION SYSTEM. Journal of Mechanics in Medicine and Biology, 2016, 16, 1650045.	0.7	16
58	Assessment of similarity relations using helium for prediction of hydrogen dispersion and safety in an enclosure. International Journal of Hydrogen Energy, 2016, 41, 15388-15398.	7.1	38
59	Numerical simulations of cellular detonation diffraction in a stable gaseous mixture. Propulsion and Power Research, 2016, 5, 177-183.	4.3	21
60	Numerical study of oblique detonation wave initiation in a stoichiometric hydrogen-air mixture. Physics of Fluids, 2015, 27, .	4.0	68
61	Experiments and Modeling of Air-Powered Needle-Free Liquid Injectors. Journal of Medical and Biological Engineering, 2015, 35, 685-695.	1.8	17
62	Evolution of cellular structures on oblique detonation surfaces. Combustion and Flame, 2015, 162, 470-477.	5.2	107
63	Experimental characterization of galloping detonations in unstable mixtures. Combustion and Flame, 2015, 162, 2405-2413.	5.2	43
64	Explosion behavior of methaneâ€“dimethyl ether/air mixtures. Fuel, 2015, 157, 56-63.	6.4	68
65	High resolution GPU-based flow simulation of the gaseous methane-oxygen detonation structure. Journal of Visualization, 2015, 18, 273-276.	1.8	13
66	Effects of porous walled tubes on detonation transmission into unconfined space. Proceedings of the Combustion Institute, 2015, 35, 1981-1987.	3.9	40
67	Detonation limits in rough walled tubes. Proceedings of the Combustion Institute, 2015, 35, 1989-1996.	3.9	39
68	Numerical study on unstable surfaces of oblique detonations. Journal of Fluid Mechanics, 2014, 744, 111-128.	3.4	104
69	Response of critical tube diameter phenomenon to small perturbations for gaseous detonations. Shock Waves, 2014, 24, 219-229.	1.9	22
70	On the dynamic detonation parameters in acetyleneâ€“oxygen mixtures with varying amount of argon dilution. Combustion and Flame, 2014, 161, 1390-1397.	5.2	55
71	Minimum tube diameters for steady propagation of gaseous detonations. Shock Waves, 2014, 24, 447-454.	1.9	46
72	Velocity fluctuation near the detonation limits. Combustion and Flame, 2014, 161, 2982-2990.	5.2	58

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73	A technique for promoting detonation transmission from a confined tube into larger area for pulse detonation engine applications. Propulsion and Power Research, 2014, 3, 9-14.	4.3	11
74	A note on relative equilibria in a rotating shallow water layer. Journal of Fluid Mechanics, 2013, 724, 695-703.	3.4	13
75	Near limit behavior of the detonation velocity. Proceedings of the Combustion Institute, 2013, 34, 1957-1963.	3.9	77
76	Measurement and relationship between critical tube diameter and critical energy for direct blast initiation of gaseous detonations. Journal of Loss Prevention in the Process Industries, 2013, 26, 1293-1299.	3.3	39
77	Detonation Instability. , 2012, , 107-212.		17
78	The critical tube diameter and critical energy for direct initiation of detonation in C2H2/N2O/Ar mixtures. Combustion and Flame, 2012, 159, 2944-2953.	5.2	48
79	Design analysis and comparison between standard and rotary porting systems for IC engine. International Journal of Automotive Technology, 2012, 13, 175-191.	1.4	8
80	Measurement and scaling analysis of critical energy for direct initiation of gaseous detonations. Shock Waves, 2012, 22, 275-279.	1.9	33
81	Measurement and chemical kinetic model predictions of detonation cell size in methanolâ€“oxygen mixtures. Shock Waves, 2012, 22, 173-178.	1.9	14
82	Measurement of effective blast energy for direct initiation of spherical gaseous detonations from high-voltage spark discharge. Shock Waves, 2012, 22, 1-7.	1.9	32
83	Applying nonlinear dynamic theory to one-dimensional pulsating detonations. Combustion Theory and Modelling, 2011, 15, 205-225.	1.9	10
84	A Simple Method for Initial Condensed-Phase Combustion Reactions Predictions. Applied Spectroscopy Reviews, 2011, 46, 132-139.	6.7	1
85	The growth of fractal dimension of an interface evolution from the interaction of a shock wave with a rectangular block of SF6. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 4158-4162.	3.3	14
86	Direct blast initiation of spherical gaseous detonations in highly argon diluted mixtures. Proceedings of the Combustion Institute, 2011, 33, 2265-2271.	3.9	73
87	Visualization of an imploding circular wave front and the formation of a central vertical jet. Journal of Visualization, 2011, 14, 19-22.	1.8	2
88	Numerical simulation and flow visualization using soap film of the self-organized vortex structure in the wake of an array of cylinders. Journal of Visualization, 2011, 14, 311-314.	1.8	1
89	Critical energy for direct initiation of spherical detonations in H2/N2O/Ar mixtures. International Journal of Hydrogen Energy, 2011, 36, 5707-5716.	7.1	70
90	Symmetrization of a polygonal hollow-core vortex through beat-wave resonance. Physical Review E, 2011, 83, 056319.	2.1	7

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91	Propagation of near-limit gaseous detonations in small diameter tubes. Shock Waves, 2010, 20, 499-508.	1.9	65
92	Detonation diffraction from an annular channel. Shock Waves, 2010, 20, 449-455.	1.9	20
93	Measurement of critical energy for direct initiation of spherical detonations in stoichiometric high-pressure H2â€“O2 mixtures. Combustion and Flame, 2010, 157, 1795-1799.	5.2	39
94	Numerical simulation of detonation structures using a thermodynamically consistent and fully conservative reactive flow model for multi-component computations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 2135-2153.	2.1	13
95	Measurement and chemical kinetic prediction of detonation sensitivity and cellular structure characteristics in dimethyl etherâ€“oxygen mixtures. Fuel, 2009, 88, 124-131.	6.4	45
96	Comments on explosion problems for hydrogen safety. Journal of Loss Prevention in the Process Industries, 2008, 21, 136-146.	3.3	109
97	Head-on Collision of a Detonation with a Planar Shock Wave. Shock Waves, 2006, 15, 341-352.	1.9	12
98	Numerical investigation of the instability for one-dimensional Chapmanâ€“Jouguet detonations with chain-branching kinetics. Combustion Theory and Modelling, 2005, 9, 385-401.	1.9	165
99	Direct initiation of detonation with a multi-step reaction scheme. Journal of Fluid Mechanics, 2003, 476, 179-211.	3.4	75
100	The effect of argon dilution on the stability of acetylene/oxygen detonations. Proceedings of the Combustion Institute, 2002, 29, 2825-2831.	3.9	69
101	Reconstructing shock front of unstable detonations based on multi-layer perceptron. Acta Mechanica Sinica/Lixue Xuebao, 0, , 1.	3.4	2
102	Direct initiation of detonation with a multi-step reaction scheme. , 0, .		1