# Hoi Dick Ng

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 102 papers | 3,060 citations | 109137 35 h-index | 182168 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 Chapmanâ€"Jouguet detonations with chain-branching kinetics. Combustion Theory and Modelling, 2005, 9, 385-401. | 1.0 | 165 |
| 2 | Comments on explosion problems for hydrogen safety. Journal of Loss Prevention in the Process Industries, 2008, 21, 136-146. | 1.7 | 109 |
| 3 | Evolution of cellular structures on oblique detonation surfaces. Combustion and Flame, 2015, 162, 470-477. | 2.8 | 107 |
| 4 | Numerical study on unstable surfaces of oblique detonations. Journal of Fluid Mechanics, 2014, 744, 111-128. | 1.4 | 104 |
| 5 | Initiation characteristics of wedge-induced oblique detonation waves in a stoichiometric hydrogen-air mixture. Proceedings of the Combustion Institute, 2017, 36, 2735-2742. | 2.4 | 89 |
| 6 | Effects of inflow Mach number on oblique detonation initiation with a two-step induction-reaction kinetic model. Combustion and Flame, 2018, 193, 246-256. | 2.8 | 89 |
| 7 | Near limit behavior of the detonation velocity. Proceedings of the Combustion Institute, 2013, 34, 1957-1963. | 2.4 | 77 |
| 8 | Experimental study of detonation limits in methane-oxygen mixtures: Determining tube scale and initial pressure effects. Fuel, 2020, 259, 116220. | 3.4 | 77 |
| 9 | Direct initiation of detonation with a multi-step reaction scheme. Journal of Fluid Mechanics, 2003, 476, 179-211. | 1.4 | 75 |
| 10 | Direct blast initiation of spherical gaseous detonations in highly argon diluted mixtures. Proceedings of the Combustion Institute, 2011, 33, 2265-2271. | 2.4 | 73 |
| 11 | Critical energy for direct initiation of spherical detonations in H2/N2O/Ar mixtures. International Journal of Hydrogen Energy, 2011, 36, 5707-5716. | 3.8 | 70 |
| 12 | The effect of argon dilution on the stability of acetylene/oxygen detonations. Proceedings of the Combustion Institute, 2002, 29, 2825-2831. | 2.4 | 69 |
| 13 | Numerical study of oblique detonation wave initiation in a stoichiometric hydrogen-air mixture. Physics of Fluids, 2015, 27, . | 1.6 | 68 |
| 14 | Explosion behavior of methaneâ€"dimethyl ether/air mixtures. Fuel, 2015, 157, 56-63. | 3.4 | 68 |
| 15 | An experimental investigation of detonation limits in hydrogenâ€"oxygenâ€"argon mixtures. International Journal of Hydrogen Energy, 2016, 41, 6076-6083. | 3.8 | 68 |
| 16 | Numerical study of inflow equivalence ratio inhomogeneity on oblique detonation formation in hydrogenâ€"air mixtures. Aerospace Science and Technology, 2017, 71, 256-263. | 2.5 | 66 |
| 17 | Propagation of near-limit gaseous detonations in small diameter tubes. Shock Waves, 2010, 20, 499-508. | 1.0 | 65 |
| 18 | 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. | 2.8 | 61 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Velocity fluctuation near the detonation limits. Combustion and Flame, 2014, 161, 2982-2990. | 2.8 | 58 |
| 20 | Numerical study of wedge-induced oblique detonations in unsteady flow. Journal of Fluid Mechanics, 2019, 876, 264-287. | 1.4 | 57 |
| 21 | On the dynamic detonation parameters in acetyleneâ€“oxygen mixtures with varying amount of argon dilution. Combustion and Flame, 2014, 161, 1390-1397. | 2.8 | 55 |
| 22 | An experimental investigation of the explosion characteristics of dimethyl ether-air mixtures. Energy, 2016, 107, 1-8. | 4.5 | 52 |
| 23 | The critical tube diameter and critical energy for direct initiation of detonation in C2H2/N2O/Ar mixtures. Combustion and Flame, 2012, 159, 2944-2953. | 2.8 | 48 |
| 24 | 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. | 2.4 | 48 |
| 25 | Minimum tube diameters for steady propagation of gaseous detonations. Shock Waves, 2014, 24, 447-454. | 1.0 | 46 |
| 26 | Measurement and chemical kinetic prediction of detonation sensitivity and cellular structure characteristics in dimethyl etherâ€“oxygen mixtures. Fuel, 2009, 88, 124-131. | 3.4 | 45 |
| 27 | Experimental characterization of galloping detonations in unstable mixtures. Combustion and Flame, 2015, 162, 2405-2413. | 2.8 | 43 |
| 28 | Effects of porous walled tubes on detonation transmission into unconfined space. Proceedings of the Combustion Institute, 2015, 35, 1981-1987. | 2.4 | 40 |
| 29 | Effects of slot injection on detonation wavelet characteristics in a rotating detonation engine. Acta Astronautica, 2021, 182, 274-285. | 1.7 | 40 |
| 30 | Measurement of critical energy for direct initiation of spherical detonations in stoichiometric high-pressure H2â€“O2 mixtures. Combustion and Flame, 2010, 157, 1795-1799. | 2.8 | 39 |
| 31 | 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. | 1.7 | 39 |
| 32 | Detonation limits in rough walled tubes. Proceedings of the Combustion Institute, 2015, 35, 1989-1996. | 2.4 | 39 |
| 33 | Effects of activation energy on the instability of oblique detonation surfaces with a one-step chemistry model. Physics of Fluids, 2018, 30, 106110. | 1.6 | 39 |
| 34 | 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. | 3.8 | 38 |
| 35 | Initiation structure of oblique detonation waves behind conical shocks. Physics of Fluids, 2017, 29, . | 1.6 | 38 |
| 36 | Propagation of gaseous detonation waves in a spatially inhomogeneous reactive medium. Physical Review Fluids, 2017, 2, . | 1.0 | 36 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Measurement and scaling analysis of critical energy for direct initiation of gaseous detonations. Shock Waves, 2012, 22, 275-279. | 1.0 | 33 |
| 38 | Numerical investigation of oblique detonation structure in hydrogen-oxygen mixtures with Ar dilution. Fuel, 2019, 252, 496-503. | 3.4 | 33 |
| 39 | Morphology of oblique detonation waves in a stoichiometric hydrogenâ€"air mixture. Journal of Fluid Mechanics, 2021, 913, . | 1.4 | 33 |
| 40 | Measurement of effective blast energy for direct initiation of spherical gaseous detonations from high-voltage spark discharge. Shock Waves, 2012, 22, 1-7. | 1.0 | 32 |
| 41 | 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, . | 1.4 | 30 |
| 42 | The effects of pre-ignition turbulence by gas jets on the explosion behavior of methane-oxygen mixtures. Fuel, 2020, 277, 118190. | 3.4 | 27 |
| 43 | Near-limit propagation of gaseous detonations in narrow annular channels. Shock Waves, 2017, 27, 199-207. | 1.0 | 24 |
| 44 | Effect of spatial inhomogeneities on detonation propagation with yielding confinement. Shock Waves, 2018, 28, 993-1009. | 1.0 | 24 |
| 45 | Response of critical tube diameter phenomenon to small perturbations for gaseous detonations. Shock Waves, 2014, 24, 219-229. | 1.0 | 22 |
| 46 | Transition Between Different Initiation Structures of Wedge-Induced Oblique Detonations. AIAA Journal, 2018, 56, 4016-4023. | 1.5 | 22 |
| 47 | Effects of inert gas jet on the transition from deflagration to detonation in a stoichiometric methane-oxygen mixture. Fuel, 2021, 285, 119237. | 3.4 | 22 |
| 48 | Numerical simulations of cellular detonation diffraction in a stable gaseous mixture. Propulsion and Power Research, 2016, 5, 177-183. | 2.0 | 21 |
| 49 | Detonation diffraction from an annular channel. Shock Waves, 2010, 20, 449-455. | 1.0 | 20 |
| 50 | Experimental investigation of near-limit gaseous detonations in small diameter spiral tubing. Proceedings of the Combustion Institute, 2019, 37, 3555-3563. | 2.4 | 19 |
| 51 | Meso-resolved simulations of shock-to-detonation transition in nitromethane with air-filled cavities. Journal of Applied Physics, 2019, 125, . | 1.1 | 18 |
| 52 | Numerical study of cellular detonation wave reflection over a cylindrical concave wedge. Combustion and Flame, 2019, 202, 179-194. | 2.8 | 18 |
| 53 | The role of cellular instability on the critical tube diameter problem for unstable gaseous detonations. Proceedings of the Combustion Institute, 2019, 37, 3545-3553. | 2.4 | 18 |
| 54 | Detonation Instability. , 2012, , 107-212. | | 17 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Experiments and Modeling of Air-Powered Needle-Free Liquid Injectors. Journal of Medical and Biological Engineering, 2015, 35, 685-695. | 1.0 | 17 |
| 56 | 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. | 0.3 | 16 |
| 57 | Unsteady dynamics of wedge-induced oblique detonations under periodic inflows. Physics of Fluids, 2021, 33, . | 1.6 | 16 |
| 58 | 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. | 1.7 | 14 |
| 59 | Measurement and chemical kinetic model predictions of detonation cell size in methanolâ€“oxygen mixtures. Shock Waves, 2012, 22, 173-178. | 1.0 | 14 |
| 60 | Transmission of a detonation wave across an inert layer. Combustion and Flame, 2022, 236, 111769. | 2.8 | 14 |
| 61 | 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. | 1.0 | 13 |
| 62 | A note on relative equilibria in a rotating shallow water layer. Journal of Fluid Mechanics, 2013, 724, 695-703. | 1.4 | 13 |
| 63 | High resolution GPU-based flow simulation of the gaseous methane-oxygen detonation structure. Journal of Visualization, 2015, 18, 273-276. | 1.1 | 13 |
| 64 | A model for the trajectory of the transverse detonation resulting from re-initiation of a diffracted detonation. Shock Waves, 2020, 30, 13-27. | 1.0 | 13 |
| 65 | Head-on Collision of a Detonation with a Planar Shock Wave. Shock Waves, 2006, 15, 341-352. | 1.0 | 12 |
| 66 | Near-field relaxation subsequent to the onset of oblique detonations with a two-step kinetic model. Physics of Fluids, 2021, 33, 096106. | 1.6 | 12 |
| 67 | 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. | 2.0 | 11 |
| 68 | Nonlinear dynamics and chaos regularization of one-dimensional pulsating detonations with small sinusoidal density perturbations. Proceedings of the Combustion Institute, 2021, 38, 3701-3708. | 2.4 | 11 |
| 69 | Computational study of gaseous cellular detonation diffraction and re-initiation by small obstacle induced perturbations. Physics of Fluids, 2021, 33, . | 1.6 | 11 |
| 70 | Applying nonlinear dynamic theory to one-dimensional pulsating detonations. Combustion Theory and Modelling, 2011, 15, 205-225. | 1.0 | 10 |
| 71 | Transmission of a detonation across a density interface. Shock Waves, 2018, 28, 967-979. | 1.0 | 10 |
| 72 | The Effect of Chemical Reactivity on the Formation of Gaseous Oblique Detonation Waves. Aerospace, 2019, 6, 62. | 1.1 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Design analysis and comparison between standard and rotary porting systems for IC engine. International Journal of Automotive Technology, 2012, 13, 175-191. | 0.7 | 8 |
| 74 | Symmetrization of a polygonal hollow-core vortex through beat-wave resonance. Physical Review E, 2011, 83, 056319. | 0.8 | 7 |
| 75 | On the application of gas detonation-driven water jet for material surface treatment process. Manufacturing Letters, 2019, 21, 70-74. | 1.1 | 7 |
| 76 | Numerical simulation of deflagration-to-detonation transition via shockâ€“multiple flame kernels interactions. Computers and Mathematics With Applications, 2021, 83, 111-126. | 1.4 | 7 |
| 77 | Numerical study of detonation wave propagation modes in annular channels. AIP Advances, 2021, 11, . | 0.6 | 7 |
| 78 | Velocity fluctuation and cellular structure of near-limit detonations in rough tubes. Fuel, 2021, 289, 119909. | 3.4 | 6 |
| 79 | Critical tube diameter for quasi-detonations. Combustion and Flame, 2022, 244, 112280. | 2.8 | 6 |
| 80 | Controlled Release Using Gas Detonation in Needle-Free Liquid Jet Injections for Drug Delivery. Applied Sciences (Switzerland), 2019, 9, 2712. | 1.3 | 5 |
| 81 | Investigation of near-limit detonation propagation in a tube with helical spiral. Fuel, 2021, 286, 119384. | 3.4 | 5 |
| 82 | Small-size rotating detonation engine: scaling and minimum mass flow rate. Shock Waves, 2021, 31, 665-674. | 1.0 | 5 |
| 83 | Propagation of near-limit gaseous detonations in rough-walled tubes. Shock Waves, 2020, 30, 769-780. | 1.0 | 4 |
| 84 | Transitions between systems of satellite vortices in a rotating fluid. Physics of Fluids, 2020, 32, . | 1.6 | 4 |
| 85 | Flow visualization and numerical simulation of a two-dimensional fluid flow over a foil. Journal of Visualization, 2017, 20, 687-693. | 1.1 | 3 |
| 86 | Rotating polygonal depression soliton clusters on the inner surface of a liquid ring. Physical Review E, 2019, 99, 023110. | 0.8 | 3 |
| 87 | Computational methods for gas dynamics and compressible multiphase flows. Shock Waves, 2019, 29, 1-2. | 1.0 | 3 |
| 88 | Near-limit detonations of methaneâ€“oxygen mixtures in long narrow tubes. Shock Waves, 2020, 30, 713-719. | 1.0 | 3 |
| 89 | Visualization of an imploding circular wave front and the formation of a central vertical jet. Journal of Visualization, 2011, 14, 19-22. | 1.1 | 2 |
| 90 | Modeling propellant fires radiant heat flux. Journal of Energetic Materials, 2019, 37, 110-124. | 1.0 | 2 |

| # | Article | IF | Citations |
| --- | --- | --- | --- |
| 91 | Reconstructing shock front of unstable detonations based on multi-layer perceptron. Acta Mechanica Sinica/Lixue Xuebao, 0, , 1. | 1.5 | 2 |
| 92 | Design and Analysis: Servo-Tube-Powered Liquid Jet Injector for Drug Delivery Applications. Applied Sciences (Switzerland), 2022, 12, 6920. | 1.3 | 2 |
| 93 | A Simple Method for Initial Condensed-Phase Combustion Reactions Predictions. Applied Spectroscopy Reviews, 2011, 46, 132-139. | 3.4 | 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. | 1.1 | 1 |
| 95 | New experimental confirmation of Kelvinâ€™s equilibria. European Physical Journal Plus, 2018, 133, 1. | 1.2 | 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. | 1.6 | 1 |
| 97 | 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. | 1.0 | 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, , . | 0.3 | 0 |
| 100 | Skeletons of patterned vortex cores. Journal of Visualization, 2019, 22, 857-865. | 1.1 | 0 |
| 101 | Numerical simulations of gaseous cellular detonation interaction with bluff-body obstacles. AIP Conference Proceedings, 2020, , . | 0.3 | 0 |
| 102 | Stabilization of one-dimensional pulsating detonation instability using initial density non-uniformity. AIP Conference Proceedings, 2022, , . | 0.3 | 0 |