Jyh-Yuan Chen

List of Publications by Year
in descending order

94 papers	4,542 citations	126708 33 h-index	110170 64 g-index
94 all docs	94 docs citations	94 times ranked	2461 citing authors

#	Article	IF	Citations
1	Engine efficiency enhancement and operation range extension by argon power cycle using natural gas. Applied Energy, 2021, 281, 116109.	5.1	15
2	Reduced reaction mechanism for natural gas combustion in novel power cycles. Combustion and Flame, 2021, 223, 486-494.	2.8	16
3	Propulsive effect of microwave-induced plasma jet on spark ignition of CO2-diluted CH4-air mixture. Combustion and Flame, 2021, 229, 111400.	2.8	12
4	Effect of Microwave Pulses on the Morphology and Development of Spark-Ignited Flame Kernel. Energies, 2021, 14, 6205.	1.6	3
5	Modes of Detonation Wave Propagation in Water Vapor Concentration Gradients. Combustion Science and Technology, 2020, 192, 1910-1930.	1.2	7
6	A Parametric Study of LEM3D Based on Comparison with a Turbulent Lifted Hydrogen Jet Flame in a Vitiated Co-Flow. Combustion Science and Technology, 2020, 192, 610-637.	1.2	1
7	Strengthening effect of microwave on spark ignited spherical expanding flames of methane-air mixture. Energy Conversion and Management, 2020, 224, 113368.	4.4	10
8	Experimental study of microwave assisted spark ignition on expanding C2H2-Air spherical flames. Combustion and Flame, 2020, 222, 111-122.	2.8	15
9	H Radical Sensitivity-Assisted Automatic Chemical Kinetic Model Reduction for Laminar Flame Chemistry Retaining: A Case Study of Gasolineâ€“DME Mixture under Engine Conditions. Energy & Fuels, 2019, 33, 3551-3556.	2.5	16
10	A hybrid flamelet finite-rate chemistry approach for efficient LES with a transported FDF. Combustion and Flame, 2019, 199, 183-193.	2.8	13
11	Towards improved automatic chemical kinetic model reduction regarding ignition delays and flame speeds. Combustion and Flame, 2018, 190, 293-301.	2.8	35
12	Investigation of the Down-Scaling Effects on the Low Swirl Burner and its Application to Microturbines. , 2018, , .		2
13	Accelerating simulations using REDCHEM_v0.0 for atmospheric chemistry mechanism reduction. Geoscientific Model Development, 2018, 11, 3391-3407.	1.3	4
14	Analysis of the currentâ€“voltage curves and saturation currents in burner-stabilised premixed flames with detailed ion chemistry and transport models. Combustion Theory and Modelling, 2018, 22, 939-972.	1.0	15
15	Three-dimensional Linear Eddy Modeling of a Turbulent Lifted Hydrogen Jet Flame in a Vitiated Co-flow. Flow, Turbulence and Combustion, 2018, 101, 993-1007.	1.4	2
16	Effects of water content on evaporation and combustion characteristics of water emulsified diesel spray. Applied Energy, 2018, 226, 397-407.	5.1	62
17	Experimental and Numerical Investigation of the Argon Power Cycle. , 2018, , .		3
18	Simulations of planar non-thermal plasma assisted ignition at atmospheric pressure. Proceedings of the Combustion Institute, 2017, 36, 4155-4163.	2.4	15

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19	Modes of reaction front propagation and end-gas combustion of hydrogen/air mixtures in a closed chamber. International Journal of Hydrogen Energy, 2017, 42, 10501-10512.	3.8	17
20	Development of a reduced chemical mechanism targeted for a 5-component gasoline surrogate: A case study on the heat release nature in a GCI engine. Combustion and Flame, 2017, 178, 268-276.	2.8	41
21	The Role of Hydrodynamic Enhancement on Ignition of Lean Methane-Air Mixtures by Pulsed Nanosecond Discharges for Automotive Engine Applications. Combustion Science and Technology, 2017, 189, 2023-2037.	1.2	4
22	Improved skeletal reduction on multiple gasoline-ethanol surrogates using a Jacobian-aided DRGEP approach under gasoline compression ignition (GCI) engine conditions. Fuel, 2017, 210, 617-624.	3.4	15
23	Ab initio calculation and kinetic modeling study of diethyl ether ignition with application toward a skeletal mechanism for CI engine modeling. Fuel, 2017, 209, 509-520.	3.4	35
24	Numerical analysis and model development for laminar flame speed of stratified methane/air mixtures. Combustion and Flame, 2017, 184, 233-245.	2.8	12
25	Laminar flame speeds of stratified methane, propane, and n-heptane flames. Combustion and Flame, 2017, 176, 38-47.	2.8	35
26	The iâˆ'V curve characteristics of burner-stabilized premixed flames: detailed and reduced models. Proceedings of the Combustion Institute, 2017, 36, 1241-1250.	2.4	22
27	Code-Validation Scalar Measurements in High-Pressure Hydrogen-Added Methane Combustion. Journal of Propulsion and Power, 2017, 33, 285-304.	1.3	5
28	Experimental and numerical investigation of ion signals in boosted HCCI combustion using cesium and potassium acetate additives. Energy Conversion and Management, 2016, 108, 181-189.	4.4	14
29	Cyclic variations and prior-cycle effects of ion current sensing in an HCCI engine: A time-series analysis. Applied Energy, 2016, 168, 628-635.	5.1	32
30	Application of Jacobian defined direct interaction coefficient in DRGEP-based chemical mechanism reduction methods using different graph search algorithms. Combustion and Flame, 2016, 174, 77-84.	2.8	37
31	Modeling plasma-assisted methaneâ€"air ignition using pre-calculated electron impact reaction rates. Combustion and Flame, 2016, 172, 38-48.	2.8	34
32	Numerical study of laminar flame speed of fuel-stratified hydrogen/air flames. Combustion and Flame, 2016, 163, 394-405.	2.8	37
33	Modeling hydrogen inhibition in gasification surface reactions. International Journal of Hydrogen Energy, 2015, 40, 6059-6071.	3.8	6
34	Computational study of the pressure dependence of sequential auto-ignition for partial fuel stratification with gasoline. Proceedings of the Combustion Institute, 2015, 35, 2993-3000.	2.4	22
35	Nanosecond Pulsed Discharge Ignition in a Lean Methane-Air Mixture. , 2015, , .		6
36	Intermediate temperature heat release in an HCCI engine fueled by ethanol/n-heptane mixtures: An experimental and modeling study. Combustion and Flame, 2014, 161, 680-695.	2.8	83

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37	Evaluation of a reduced mechanism for turbulent premixed combustion. Combustion and Flame, 2014, 161, 3085-3099.	2.8	19
38	COMPUTATIONAL STUDY OF PARTIAL FUEL STRATIFICATION FOR HCCI ENGINES USING GASOLINE SURROGATE REDUCED MECHANISM. Combustion Science and Technology, 2014, 186, 332-354.	1.2	18
39	Experiments and Computational Fluid Dynamics Modeling Analysis of Large n-Alkane Ignition Kinetics in the Ignition Quality Tester. Energy & Fuels, 2014, 28, 4781-4794.	2.5	35
40	Enhancement of flame development by microwave-assisted spark ignition in constant volume combustion chamber. Combustion and Flame, 2013, 160, 1225-1234.	2.8	129
41	A 5-step reduced mechanism for combustion of CO/H2/H2O/CH4/CO2 mixtures with low hydrogen/methane and high H2O content. Combustion and Flame, 2013, 160, 56-75.	2.8	56
42	HCCI Intelligent Rapid Modeling by Artificial Neural Network and Genetic Algorithm. Journal of Combustion, 2012, 2012, 1-11.	0.5	2
43	Extending Lean Operating Limit and Reducing Emissions of Methane Spark-Ignited Engines Using a Microwave-Assisted Spark Plug. Journal of Combustion, 2012, 2012, 1-8.	0.5	24
44	Experimental Study of Methane Fuel Oxycombustion in an SI Engine. , 2012, , .		2
45	Raman/Rayleigh scattering and CO-LIF measurements in laminar and turbulent jet flames of dimethyl ether. Combustion and Flame, 2012, 159, 2533-2562.	2.8	69
46	Numerical and Experimental Investigation of n-Heptane Autoignition in the Ignition Quality Tester (IQT). Energy & Fuels, 2011, 25, 5562-5572.	2.5	61
47	An Approach for Formulating Surrogates for Gasoline with Application toward a Reduced Surrogate Mechanism for CFD Engine Modeling. Energy & Fuels, 2011, 25, 5215-5223.	2.5	252
48	The effects of intake pressure, fuel concentration, and bias voltage on the detection of ions in a Homogeneous Charge Compression Ignition (HCCI) engine. Proceedings of the Combustion Institute, 2009, 32, 2877-2884.	2.4	44
49	Probability density function treatment of turbulence/chemistry interactions during the ignition of a temperature-stratified mixture for application to HCCI engine modeling. Combustion and Flame, 2008, 155, 571-584.	2.8	18
50	Speedy solution of quasi-steady-state species by combination of fixed-point iteration and matrix inversion. Combustion and Flame, 2008, 153, 634-646.	2.8	27
51	A Eulerian PDF scheme for LES of nonpremixed turbulent combustion with second-order accurate mixture fraction. Combustion Theory and Modelling, 2007, 11, 675-695.	1.0	27
52	A numerical investigation into the anomalous slight NOx increase when burning biodiesel; A new (old) theory. Fuel Processing Technology, 2007, 88, 659-667.	3.7	265
53	A NUMERICAL INVESTIGATION OF A LIFTED H2/N2TURBULENT JET FLAME IN A VITIATED COFLOW. Combustion Science and Technology, 2006, 178, 1001-1030.	1.2	45
54	Selecting the optimum quasi-steady-state species for reduced chemical kinetic mechanisms using a genetic algorithm. Combustion and Flame, 2006, 144, 37-52.	2.8	43

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55	Piloted methane/air jet flames: Transport effects and aspects of scalar structure. Combustion and Flame, 2005, 143, 433-449.	2.8	162
56	Lifted methaneâ€“air jet flames in a vitiated coflow. Combustion and Flame, 2005, 143, 491-506.	2.8	269
57	Modeling of turbulent opposed-jet mixing flows with â€“ model and second-order closure. International Journal of Heat and Mass Transfer, 2004, 47, 1023-1035.	2.5	18
58	ANALYSIS OF IN SITU ADAPTIVE TABULATION PERFORMANCE FOR COMBUSTION CHEMISTRY AND IMPROVEMENT WITH A MODIFIED SEARCH ALGORITHM. Combustion Science and Technology, 2004, 176, 1153-1169.	1.2	26
59	Improvements on a Newton-Krylov Based Solver for CFD Models Using Finite Rate NOx Chemistry. , 2004, , .		0
60	Optimization of homogeneous charge compression ignition with genetic algorithms. Combustion Science and Technology, 2003, 175, 373-392.	1.2	23
61	Reduced Chemical Kinetic Mechanisms for Hydrocarbon Fuels. Journal of Propulsion and Power, 2002, 18, 192-198.	1.3	52
62	Augmented reduced mechanisms for NO emission in methane oxidation. Combustion and Flame, 2001, 125, 906-919.	2.8	144
63	â€˜One-dimensional turbulenceâ€™ simulation of turbulent jet diffusion flames: model formulation and illustrative applications. Combustion and Flame, 2001, 125, 1083-1105.	2.8	110
64	Scalar profiles and NO formation in laminar opposed-flow partially premixed methane/air flames. Combustion and Flame, 2001, 127, 2102-2118.	2.8	441
65	Numerical study of buoyancy effects on the structure and propagation of triple flames. Combustion Theory and Modelling, 2001, 5, 499-515.	1.0	17
66	Raman/Rayleigh/LIF measurements in a turbulent CH4/H2/N2 jet diffusion flame: experimental techniques and turbulenceâ€“chemistry interaction. Combustion and Flame, 2000, 123, 326-343.	2.8	196
67	Experiments on the scalar structure of turbulent CO/H2/N2 jet flames. Combustion and Flame, 2000, 120, 549-569.	2.8	145
68	Numerical Studies of Methane Catalytic Combustion Inside a Monolith Honeycomb Reactor Using Multi-Step Surface Reactions. Combustion Science and Technology, 2000, 150, 27-57.	1.2	39
69	A self-organizing-map approach to chemistry representation in combustion applications. Combustion Theory and Modelling, 2000, 4, 61-76.	1.0	67
70	Further Validation of an Augmented Reduced Mechanism for Methane Oxidation: Comparison of Global Parameters and Detailed Structure. Combustion Science and Technology, 2000, 156, 201-220.	1.2	25
71	Nitric oxide formation in dilute hydrogen jet flames: isolation of the effects of radiation and turbulence-chemistry submodels. Combustion and Flame, 1999, 117, 4-31.	2.8	120
72	Chemical response of methane/air diffusion flames to unsteady strain rate. Combustion and Flame, 1999, 118, 204-212.	2.8	57

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73	Numerical Modeling of NO Formation in Laminar Bunsen Flamesâ€"A Flamelet Approach. Combustion and Flame, 1998, 114, 420-435.	2.8	22
74	Modeling Differential Diffusion Effects in Turbulent Nonreacting/Reacting Jets with Stochastic Mixing Models. Combustion Science and Technology, 1998, 133, 343-375.	1.2	22
75	Fuel-dilution effect on differential molecular diffusion in laminar hydrogen diffusion flames. Combustion Theory and Modelling, 1998, 2, 497-514.	1.0	11
76	Stochastic Modeling of Partially Stirred Reactors. Combustion Science and Technology, 1997, 122, 63-94.	1.2	63
77	Flamelet-based modeling of NO formation in turbulent hydrogen jet diffusion flames. Combustion and Flame, 1997, 111, 1-15.	2.8	36
78	Catalytic oxidation of natural gas over supported platinum: Flow reactor experiments and detailed numberical modeling. Proceedings of the Combustion Institute, 1996, 26, 1771-1778.	0.3	31
79	Catalytic Combustion of Natural Gas Over Supported Platinum: Flow Reactor Experiments and Detailed Numerical Modeling. , 1996, , .		2
80	A Comparison of CMC and PDF Modelling Predictions with Experimental Nitric Oxide LIF/Raman Measurements in a Turbulent H2Jet Flame. Combustion Science and Technology, 1995, 105, 357-375.	1.2	51
81	Prediction of NO(x) production in a turbulent hydrogen-air jet flame. Journal of Propulsion and Power, 1994, 10, 161-168.	1.3	16
82	Application of a robust Î²-pdf treatment to analysis of thermal NO formation in nonpremixed hydrogen-air flame. Combustion and Flame, 1994, 98, 375-390.	2.8	29
83	PDF modeling and analysis of thermal NO formation in turbulent nonpremixed hydrogen-air jet flames. Combustion and Flame, 1992, 88, 397-412.	2.8	71
84	Reduced Reaction Mechanisms for Methanol-Air Diffusion Flames. Combustion Science and Technology, 1991, 78, 127-145.	1.2	20
85	Effect of DamkÃ¶hler number on superequilibrium OH concentration in turbulent nonpremixed jet flames. Combustion and Flame, 1990, 82, 235-251.	2.8	147
86	A model for soot formation in a laminar diffusion flame. Combustion and Flame, 1990, 81, 73-85.	2.8	81
87	Chemical models for pdf modeling of hydrogenî—¸air nonpremixed turbulent flames. Combustion and Flame, 1990, 79, 75-99.	2.8	52
88	Extending the Lean Stability Limits of Gasoline Using a Microwave-Assisted Spark Plug. , 0, , .		35
89	Maximizing Power Output in an Automotive Scale Multi-Cylinder Homogeneous Charge Compression Ignition (HCCI) Engine. , 0, , .		27
90	Characterization of Ion Signals under Ringing Conditions in an HCCI Engine. , 0, , .		8

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91	Fuel-Dithering Optimization of Efficiency of TWC on Natural Gas IC Engine. SAE International Journal of Engines, 0, 8, 1246-1252.	0.4	18
92	A Model for Prediction of Knock in the Cycle Simulation by Detail Characterization of Fuel and Temperature Stratification. SAE International Journal of Engines, 0, 8, 1520-1534.	0.4	14
93	Application of Corona Discharge Ignition in a Boosted Direct-Injection Single Cylinder Gasoline Engine: Effects on Combustion Phasing, Fuel Consumption, and Emissions. SAE International Journal of Engines, 0, 9, 1970-1988.	0.4	35
94	A Skeletal Mechanism for MILD Combustion of n-Heptane/Air Mixtures. Combustion Science and Technology, 0, , 1-32.	1.2	1