Rodney Fox

List of Publications by Year
in descending order

231 papers	10,819 citations	34105 52 h-index	43889 91 g-index
236 all docs	236 docs citations	236 times ranked	4353 citing authors

#	Article	IF	Citations
1	Solution of population balance equations using the direct quadrature method of moments. Journal of Aerosol Science, 2005, 36, 43-73.	3.8	654
2	Quadrature method of moments for aggregationâ€“breakage processes. Journal of Colloid and Interface Science, 2003, 258, 322-334.	9.4	441
3	Quadrature method of moments for population-balance equations. AICHE Journal, 2003, 49, 1266-1276.	3.6	355
4	Mixing in a multi-inlet vortex mixer (MIVM) for flash nano-precipitation. Chemical Engineering Science, 2008, 63, 2829-2842.	3.8	319
5	Application of the direct quadrature method of moments to polydisperse gasâ€“solid fluidized beds. Powder Technology, 2004, 139, 7-20.	4.2	245
6	A large eddy PIV method for turbulence dissipation rate estimation. Chemical Engineering Science, 2000, 55, 4423-4434.	3.8	237
7	Implementation of the quadrature method of moments in CFD codes for aggregationâ€“breakage problems. Chemical Engineering Science, 2003, 58, 3337-3351.	3.8	210
8	Conditional quadrature method of moments for kinetic equations. Journal of Computational Physics, 2011, 230, 8216-8246.	3.8	186
9	Large-Eddy-Simulation Tools for Multiphase Flows. Annual Review of Fluid Mechanics, 2012, 44, 47-76.	25.0	185
10	CFD predictions for chemical processing in a confined impinging-jets reactor. AICHE Journal, 2006, 52, 731-744.	3.6	177
11	A CFD model for biomass fast pyrolysis in fluidized-bed reactors. Chemical Engineering Science, 2011, 66, 2440-2452.	3.8	175
12	An extended quadrature method of moments for population balance equations. Journal of Aerosol Science, 2012, 51, 1-23.	3.8	174
13	Hybrid large-eddy simulation/Lagrangian filtered-density-function approach for simulating turbulent combustion. Combustion and Flame, 2005, 143, 56-78.	5.2	163
14	On multiphase turbulence models for collisional fluidâ€“particle flows. Journal of Fluid Mechanics, 2014, 742, 368-424.	3.4	162
15	Experimental validation and CFD modeling study of biomass fast pyrolysis in fluidized-bed reactors. Fuel, 2012, 97, 757-769.	6.4	143
16	A quadrature-based moment method for dilute fluid-particle flows. Journal of Computational Physics, 2008, 227, 2514-2539.	3.8	140
17	On fluidâ€“particle dynamics in fully developed cluster-induced turbulence. Journal of Fluid Mechanics, 2015, 780, 578-635.	3.4	128
18	Segregation in polydisperse fluidized beds: Validation of a multi-fluid model. Chemical Engineering Science, 2008, 63, 272-285.	3.8	125

#	Article	IF	Citations
19	On the Comparison between Population Balance Models for CFD Simulation of Bubble Columns. Industrial & Engineering Chemistry Research, 2005, 44, 5063-5072.	3.7	120
20	A quadrature-based third-order moment method for dilute gas-particle flows. Journal of Computational Physics, 2008, 227, 6313-6350.	3.8	118
21	Numerical simulation of spray coalescence in an Eulerian framework: Direct quadrature method of moments and multi-fluid method. Journal of Computational Physics, 2008, 227, 3058-3088.	3.8	116
22	Implementation of the population balance equation in CFD codes for modelling soot formation in turbulent flames. Chemical Engineering Science, 2006, 61, 87-95.	3.8	107
23	Computational fluid dynamics and electrostatic modeling of polymerization fluidized-bed reactors. Powder Technology, 2010, 203, 109-124.	4.2	103
24	CFD predictions for flow-regime transitions in bubble columns. AICHE Journal, 2005, 51, 1897-1923.	3.6	101
25	Dynamics of scalar dissipation in isotropic turbulence: a numerical and modelling study. Journal of Fluid Mechanics, 2001, 433, 29-60.	3.4	95
26	On the relationship between Lagrangian micromixing models and computational fluid dynamics. Chemical Engineering and Processing: Process Intensification, 1998, 37, 521-535.	3.6	93
27	Realizable high-order finite-volume schemes for quadrature-based moment methods. Journal of Computational Physics, 2011, 230, 5328-5352.	3.8	88
28	CFD simulation of aggregation and breakage processes in laminar Taylorâ€“Couette flow. Journal of Colloid and Interface Science, 2005, 282, 380-396.	9.4	85
29	Modeling of Fine-Particle Formation in Turbulent Flames. Annual Review of Fluid Mechanics, 2016, 48, 159-190.	25.0	82
30	On velocityâ€conditioned scalar mixing in homogeneous turbulence. Physics of Fluids, 1996, 8, 2678-2691.	4.0	79
31	Implementation of an iterative solution procedure for multi-fluid gasâ€“particle flow models on unstructured grids. Powder Technology, 2011, 213, 174-187.	4.2	78
32	Multivariate Quadrature-Based Moments Methods for turbulent polydisperse gasâ€“liquid systems. International Journal of Multiphase Flow, 2013, 50, 41-57.	3.4	78
33	Simulation of turbulent precipitation in a semi-batch Taylor-Couette reactor using CFD. AICHE Journal, 2001, 47, 664-676.	3.6	77
34	Hybrid finite-volume/transported PDF simulations of a partially premixed methaneâ€“air flame. Combustion and Flame, 2004, 136, 327-350.	5.2	77
35	Numerical study of collisional particle dynamics in cluster-induced turbulence. Journal of Fluid Mechanics, 2014, 747, .	3.4	75
36	Solution of population balance equations in applications with fine particles: Mathematical modeling and numerical schemes. Journal of Computational Physics, 2016, 325, 129-156.	3.8	75

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37	Direct numerical simulation of gasâ€“solid suspensions at moderate Reynolds number: Quantifying the coupling between hydrodynamic forces and particle velocity fluctuations. Powder Technology, 2010, 203, 57-69.	4.2	74
38	Computational Methods for Turbulent Reacting Flows in the Chemical Process Industry. Oil & Gas Science & Technology, 1996, 51, 215-243.	0.2	71
39	Comparison of micromixing models for CFD simulation of nanoparticle formation. AICHE Journal, 2004, 50, 2217-2232.	3.6	69
40	Higher-order quadrature-based moment methods for kinetic equations. Journal of Computational Physics, 2009, 228, 7771-7791.	3.8	66
41	Eulerian transported probability density function sub-filter model for large-eddy simulations of turbulent combustion. Combustion Theory and Modelling, 2006, 10, 439-458.	1.9	65
42	A fully coupled quadrature-based moment method for dilute to moderately dilute fluidâ€“particle flows. Chemical Engineering Science, 2010, 65, 2267-2283.	3.8	65
43	Investigation of turbulent mixing in a confined planar-jet reactor. AICHE Journal, 2005, 51, 2649-2664.	3.6	64
44	Experimental validation of CFD simulations of a labâ€scale fluidizedâ€bed reactor with and without sideâ€gas injection. AICHE Journal, 2010, 56, 1434-1446.	3.6	63
45	Investigation of the flow field in a three-dimensional Confined Impinging Jets Reactor by means of microPIV and DNS. Chemical Engineering Journal, 2011, 166, 294-305.	12.7	62
46	A volume-filtered description of compressible particle-laden flows. International Journal of Multiphase Flow, 2020, 122, 103138.	3.4	61
47	Theoretical Study of the Pyrolysis of Methyltrichlorosilane in the Gas Phase. 3. Reaction Rate Constant Calculations. Journal of Physical Chemistry A, 2010, 114, 2384-2392.	2.5	60
48	Kinetic Modeling of Nanoprecipitation using CFD Coupled with a Population Balance. Industrial & Engineering Chemistry Research, 2010, 49, 10651-10662.	3.7	57
49	Multi-fluid CFD modeling of biomass gasification in polydisperse fluidized-bed gasifiers. Powder Technology, 2014, 254, 187-198.	4.2	57
50	On the transition between turbulence regimes in particle-laden channel flows. Journal of Fluid Mechanics, 2018, 845, 499-519.	3.4	55
51	The Fokkerâ€“Planck closure for turbulent molecular mixing: Passive scalars. Physics of Fluids A, Fluid Dynamics, 1992, 4, 1230-1244.	1.6	54
52	Validation of CFD simulations of a stirred tank using particle image velocimetry data. Canadian Journal of Chemical Engineering, 1998, 76, 611-625.	1.7	54
53	A competitive aggregation model for Flash NanoPrecipitation. Journal of Colloid and Interface Science, 2010, 351, 330-342.	9.4	53
54	The spectral relaxation model of the scalar dissipation rate in homogeneous turbulence. Physics of Fluids, 1995, 7, 1082-1094.	4.0	51

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55	CFD analysis of micromixing effects on polymerization in tubular low-density polyethylene reactors. Chemical Engineering Science, 1999, 54, 3233-3242.	3.8	51
56	Bivariate direct quadrature method of moments for coagulation and sintering of particle populations. Journal of Aerosol Science, 2006, 37, 1562-1580.	3.8	51
57	Linear stability analysis of a two-fluid model for airâ€“water bubble columns. Chemical Engineering Science, 2007, 62, 3159-3177.	3.8	51
58	A microscale multi-inlet vortex nanoprecipitation reactor: Turbulence measurement and simulation. Applied Physics Letters, 2009, 94, 204104.	3.3	51
59	Improved Fokkerâ€“Planck model for the joint scalar, scalar gradient PDF. Physics of Fluids, 1994, 6, 334-348.	4.0	49
60	CFD simulation of shear-induced aggregation and breakage in turbulent Taylorâ€“Couette flow. Journal of Colloid and Interface Science, 2005, 285, 167-178.	9.4	49
61	Multi-environment probability density function method for modelling turbulent combustion using realistic chemical kinetics. Combustion Theory and Modelling, 2007, 11, 889-907.	1.9	49
62	Optimal Moment Sets for Multivariate Direct Quadrature Method of Moments. Industrial & Engineering Chemistry Research, 2009, 48, 9686-9696.	3.7	48
63	Simulation of fine particle formation by precipitation using computational fluid dynamics. Canadian Journal of Chemical Engineering, 2000, 78, 983-993.	1.7	47
64	The Lagrangian spectral relaxation model of the scalar dissipation in homogeneous turbulence. Physics of Fluids, 1997, 9, 2364-2386.	4.0	46
65	Theoretical Study of the Pyrolysis of Methyltrichlorosilane in the Gas Phase. 2. Reaction Paths and Transition States. Journal of Physical Chemistry A, 2007, 111, 1475-1486.	2.5	46
66	Turbulence in a microscale planar confined impinging-jets reactor. Lab on A Chip, 2009, 9, 1110.	6.0	45
67	Population balance modeling of aggregation and breakage in turbulent Taylorâ€“Couette flow. Journal of Colloid and Interface Science, 2007, 307, 433-446.	9.4	44
68	Quadrature-Based Moment Model for Moderately Dense Polydisperse Gasâˆ’Particle Flows. Industrial & Engineering Chemistry Research, 2010, 49, 5174-5187.	3.7	44
69	Theoretical Study of the Pyrolysis of Methyltrichlorosilane in the Gas Phase. 1. Thermodynamics. Journal of Physical Chemistry A, 2007, 111, 1462-1474.	2.5	43
70	Computational and experimental study of electrostatics in gasâ€“solid polymerization fluidized beds. Chemical Engineering Science, 2013, 92, 146-156.	3.8	43
71	Eulerâ€“euler anisotropic gaussian mesoscale simulation of homogeneous clusterâ€induced gasâ€“particle turbulence. AICHE Journal, 2017, 63, 2630-2643.	3.6	40
72	Turbulent precipitation in micromixers: CFD simulation and flow field validation. Chemical Engineering Research and Design, 2010, 88, 1182-1193.	5.6	39

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73	Large-eddy-simulation-based multiscale modeling of TiO2 nanoparticle synthesis in a turbulent flame reactor using detailed nucleation chemistry. Chemical Engineering Science, 2011, 66, 4370-4381.	3.8	39
74	Verification of Eulerianâ€“Eulerian and Eulerianâ€“Lagrangian simulations for turbulent fluidâ€“particle flows. AICHE Journal, 2017, 63, 5396-5412.	3.6	39
75	Eulerian models for turbulent spray combustion with polydispersity and droplet crossing. Comptes Rendus - Mecanique, 2009, 337, 438-448.	2.1	38
76	Numerical study of mixing and segregation in a biomass fluidized bed. Powder Technology, 2013, 237, 355-366.	4.2	38
77	Validation of LES predictions for turbulent flow in a Confined Impinging Jets Reactor. Applied Mathematical Modelling, 2011, 35, 1591-1602.	4.2	37
78	An open-source quadrature-based population balance solver for OpenFOAM. Chemical Engineering Science, 2018, 176, 306-318.	3.8	37
79	Eulerian Quadrature-Based Moment Models for Dilute Polydisperse Evaporating Sprays. Flow, Turbulence and Combustion, 2010, 85, 649-676.	2.6	36
80	Advanced continuum modelling of gas-particle flows beyond the hydrodynamic limit. Applied Mathematical Modelling, 2011, 35, 1616-1627.	4.2	36
81	Sparse identification of multiphase turbulence closures for coupled fluidâ€“particle flows. Journal of Fluid Mechanics, 2021, 914, .	3.4	36
82	PDF modeling of turbulent-mixing effects on initiator efficiency in a tubular LDPE reactor. AICHE Journal, 1996, 42, 2926-2940.	3.6	35
83	Simultaneous velocity and concentration field measurements of passive-scalar mixing in a confined rectangular jet. Experiments in Fluids, 2007, 42, 847-862.	2.4	35
84	On the Comparison between Presumed and Full PDF Methods for Turbulent Precipitation. Industrial & Engineering Chemistry Research, 2001, 40, 5132-5139.	3.7	34
85	Application of in situ adaptive tabulation to CFD simulation of nano-particle formation by reactive precipitation. Chemical Engineering Science, 2003, 58, 4387-4401.	3.8	34
86	Computational Modeling of Biomass Thermochemical Conversion in Fluidized Beds: Particle Density Variation and Size Distribution. Industrial & Engineering Chemistry Research, 2015, 54, 4084-4094.	3.7	34
87	The Lagrangian spectral relaxation model for differential diffusion in homogeneous turbulence. Physics of Fluids, 1999, 11, 1550-1571.	4.0	33
88	PDF simulations of ethylene decomposition in tubular LDPE reactors. AICHE Journal, 2005, 51, 585-606.	3.6	32
89	CFD Models for Analysis and Design of Chemical Reactors. Advances in Chemical Engineering, 2006, 31, 231-305.	0.9	32
90	Flow Characteristics in a Scaled-up Multi-inlet Vortex Nanoprecipitation Reactor. Industrial & Engineering Chemistry Research, 2015, 54, 4512-4525.	3.7	32

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91	Conditional hyperbolic quadrature method of moments for kinetic equations. Journal of Computational Physics, 2018, 365, 269-293.	3.8	32
92	Micromixing effects in the ClOâ˜2 + Iâ˜ reaction: perturbation analysis and numerical simulation of the unsteady-state IEM model. Chemical Engineering Science, 1990, 45, 2857-2876.	3.8	31
93	Improved Lagrangian mixing models for passive scalars in isotropic turbulence. Physics of Fluids, 2003, 15, 961-985.	4.0	31
94	Strongly coupled fluid-particle flows in vertical channels. I. Reynolds-averaged two-phase turbulence statistics. Physics of Fluids, 2016, 28, .	4.0	31
95	Multiscale Modeling of TiO₂ Nanoparticle Production in Flame Reactors: Effect of Chemical Mechanism. Industrial & Engineering Chemistry Research, 2010, 49, 10663-10673.	3.7	30
96	A Quadrature-Based Kinetic Model for Dilute Non-Isothermal Granular Flows. Communications in Computational Physics, 2011, 10, 216-252.	1.7	30
97	Modeling soot oxidation with the Extended Quadrature Method of Moments. Proceedings of the Combustion Institute, 2017, 36, 789-797.	3.9	28
98	Computational Fluid Dynamics Simulation of Chemical Reactors:Â Application of in Situ Adaptive Tabulation to Methane Thermochlorination Chemistry. Industrial & Engineering Chemistry Research, 1999, 38, 4200-4212.	3.7	27
99	Turbulent mixing in a confined rectangular wake. Chemical Engineering Science, 2006, 61, 6946-6962.	3.8	27
100	Realizable high-order finite-volume schemes for quadrature-based moment methods applied to diffusion population balance equations. Journal of Computational Physics, 2013, 249, 162-179.	3.8	27
101	Dynamic delayed detached eddy simulation of a multiâ€inlet vortex reactor. AICHE Journal, 2016, 62, 2570-2578.	3.6	27
102	Strongly coupled fluid-particle flows in vertical channels. II. Turbulence modeling. Physics of Fluids, 2016, 28, .	4.0	27
103	On the Simulation of Turbulent Precipitation in a Tubular Reactor via Computational Fluid Dynamics (CFD). Chemical Engineering Research and Design, 2001, 79, 998-1004.	5.6	26
104	Simulations of multiphase reactive flows in fluidized beds usingin situadaptive tabulation. Combustion Theory and Modelling, 2004, 8, 195-209.	1.9	26
105	A multienvironment conditional probability density function model for turbulent reacting flows. Physics of Fluids, 2004, 16, 4551-4565.	4.0	25
106	Destructive aggregation: Aggregation with collision-induced breakage. Journal of Colloid and Interface Science, 2006, 302, 149-158.	9.4	25
107	Radiation transport modeling using extended quadrature method of moments. Journal of Computational Physics, 2013, 246, 221-241.	3.8	25
108	On the hyperbolicity of the two-fluid model for gasâ€“liquid bubbly flows. Applied Mathematical Modelling, 2018, 57, 432-447.	4.2	25

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109	PDF simulation of a turbulent seriesâ€"parallel reaction in an axisymmetric reactor. Chemical Engineering Science, 1994, 49, 5141-5158.	3.8	24
110	Reactive mixing in a tubular jet reactor: a comparison of PDF simulations with experimental data. Chemical Engineering Science, 1994, 49, 5229-5241.	3.8	24
111	A solution algorithm for fluidâ€"particle flows across all flow regimes. Journal of Computational Physics, 2017, 344, 575-594.	3.8	24
112	Modeling of bubble-column flows with quadrature-based moment methods. Chemical Engineering Science, 2011, 66, 3058-3070.	3.8	23
113	On the role of gas-phase and surface chemistry in the production of titania nanoparticles in turbulent flames. Chemical Engineering Science, 2013, 104, 1003-1018.	3.8	23
114	Measurements of turbulence in a microscale multi-inlet vortex nanoprecipitation reactor. Journal of Micromechanics and Microengineering, 2013, 23, 075005.	2.6	23
115	Effect of Domain Size on Fluidâ€"Particle Statistics in Homogeneous, Gravity-Driven, Cluster-Induced Turbulence. Journal of Fluids Engineering, Transactions of the ASME, 2016, 138, .	1.5	23
116	A kinetic-based hyperbolic two-fluid model for binary hard-sphere mixtures. Journal of Fluid Mechanics, 2019, 877, 282-329.	3.4	23
117	Unsteady-state IEM model: numerical simulation and multiple-scale perturbation analysis near perfect-micromixing limit. Chemical Engineering Science, 1990, 45, 373-386.	3.8	22
118	Modeling multiple reactive scalar mixing with the generalized IEM model. Physics of Fluids, 1995, 7, 2820-2830.	4.0	22
119	Multivariate Gaussian Extended Quadrature Method of Moments for Turbulent Disperse Multiphase Flow. Multiscale Modeling and Simulation, 2017, 15, 1553-1583.	1.6	22
120	CFD Analysis of Premixed Methane Chlorination Reactors with Detailed Chemistry. Industrial & Engineering Chemistry Research, 2001, 40, 5170-5176.	3.7	21
121	Effect of density ratio on velocity fluctuations in dispersed multiphase flow from simulations of finite-size particles. Acta Mechanica, 2019, 230, 469-484.	2.1	20
122	Objective decomposition of the stress tensor in granular flows. Physical Review E, 2005, 71, 021302.	2.1	19
123	Effect of model formulation on flow-regime predictions for bubble columns. AICHE Journal, 2007, 53, 9-18.	3.6	19
124	On Brownian Dynamics Simulation of Nanoparticle Aggregation. Industrial & Engineering Chemistry Research, 2008, 47, 3338-3345.	3.7	19
125	An extended quadratureâ€based massâ€velocity moment model for polydisperse bubbly flows. Canadian Journal of Chemical Engineering, 2014, 92, 2053-2066.	1.7	19
126	Turbulent mixing in the confined swirling flow of a multiâ€inlet vortex reactor. AICHE Journal, 2017, 63, 2409-2419.	3.6	19

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127	Implementation of pseudo-turbulence closures in an Eulerianâ€“Eulerian two-fluid model for non-isothermal gasâ€“solid flow. Chemical Engineering Science, 2019, 207, 663-671.	3.8	19
128	A quadrature-based moment method for polydisperse bubbly flows. Computer Physics Communications, 2019, 244, 187-204.	7.5	19
129	Largeâ€eddy simulation modeling of turbulent flame synthesis of titania nanoparticles using a bivariate particle description. AICHE Journal, 2014, 60, 459-472.	3.6	18
130	Confocal imaging of laminar and turbulent mixing in a microscale multi-inlet vortex nanoprecipitation reactor. Applied Physics Letters, 2011, 99, 204103.	3.3	17
131	Characterization of sheared colloidal aggregation using Langevin dynamics simulation. Physical Review E, 2014, 89, 062312.	2.1	17
132	A Batchelor Vortex Model for Mean Velocity of Turbulent Swirling Flow in a Macroscale Multi-Inlet Vortex Reactor. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	16
133	A two-dimensional population balance model for cell growth including multiple uptake systems. Chemical Engineering Research and Design, 2018, 132, 966-981.	5.6	16
134	A hyperbolic two-fluid model for compressible flows with arbitrary material-density ratios. Journal of Fluid Mechanics, 2020, 903, .	3.4	16
135	Steady-state iem model: singular perturbation analysis near perfect-micromixing limit. Chemical Engineering Science, 1989, 44, 2831-2842.	3.8	15
136	Computation of turbulent reactive flows: first- principles macro/micromixing models using probability density function methods. Chemical Engineering Science, 1992, 47, 2853-2858.	3.8	15
137	Reynolds-stress modeling of cluster-induced turbulence in particle-laden vertical channel flow. Physical Review Fluids, 2020, 5, .	2.5	15
138	Bifurcation and stability analysis of micromixing effects in the chloriteâ€”iodide reaction. Chemical Engineering Science, 1994, 49, 3465-3484.	3.8	14
139	Effect of Feed-Stream Configuration on Gas-Phase Chlorination Reactor Performance. Industrial & Engineering Chemistry Research, 2003, 42, 2544-2557.	3.7	14
140	CFD Modeling of Electrostatic Forces in Gas-Solid Fluidized Beds. Journal of Computational Multiphase Flows, 2010, 2, 189-205.	0.8	14
141	Reprint of: Multi-fluid CFD modeling of biomass gasification in polydisperse fluidized-bed gasifiers. Powder Technology, 2014, 265, 23-34.	4.2	14
142	Application of the Fokker-Planck molecular mixing model to turbulent scalar mixing using moment methods. Physics of Fluids, 2017, 29, 065109.	4.0	14
143	A Lagrangian probability-density-function model for collisional turbulent fluidâ€“particle flows. Journal of Fluid Mechanics, 2019, 862, 449-489.	3.4	14
144	Computational study of buoyancy driven turbulence in statistically homogeneous bubbly flows. Chemical Engineering Science, 2020, 216, 115546.	3.8	14

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145	Investigation of passive scalar mixing in a confined rectangular wake using simultaneous PIV and PLIF. Chemical Engineering Science, 2010, 65, 3372-3383.	3.8	13
146	EULERIAN MOMENT METHODS FOR AUTOMOTIVE SPRAYS. Atomization and Sprays, 2015, 25, 189-254.	0.8	13
147	Wavelet-based Spatiotemporal Multiscaling in Diffusion Problems with Chemically Reactive Boundary. International Journal for Multiscale Computational Engineering, 2006, 4, 755-770.	1.2	13
148	Linear stability analysis of the unsteady-state IEM model of micromixing. Chemical Engineering Science, 1990, 45, 3571-3583.	3.8	12
149	The BMC/GIEM Model for Micromixing in Non-Premixed Turbulent Reacting Flows. Industrial & Engineering Chemistry Research, 1998, 37, 2131-2141.	3.7	12
150	Experimental characterization of turbulent mixing performance using simultaneous stereoscopic particle image velocimetry and planar laser-induced fluorescence. Experiments in Fluids, 2019, 60, 1.	2.4	12
151	Three-dimensional conditional hyperbolic quadrature method of moments. Journal of Computational Physics: X, 2019, 1, 100006.	0.7	12
152	A moment-based kinetic theory model for polydisperse gasâ€“particle flows. Powder Technology, 2020, 365, 92-105.	4.2	12
153	Direct comparison of Eulerianâ€“Eulerian and Eulerianâ€“Lagrangian simulations for particleâ€laden vertical channel flow. AICHE Journal, 2020, 66, e16230.	3.6	12
154	CFD simulations of stirred-tank reactors for gas-liquid and gas-liquid-solid systems using OpenFOAM‹sup›Â®‹/sup›. International Journal of Chemical Reactor Engineering, 2021, 19, 193-207.	1.1	12
155	Introduction and Fundamentals of Modeling Approaches for Polydisperse Multiphase Flows. , 2007, , 1-40.		11
156	A delayed detached eddy simulation model with low Reynolds number correction for transitional swirling flow in a multi-inlet vortex nanoprecipitation reactor. Chemical Engineering Science, 2019, 193, 66-75.	3.8	11
157	A second-order realizable scheme for moment advection on unstructured grids. Computer Physics Communications, 2020, 248, 106993.	7.5	11
158	Modeling the scalar dissipation rate for a turbulent series-parallel reaction. Chemical Engineering Science, 1996, 51, 1929-1938.	3.8	10
159	Coarse-grained computation for particle coagulation and sintering processes by linking Quadrature Method of Moments with Monte-Carlo. Journal of Computational Physics, 2010, 229, 5299-5314.	3.8	10
160	Application of quadrature-based uncertainty quantification to the NETL small-scale challenge problem SSCP-I. Powder Technology, 2015, 272, 100-112.	4.2	10
161	Hyperbolic Quadrature Method of Moments for the One-Dimensional Kinetic Equation. SIAM Journal on Applied Mathematics, 2022, 82, 750-771.	1.8	10
162	Micromixing effects in the nicolisâ€”puhl reaction: numerical bifurcation and stability analysis of the IEM model. Chemical Engineering Science, 1991, 46, 1829-1847.	3.8	9

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163	Momentum Transfer Between Polydisperse Particles in Dense Granular Flow. Journal of Fluids Engineering, Transactions of the ASME, 2006, 128, 62-68.	1.5	9
164	Numerical study on the turbulent reacting flow in the vicinity of the injector of an LDPE tubular reactor. Chemical Engineering Science, 2007, 62, 2435-2444.	3.8	9
165	Validation of Two-Fluid Simulations of a Pseudo-Two-Dimensional Bubble Column with Uniform and Nonuniform Aeration. Industrial & Engineering Chemistry Research, 2009, 48, 8134-8147.	3.7	9
166	Quadrature-based moment closures for non-equilibrium flows: Hard-sphere collisions and approach to equilibrium. Journal of Computational Physics, 2012, 231, 7431-7449.	3.8	9
167	Towards Eulerian Modeling of a Polydisperse Evaporating Spray Under Realistic Internal-Combustion-Engine Conditions. Flow, Turbulence and Combustion, 2014, 93, 689-722.	2.6	9
168	Effect of inlet conditions on the accuracy of large eddy simulations of a turbulent rectangular wake. Chemical Engineering Journal, 2014, 250, 175-189.	12.7	9
169	Reduced Chemical Kinetics for the Modeling of TiO2 Nanoparticle Synthesis in Flame Reactors. Industrial & Engineering Chemistry Research, 2015, 54, 5407-5415.	3.7	9
170	Stochastic modeling of a fluidized-bed reactor. AICHE Journal, 1985, 31, 992-998.	3.6	8
171	A quadrature closure for the reaction-source term in conditional-moment closure. Proceedings of the Combustion Institute, 2007, 31, 1675-1682.	3.9	8
172	Large eddy simulations of incompressible turbulent flows using parallel computing techniques. International Journal for Numerical Methods in Fluids, 2008, 56, 1819-1843.	1.6	8
173	Population, characteristics and kinematics of vortices in a confined rectangular jet with a co-flow. Experiments in Fluids, 2011, 50, 1473-1493.	2.4	8
174	Visualization of turbulent reactive mixing in a planar microscale confined impinging-jet reactor. Journal of Micromechanics and Microengineering, 2011, 21, 115006.	2.6	8
175	Predictive capability of Large Eddy Simulation for point-wise and spatial turbulence statistics in a confined rectangular jet. Chemical Engineering Science, 2012, 69, 240-256.	3.8	8
176	Quadrature-Based Moment Methods for Multiphase Chemically Reacting Flows. Advances in Chemical Engineering, 2018, 52, 1-50.	0.9	8
177	On the liquid flow distribution in trickle-bed reactors. Industrial & Engineering Chemistry Research, 1987, 26, 2413-2419.	3.7	7
178	A term-by-term direct numerical simulation validation study of the multi-environment conditional probability-density-function model for turbulent reacting flows. Physics of Fluids, 2007, 19, 085102.	4.0	7
179	Conditional statistics for passive-scalar mixing in a confined rectangular turbulent jet. Physics of Fluids, 2007, 19, 055104.	4.0	7
180	Coarse-Graining Approach to Infer Mesoscale Interaction Potentials from Atomistic Interactions for Aggregating Systems. Industrial & Engineering Chemistry Research, 2012, 51, 16116-16134.	3.7	7

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181	Filtration model for polydisperse aerosols in gasâ€solid flow using granuleâ€resolved direct numerical simulation. AIChE Journal, 2015, 61, 3594-3606.	3.6	7
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