

Hoi Dick Ng

List of Publications by Year in descending order

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102
papers

3,060
citations

109321

35
h-index

182427

51
g-index

106
all docs

106
docs citations

106
times ranked

715
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical investigation of the instability for one-dimensional Chapman-Jouguet detonations with chain-branching kinetics. <i>Combustion Theory and Modelling</i> , 2005, 9, 385-401.	1.9	165
2	Comments on explosion problems for hydrogen safety. <i>Journal of Loss Prevention in the Process Industries</i> , 2008, 21, 136-146.	3.3	109
3	Evolution of cellular structures on oblique detonation surfaces. <i>Combustion and Flame</i> , 2015, 162, 470-477.	5.2	107
4	Numerical study on unstable surfaces of oblique detonations. <i>Journal of Fluid Mechanics</i> , 2014, 744, 111-128.	3.4	104
5	Initiation characteristics of wedge-induced oblique detonation waves in a stoichiometric hydrogen-air mixture. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 2735-2742.	3.9	89
6	Effects of inflow Mach number on oblique detonation initiation with a two-step induction-reaction kinetic model. <i>Combustion and Flame</i> , 2018, 193, 246-256.	5.2	89
7	Near limit behavior of the detonation velocity. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 1957-1963.	3.9	77
8	Experimental study of detonation limits in methane-oxygen mixtures: Determining tube scale and initial pressure effects. <i>Fuel</i> , 2020, 259, 116220.	6.4	77
9	Direct initiation of detonation with a multi-step reaction scheme. <i>Journal of Fluid Mechanics</i> , 2003, 476, 179-211.	3.4	75
10	Direct blast initiation of spherical gaseous detonations in highly argon diluted mixtures. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 2265-2271.	3.9	73
11	Critical energy for direct initiation of spherical detonations in H ₂ /N ₂ O/Ar mixtures. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 5707-5716.	7.1	70
12	The effect of argon dilution on the stability of acetylene/oxygen detonations. <i>Proceedings of the Combustion Institute</i> , 2002, 29, 2825-2831.	3.9	69
13	Numerical study of oblique detonation wave initiation in a stoichiometric hydrogen-air mixture. <i>Physics of Fluids</i> , 2015, 27, .	4.0	68
14	Explosion behavior of methane-dimethyl ether/air mixtures. <i>Fuel</i> , 2015, 157, 56-63.	6.4	68
15	An experimental investigation of detonation limits in hydrogen-oxygen-argon mixtures. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 6076-6083.	7.1	68
16	Numerical study of inflow equivalence ratio inhomogeneity on oblique detonation formation in hydrogen-air mixtures. <i>Aerospace Science and Technology</i> , 2017, 71, 256-263.	4.8	66
17	Propagation of near-limit gaseous detonations in small diameter tubes. <i>Shock Waves</i> , 2010, 20, 499-508.	1.9	65
18	Numerical investigation on the initiation of oblique detonation waves in stoichiometric acetylene-oxygen mixtures with high argon dilution. <i>Combustion and Flame</i> , 2019, 204, 391-396.	5.2	61

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19	Velocity fluctuation near the detonation limits. <i>Combustion and Flame</i> , 2014, 161, 2982-2990.	5.2	58
20	Numerical study of wedge-induced oblique detonations in unsteady flow. <i>Journal of Fluid Mechanics</i> , 2019, 876, 264-287.	3.4	57
21	On the dynamic detonation parameters in acetylene-oxygen mixtures with varying amount of argon dilution. <i>Combustion and Flame</i> , 2014, 161, 1390-1397.	5.2	55
22	An experimental investigation of the explosion characteristics of dimethyl ether-air mixtures. <i>Energy</i> , 2016, 107, 1-8.	8.8	52
23	The critical tube diameter and critical energy for direct initiation of detonation in C ₂ H ₂ /N ₂ O/Ar mixtures. <i>Combustion and Flame</i> , 2012, 159, 2944-2953.	5.2	48
24	A numerical study on the instability of oblique detonation waves with a two-step induction reaction kinetic model. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 3537-3544.	3.9	48
25	Minimum tube diameters for steady propagation of gaseous detonations. <i>Shock Waves</i> , 2014, 24, 447-454.	1.9	46
26	Measurement and chemical kinetic prediction of detonation sensitivity and cellular structure characteristics in dimethyl ether-oxygen mixtures. <i>Fuel</i> , 2009, 88, 124-131.	6.4	45
27	Experimental characterization of galloping detonations in unstable mixtures. <i>Combustion and Flame</i> , 2015, 162, 2405-2413.	5.2	43
28	Effects of porous walled tubes on detonation transmission into unconfined space. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 1981-1987.	3.9	40
29	Effects of slot injection on detonation wavelet characteristics in a rotating detonation engine. <i>Acta Astronautica</i> , 2021, 182, 274-285.	3.2	40
30	Measurement of critical energy for direct initiation of spherical detonations in stoichiometric high-pressure H ₂ -O ₂ mixtures. <i>Combustion and Flame</i> , 2010, 157, 1795-1799.	5.2	39
31	Measurement and relationship between critical tube diameter and critical energy for direct blast initiation of gaseous detonations. <i>Journal of Loss Prevention in the Process Industries</i> , 2013, 26, 1293-1299.	3.3	39
32	Detonation limits in rough walled tubes. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 1989-1996.	3.9	39
33	Effects of activation energy on the instability of oblique detonation surfaces with a one-step chemistry model. <i>Physics of Fluids</i> , 2018, 30, 106110.	4.0	39
34	Assessment of similarity relations using helium for prediction of hydrogen dispersion and safety in an enclosure. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 15388-15398.	7.1	38
35	Initiation structure of oblique detonation waves behind conical shocks. <i>Physics of Fluids</i> , 2017, 29, .	4.0	38
36	Propagation of gaseous detonation waves in a spatially inhomogeneous reactive medium. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	36

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37	Measurement and scaling analysis of critical energy for direct initiation of gaseous detonations. <i>Shock Waves</i> , 2012, 22, 275-279.	1.9	33
38	Numerical investigation of oblique detonation structure in hydrogen-oxygen mixtures with Ar dilution. <i>Fuel</i> , 2019, 252, 496-503.	6.4	33
39	Morphology of oblique detonation waves in a stoichiometric hydrogen-air mixture. <i>Journal of Fluid Mechanics</i> , 2021, 913, .	3.4	33
40	Measurement of effective blast energy for direct initiation of spherical gaseous detonations from high-voltage spark discharge. <i>Shock Waves</i> , 2012, 22, 1-7.	1.9	32
41	Numerical investigation of flow structures resulting from the interaction between an oblique detonation wave and an upper expansion corner. <i>Journal of Fluid Mechanics</i> , 2020, 903, .	3.4	30
42	The effects of pre-ignition turbulence by gas jets on the explosion behavior of methane-oxygen mixtures. <i>Fuel</i> , 2020, 277, 118190.	6.4	27
43	Near-limit propagation of gaseous detonations in narrow annular channels. <i>Shock Waves</i> , 2017, 27, 199-207.	1.9	24
44	Effect of spatial inhomogeneities on detonation propagation with yielding confinement. <i>Shock Waves</i> , 2018, 28, 993-1009.	1.9	24
45	Response of critical tube diameter phenomenon to small perturbations for gaseous detonations. <i>Shock Waves</i> , 2014, 24, 219-229.	1.9	22
46	Transition Between Different Initiation Structures of Wedge-Induced Oblique Detonations. <i>AIAA Journal</i> , 2018, 56, 4016-4023.	2.6	22
47	Effects of inert gas jet on the transition from deflagration to detonation in a stoichiometric methane-oxygen mixture. <i>Fuel</i> , 2021, 285, 119237.	6.4	22
48	Numerical simulations of cellular detonation diffraction in a stable gaseous mixture. <i>Propulsion and Power Research</i> , 2016, 5, 177-183.	4.3	21
49	Detonation diffraction from an annular channel. <i>Shock Waves</i> , 2010, 20, 449-455.	1.9	20
50	Experimental investigation of near-limit gaseous detonations in small diameter spiral tubing. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 3555-3563.	3.9	19
51	Meso-resolved simulations of shock-to-detonation transition in nitromethane with air-filled cavities. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	18
52	Numerical study of cellular detonation wave reflection over a cylindrical concave wedge. <i>Combustion and Flame</i> , 2019, 202, 179-194.	5.2	18
53	The role of cellular instability on the critical tube diameter problem for unstable gaseous detonations. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 3545-3553.	3.9	18
54	Detonation Instability. , 2012, , 107-212.		17

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55	Experiments and Modeling of Air-Powered Needle-Free Liquid Injectors. <i>Journal of Medical and Biological Engineering</i> , 2015, 35, 685-695.	1.8	17
56	CFD MODELING OF HIGH SPEED LIQUID JETS FROM AN AIR-POWERED NEEDLE-FREE INJECTION SYSTEM. <i>Journal of Mechanics in Medicine and Biology</i> , 2016, 16, 1650045.	0.7	16
57	Unsteady dynamics of wedge-induced oblique detonations under periodic inflows. <i>Physics of Fluids</i> , 2021, 33, .	4.0	16
58	The growth of fractal dimension of an interface evolution from the interaction of a shock wave with a rectangular block of SF6. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2011, 16, 4158-4162.	3.3	14
59	Measurement and chemical kinetic model predictions of detonation cell size in methanol-oxygen mixtures. <i>Shock Waves</i> , 2012, 22, 173-178.	1.9	14
60	Transmission of a detonation wave across an inert layer. <i>Combustion and Flame</i> , 2022, 236, 111769.	5.2	14
61	Numerical simulation of detonation structures using a thermodynamically consistent and fully conservative reactive flow model for multi-component computations. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2009, 465, 2135-2153.	2.1	13
62	A note on relative equilibria in a rotating shallow water layer. <i>Journal of Fluid Mechanics</i> , 2013, 724, 695-703.	3.4	13
63	High resolution GPU-based flow simulation of the gaseous methane-oxygen detonation structure. <i>Journal of Visualization</i> , 2015, 18, 273-276.	1.8	13
64	A model for the trajectory of the transverse detonation resulting from re-initiation of a diffracted detonation. <i>Shock Waves</i> , 2020, 30, 13-27.	1.9	13
65	Head-on Collision of a Detonation with a Planar Shock Wave. <i>Shock Waves</i> , 2006, 15, 341-352.	1.9	12
66	Near-field relaxation subsequent to the onset of oblique detonations with a two-step kinetic model. <i>Physics of Fluids</i> , 2021, 33, 096106.	4.0	12
67	A technique for promoting detonation transmission from a confined tube into larger area for pulse detonation engine applications. <i>Propulsion and Power Research</i> , 2014, 3, 9-14.	4.3	11
68	Nonlinear dynamics and chaos regularization of one-dimensional pulsating detonations with small sinusoidal density perturbations. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 3701-3708.	3.9	11
69	Computational study of gaseous cellular detonation diffraction and re-initiation by small obstacle induced perturbations. <i>Physics of Fluids</i> , 2021, 33, .	4.0	11
70	Applying nonlinear dynamic theory to one-dimensional pulsating detonations. <i>Combustion Theory and Modelling</i> , 2011, 15, 205-225.	1.9	10
71	Transmission of a detonation across a density interface. <i>Shock Waves</i> , 2018, 28, 967-979.	1.9	10
72	The Effect of Chemical Reactivity on the Formation of Gaseous Oblique Detonation Waves. <i>Aerospace</i> , 2019, 6, 62.	2.2	9

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73	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
74	Symmetrization of a polygonal hollow-core vortex through beat-wave resonance. Physical Review E, 2011, 83, 056319.	2.1	7
75	On the application of gas detonation-driven water jet for material surface treatment process. Manufacturing Letters, 2019, 21, 70-74.	2.2	7
76	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
77	Numerical study of detonation wave propagation modes in annular channels. AIP Advances, 2021, 11, .	1.3	7
78	Velocity fluctuation and cellular structure of near-limit detonations in rough tubes. Fuel, 2021, 289, 119909.	6.4	6
79	Critical tube diameter for quasi-detonations. Combustion and Flame, 2022, 244, 112280.	5.2	6
80	Controlled Release Using Gas Detonation in Needle-Free Liquid Jet Injections for Drug Delivery. Applied Sciences (Switzerland), 2019, 9, 2712.	2.5	5
81	Investigation of near-limit detonation propagation in a tube with helical spiral. Fuel, 2021, 286, 119384.	6.4	5
82	Small-size rotating detonation engine: scaling and minimum mass flow rate. Shock Waves, 2021, 31, 665-674.	1.9	5
83	Propagation of near-limit gaseous detonations in rough-walled tubes. Shock Waves, 2020, 30, 769-780.	1.9	4
84	Transitions between systems of satellite vortices in a rotating fluid. Physics of Fluids, 2020, 32, .	4.0	4
85	Flow visualization and numerical simulation of a two-dimensional fluid flow over a foil. Journal of Visualization, 2017, 20, 687-693.	1.8	3
86	Rotating polygonal depression soliton clusters on the inner surface of a liquid ring. Physical Review E, 2019, 99, 023110.	2.1	3
87	Computational methods for gas dynamics and compressible multiphase flows. Shock Waves, 2019, 29, 1-2.	1.9	3
88	Near-limit detonations of methaneâ€“oxygen mixtures in long narrow tubes. Shock Waves, 2020, 30, 713-719.	1.9	3
89	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
90	Modeling propellant fires radiant heat flux. Journal of Energetic Materials, 2019, 37, 110-124.	2.0	2

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91	Reconstructing shock front of unstable detonations based on multi-layer perceptron. Acta Mechanica Sinica/Lixue Xuebao, 0, , 1.	3.4	2
92	Design and Analysis: Servo-Tube-Powered Liquid Jet Injector for Drug Delivery Applications. Applied Sciences (Switzerland), 2022, 12, 6920.	2.5	2
93	A Simple Method for Initial Condensed-Phase Combustion Reactions Predictions. Applied Spectroscopy Reviews, 2011, 46, 132-139.	6.7	1
94	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
95	New experimental confirmation of Kelvinâ€™s equilibria. European Physical Journal Plus, 2018, 133, 1.	2.6	1
96	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
97	Response to "Comment on "A model for the trajectory of the transverse detonation resulting from re-initiation of a diffracted detonation" by Yuan et al." Shock Waves, 2021, 31, 415-417.	1.9	1
98	Direct initiation of detonation with a multi-step reaction scheme. , 0, .		1
99	Numerical modelling of detonation initiation via shock interaction with multiple flame kernels. AIP Conference Proceedings, 2019, , .	0.4	0
100	Skeletons of patterned vortex cores. Journal of Visualization, 2019, 22, 857-865.	1.8	0
101	Numerical simulations of gaseous cellular detonation interaction with bluff-body obstacles. AIP Conference Proceedings, 2020, , .	0.4	0
102	Stabilization of one-dimensional pulsating detonation instability using initial density non-uniformity. AIP Conference Proceedings, 2022, , .	0.4	0