Chun Sang Yoo

List of Publications by Year
in descending order

67 papers	3,397 citations	218381 26 h-index	143772 57 g-index
67 all docs	67 docs citations	67 times ranked	1383 citing authors

#	Article	IF	Citations
1	Terascale direct numerical simulations of turbulent combustion using S3D. Computational Science & Discovery, 2009, 2, 015001.	1.5	462
2	Three-dimensional direct numerical simulation of a turbulent lifted hydrogen jet flame in heated coflow: a chemical explosive mode analysis. Journal of Fluid Mechanics, 2010, 652, 45-64.	1.4	271
3	Chemical explosive mode analysis for a turbulent lifted ethylene jet flame in highly-heated coflow. Combustion and Flame, 2012, 159, 265-274.	2.8	236
4	Direct numerical simulations of ignition of a lean n-heptane/air mixture with temperature inhomogeneities at constant volume: Parametric study. Combustion and Flame, 2011, 158, 1727-1741.	2.8	222
5	Characteristic boundary conditions for simulations of compressible reacting flows with multi-dimensional, viscous and reaction effects. Combustion Theory and Modelling, 2007, 11, 259-286.	1.0	211
6	Three-dimensional direct numerical simulation of a turbulent lifted hydrogen jet flame in heated coflow: flame stabilization and structure. Journal of Fluid Mechanics, 2009, 640, 453-481.	1.4	197
7	Characteristic boundary conditions for direct simulations of turbulent counterflow flames. Combustion Theory and Modelling, 2005, 9, 617-646.	1.0	176
8	A DNS study on the stabilization mechanism of a turbulent lifted ethylene jet flame in highly-heated coflow. Proceedings of the Combustion Institute, 2011, 33, 1619-1627.	2.4	140
9	Dynamic stiffness removal for direct numerical simulations. Combustion and Flame, 2009, 156, 1542-1551.	2.8	111
10	A DNS study of ignition characteristics of a lean iso-octane/air mixture under HCCI and SACI conditions. Proceedings of the Combustion Institute, 2013, 34, 2985-2993.	2.4	109
11	Computational diagnostics for n-heptane flames with chemical explosive mode analysis. Combustion and Flame, 2012, 159, 3119-3127.	2.8	107
12	Direct numerical simulations of the ignition of lean primary reference fuel/air mixtures with temperature inhomogeneities. Combustion and Flame, 2013, 160, 2038-2047.	2.8	103
13	Identification of premixed flame propagation modes using chemical explosive mode analysis. Proceedings of the Combustion Institute, 2019, 37, 2407-2415.	2.4	78
14	Response of flame thickness and propagation speed under intense turbulence in spatially developing lean premixed methaneâ€“air jet flames. Combustion and Flame, 2015, 162, 3294-3306.	2.8	72
15	Direct numerical simulations of ignition of a lean n-heptane/air mixture with temperature and composition inhomogeneities relevant to HCCI and SCCI combustion. Combustion and Flame, 2015, 162, 4566-4585.	2.8	63
16	A DNS study of the ignition of lean PRF/air mixtures with temperature inhomogeneities under high pressure and intermediate temperature. Combustion and Flame, 2015, 162, 717-726.	2.8	60
17	On the effect of injection timing on the ignition of lean PRF/air/EGR mixtures under direct dual fuel stratification conditions. Combustion and Flame, 2017, 183, 309-321.	2.8	56
18	Ignition of a lean PRF/air mixture under RCCI/SCCI conditions: Chemical aspects. Proceedings of the Combustion Institute, 2017, 36, 3587-3596.	2.4	52

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19	Transient dynamics of edge flames in a laminar nonpremixed hydrogenâ€“air counterflow. Proceedings of the Combustion Institute, 2005, 30, 349-356.	2.4	46
20	Dynamics of bluff-body-stabilized premixed hydrogen/air flames in a narrow channel. Combustion and Flame, 2015, 162, 2602-2609.	2.8	46
21	Transient soot dynamics in turbulent nonpremixed ethyleneâ€“air counterflow flames. Proceedings of the Combustion Institute, 2007, 31, 701-708.	2.4	44
22	Ignition of a lean PRF/air mixture under RCCI/SCCI conditions: A comparative DNS study. Proceedings of the Combustion Institute, 2017, 36, 3623-3631.	2.4	37
23	Direct numerical simulations of the ignition of a lean biodiesel/air mixture with temperature and composition inhomogeneities at high pressure and intermediate temperature. Combustion and Flame, 2014, 161, 2878-2889.	2.8	36
24	Effects of non-thermal plasma on the lean blowout limits and CO/NOx emissions in swirl-stabilized turbulent lean-premixed flames of methane/air. Combustion and Flame, 2020, 212, 403-414.	2.8	34
25	Laminar flame speed, Markstein length, and cellular instability for spherically propagating methane/ethyleneâ€“air premixed flames. Combustion and Flame, 2020, 214, 464-474.	2.8	33
26	A DNS study of self-accelerating cylindrical hydrogenâ€“air flames with detailed chemistry. Proceedings of the Combustion Institute, 2015, 35, 753-760.	2.4	27
27	Analysis of second-order conditional moment closure applied to an autoignitive lifted hydrogen jet flame. Proceedings of the Combustion Institute, 2009, 32, 1695-1703.	2.4	24
28	A Comparative Study of Conditional Moment Closure Modelling for Ignition of iso-octane and n-heptane in Thermally Stratified Mixtures. Flow, Turbulence and Combustion, 2015, 95, 1-28.	1.4	23
29	Ignition characteristics of a temporally evolving n-heptane jet in an iso-octane/air stream under RCCI combustion-relevant conditions. Combustion and Flame, 2019, 208, 299-312.	2.8	21
30	Conditional moment closure modelling for HCCI with temperature inhomogeneities. Proceedings of the Combustion Institute, 2015, 35, 3087-3095.	2.4	20
31	Surfactant effects on droplet dynamics and deposition patterns: a lattice gas model. Soft Matter, 2017, 13, 6529-6541.	1.2	20
32	Decreasing liftoff height behavior in diluted laminar lifted methane jet flames. Proceedings of the Combustion Institute, 2019, 37, 2005-2012.	2.4	20
33	Differential diffusion effect on the stabilization characteristics of autoignited laminar lifted methane/hydrogen jet flames in heated coflow air. Combustion and Flame, 2018, 198, 305-319.	2.8	19
34	A numerical study of transient ignition and flame characteristics of diluted hydrogen versus heated air in counterflow. Combustion and Flame, 2009, 156, 140-151.	2.8	18
35	Effects of H2O and NO on extinction and re-ignition of vortex-perturbed hydrogen counterflow flames. Proceedings of the Combustion Institute, 2009, 32, 1059-1066.	2.4	17
36	Effects of non-thermal plasma on turbulent premixed flames of ammonia/air in a swirl combustor. Fuel, 2022, 323, 124227.	3.4	17

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37	On the flame stabilization of turbulent lifted hydrogen jet flames in heated coflows near the autoignition limit: A comparative DNS study. Combustion and Flame, 2021, 233, 111584.	2.8	14
38	Doubly conditional moment closure modelling for HCCI with temperature inhomogeneities. Proceedings of the Combustion Institute, 2017, 36, 3677-3685.	2.4	13
39	Effect of NO on extinction and re-ignition of vortex-perturbed hydrogen flames. Combustion and Flame, 2010, 157, 217-229.	2.8	12
40	Two-dimensional characteristic boundary conditions for open boundaries in the lattice Boltzmann methods. Journal of Computational Physics, 2015, 302, 191-199.	1.9	11
41	Effect of core metal on flame spread and extinction for horizontal electrical wire with applied AC electric fields. Proceedings of the Combustion Institute, 2021, 38, 4747-4756.	2.4	11
42	A numerical study of the pyrolysis effect on autoignited laminar lifted dimethyl ether jet flames in heated coflow air. Combustion and Flame, 2019, 209, 225-238.	2.8	10
43	Instability Deposit Patterns in an Evaporating Droplet. Journal of Physical Chemistry B, 2014, 118, 2535-2543.	1.2	9
44	A numerical study of the diffusive-thermal instability of opposed nonpremixed tubular flames. Combustion and Flame, 2015, 162, 4612-4621.	2.8	8
45	Extinction of Strained Premixed Flames of Hydrogen/Air/Steam Mixture: Local Equilibrium Temperature and Local Equivalence Ratio. Combustion Science and Technology, 2000, 155, 227-242.	1.2	7
46	On the flame structure and stabilization characteristics of autoignited laminar lifted n-heptane jet flames in heated coflow air. Combustion and Flame, 2021, 223, 307-319.	2.8	7
47	A DNS study of ignition characteristics of a lean PRF/air mixture with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.svg"><mml:msub><mml:mtext>CH</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:math>O and H<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si4.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Ma	2.8	7
48	Interaction of turbulence, chemistry, and radiation in strained nonpremixed flames. Journal of Physics: Conference Series, 2005, 16, 91-100.	0.3	6
49	Effect of the thickness of polyethylene insulation on flame spread over electrical wire with Cu-core under AC electric fields. Combustion and Flame, 2022, 240, 112017.	2.8	6
50	Tracking flame base movement and interaction with ignition kernels using topological methods. Journal of Physics: Conference Series, 2009, 180, 012086.	0.3	5
51	Flame instabilities and flame cell dynamics in opposed nonpremixed tubular flames with radiative heat loss. Combustion and Flame, 2018, 194, 322-333.	2.8	5
52	Effects of diluents on the lifted flame characteristics in laminar nonpremixed coflow propane jets. Combustion and Flame, 2020, 222, 145-151.	2.8	5
53	Oscillation dynamics of colloidal particles caused by surfactant in an evaporating droplet. Journal of Mechanical Science and Technology, 2020, 34, 801-808.	0.7	5
54	Real-fluid thermophysicalModels: An OpenFOAM-based library for reacting flow simulations at high pressure. Computer Physics Communications, 2022, 273, 108264.	3.0	5

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55	NOx emission characteristics of CH4 versus O2/CO2 counterflow non-premixed flames at various pressures up to 300â€¯atm. Fuel, 2021, 299, 120411.	3.4	4
56	Flame edge dynamics in counterflow nonpremixed flames of CH4/He versus air at low strain rates: An experimental and numerical study. Combustion and Flame, 2022, 235, 111718.	2.8	4
57	Effects of Schmidt number on non-monotonic liftoff height behavior in laminar coflow-jet flames with diluted methane and ethylene. Proceedings of the Combustion Institute, 2021, 38, 1913-1921.	2.4	3
58	On the oscillating flame characteristics in nonpremixed laminar coflow-jets: An experimental and numerical study. Proceedings of the Combustion Institute, 2021, 38, 2049-2056.	2.4	3
59	High-fidelity simulations for clean and efficient combustion of alternative fuels. Journal of Physics: Conference Series, 2008, 125, 012028.	0.3	2
60	A modification of the narrow band-based WSGG regrouping method for computation time reduction in non-gray gas radiation analysis. International Journal of Heat and Mass Transfer, 2017, 111, 1314-1321.	2.5	2
61	A numerical study of combustion and NOX emission characteristics of a lean premixed model gas turbine combustor. Journal of Mechanical Science and Technology, 2020, 34, 1795-1803.	0.7	2
62	Large Area Organic Thin Film Coating Using a Micro Multi-nozzle Jet Head with Side Suction Channels. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 829-840.	2.7	1
63	Chemical Explosive Mode Analysis for Diagnostics of Direct Numerical Simulations. , 2020, , 89-108.		1
64	Extension of Lean Operation and Extinction Limit of Premixed Flame Applying Non-Thermal Plasma. Journal of the Korean Society of Combustion, 2019, 24, 46-50.	0.1	1
65	Direct numerical simulation of turbulent counterflow nonpremixed flames. Journal of Physics: Conference Series, 2007, 78, 012029.	0.3	0
66	â€œA numerical study of transient ignition and flame characteristics of diluted hydrogen versus heated air in counterflowâ€•[Combust. Flame Vol. 155, Issue 3]. Combustion and Flame, 2008, 155, 450.	2.8	0
67	A Numerical Study on the Low Limit Auto-Ignition Temperature of Syngas and Modification of Chemical Kinetic Mechanism. , 2019, , .		0