Niels G Deen

List of Publications by Year
in descending order

167 papers	9,498 citations	41258 49 h-index	45213 90 g-index
172 all docs	172 docs citations	172 times ranked	4455 citing authors

#	Article	IF	Citations
1	Review of discrete particle modeling of fluidized beds. Chemical Engineering Science, 2007, 62, 28-44.	1.9	796
2	Numerical Simulation of Dense Gas-Solid Fluidized Beds: A Multiscale Modeling Strategy. Annual Review of Fluid Mechanics, 2008, 40, 47-70.	10.8	517
3	Influence of rolling friction on single spout fluidized bed simulation. Particuology, 2012, 10, 582-591.	2.0	399
4	Numerical simulation of gas bubbles behaviour using a three-dimensional volume of fluid method. Chemical Engineering Science, 2005, 60, 2999-3011.	1.9	313
5	Large eddy simulation of the Gasâ€“Liquid flow in a square cross-sectioned bubble column. Chemical Engineering Science, 2001, 56, 6341-6349.	1.9	296
6	Flow regimes in a spoutâ€“fluid bed: A combined experimental and simulation study. Chemical Engineering Science, 2005, 60, 3425-3442.	1.9	270
7	Numerical simulation of the dynamic flow behavior in a bubble column: A study of closures for turbulence and interface forces. Chemical Engineering Science, 2006, 61, 7593-7608.	1.9	228
8	Energy absorption during compression and impact of dry elastic-plastic spherical granules. Granular Matter, 2010, 12, 15-47.	1.1	211
9	Direct numerical simulation of flow and heat transfer in dense fluidâ€“particle systems. Chemical Engineering Science, 2012, 81, 329-344.	1.9	195
10	Review of direct numerical simulation of fluidâ€“particle mass, momentum and heat transfer in dense gasâ€“solid flows. Chemical Engineering Science, 2014, 116, 710-724.	1.9	149
11	Development of an image measurement technique for size distribution in dense bubbly flows. Chemical Engineering Science, 2013, 94, 20-29.	1.9	148
12	Multi-scale modeling of dispersed gasâ€“liquid two-phase flow. Chemical Engineering Science, 2004, 59, 1853-1861.	1.9	145
13	On the drag force of bubbles in bubble swarms at intermediate and high Reynolds numbers. Chemical Engineering Science, 2011, 66, 3204-3211.	1.9	132
14	Detailed modeling of hydrodynamics, mass transfer and chemical reactions in a bubble column using a discrete bubble model. Chemical Engineering Science, 2005, 60, 3383-3404.	1.9	130
15	Numerical and experimental study on multiple-spout fluidized beds. Chemical Engineering Science, 2011, 66, 2368-2376.	1.9	115
16	Numerical simulation of behavior of gas bubbles using a 3-D front-tracking method. AICHE Journal, 2006, 52, 99-110.	1.8	113
17	Detailed modeling of hydrodynamics, mass transfer and chemical reactions in a bubble column using a discrete bubble model. Chemisorption of <mml:math altimg="si53.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns	1.9	112
18	Ensemble correlation PIV applied to bubble plumes rising in a bubble column. Chemical Engineering Science, 1999, 54, 5159-5171.	1.9	109

#	Article	IF	Citations
19	Parallelization of an Eulerâ€“Lagrange model using mixed domain decomposition and a mirror domain technique: Application to dispersed gasâ€“liquid two-phase flow. Journal of Computational Physics, 2006, 220, 216-248.	1.9	105
20	CFDâ€“DEM model for coupled heat and mass transfer in a spout fluidized bed with liquid injection. Chemical Engineering Journal, 2016, 288, 185-197.	6.6	100
21	Influence of liquid layers on energy absorption during particle impact. Particuology, 2009, 7, 245-259.	2.0	99
22	A DNS study of flow and heat transfer through slender fixed-bed reactors randomly packed with spherical particles. Chemical Engineering Science, 2017, 160, 1-19.	1.9	92
23	Two- and Four-Way Coupled Eulerâ€“Lagrangian Large-Eddy Simulation of Turbulent Particle-Laden Channel Flow. Flow, Turbulence and Combustion, 2009, 82, 47-71.	1.4	91
24	Characterization and CFD-DEM modelling of a prismatic spouted bed. Powder Technology, 2015, 270, 622-636.	2.1	90
25	Spout fluidized beds: Recent advances in experimental and numerical studies. Chemical Engineering Science, 2013, 86, 124-136.	1.9	87
26	A study of heat transfer in fluidized beds using an integrated DIA/PIV/IR technique. Chemical Engineering Journal, 2015, 259, 90-106.	6.6	78
27	Discrete element study of granulation in a spout-fluidized bed. Chemical Engineering Science, 2007, 62, 195-207.	1.9	77
28	Bubble dynamics in a 3â€Ð gasâ€“solid fluidized bed using ultrafast electron beam Xâ€ray tomography and twoâ€fluid model. AICHE Journal, 2014, 60, 1632-1644.	1.8	76
29	PEPT and discrete particle simulation study of spoutâ€fluid bed regimes. AICHE Journal, 2008, 54, 1189-1202.	1.8	74
30	Experimental study of the bubble size distribution in a pseudo-2D bubble column. Chemical Engineering Science, 2013, 98, 203-211.	1.9	74
31	An experimental study of droplet-particle collisions. Powder Technology, 2016, 300, 157-163.	2.1	74
32	Numerical simulation of gasâ€“liquidâ€“solid flows using a combined front tracking and discrete particle method. Chemical Engineering Science, 2005, 60, 6188-6198.	1.9	73
33	Characterization and CFD-modeling of the hydrodynamics of a prismatic spouted bed apparatus. Chemical Engineering Science, 2009, 64, 3352-3375.	1.9	73
34	An experimental study of the effect of collision properties on spout fluidized bed dynamics. Powder Technology, 2011, 206, 139-148.	2.1	70
35	Coefficient of restitution for particles impacting on wet surfaces: An improved experimental approach. Particuology, 2016, 25, 1-9.	2.0	67
36	One-equation sub-grid scale (SGS) modelling for Eulerâ€“Euler large eddy simulation (EELES) of dispersed bubbly flow. Chemical Engineering Science, 2008, 63, 3923-3931.	1.9	66

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37	Flow Generated by an Aerated Rushton Impeller: Twoâ€phase PIV Experiments and Numerical Simulations. Canadian Journal of Chemical Engineering, 2002, 80, 1-15.	0.9	66
38	Improved magnetic particle tracking technique in dense gas fluidized beds. AICHE Journal, 2014, 60, 3133-3142.	1.8	64
39	Effect of viscosity on droplet-droplet collisional interaction. Physics of Fluids, 2017, 29, .	1.6	63
40	Two-Phase PIV in Bubbly Flows: Status and Trends. Chemical Engineering and Technology, 2002, 25, 97.	0.9	62
41	Two-fluid modeling of three-dimensional cylindrical gasâ€“solid fluidized beds using the kinetic theory of granular flow. Chemical Engineering Science, 2013, 102, 227-245.	1.9	61
42	Numerical study of bubble break-up in bubbly flows using a deterministic Eulerâ€“Lagrange framework. Chemical Engineering Science, 2014, 108, 9-22.	1.9	60
43	A discrete element study of wet particleâ€“particle interaction during granulation in a spout fluidized bed. Canadian Journal of Chemical Engineering, 2009, 87, 308-317.	0.9	59
44	Comparison of fibre optical measurements and discrete element simulations for the study of granulation in a spout fluidized bed. Powder Technology, 2009, 189, 202-217.	2.1	59
45	Numerical Analysis of Solids Mixing in Pressurized Fluidized Beds. Industrial & Engineering Chemistry Research, 2010, 49, 5246-5253.	1.8	55
46	Direct numerical simulation of complex multi-fluid flows using a combined front tracking and immersed boundary method. Chemical Engineering Science, 2009, 64, 2186-2201.	1.9	54
47	A critical comparison of surface tension models for the volume of fluid method. Chemical Engineering Science, 2014, 109, 65-74.	1.9	53
48	Direct numerical simulations and experiments of a pseudo-2D gas-fluidized bed. Chemical Engineering Science, 2016, 143, 166-180.	1.9	52
49	Multiscale modeling of fixed-bed reactors with porous (open-cell foam) non-spherical particles: Hydrodynamics. Chemical Engineering Journal, 2018, 334, 741-759.	6.6	51
50	Application of Coalescence and Breakup Models in a Discrete Bubble Model for Bubble Columns. Industrial & Engineering Chemistry Research, 2005, 44, 5233-5245.	1.8	49
51	Numerical investigations of a pseudo-2D spout fluidized bed with draft plates using a scaled discrete particle model. Chemical Engineering Science, 2013, 104, 790-807.	1.9	49
52	Droplet spreading and capillary imbibition in a porous medium: A coupled IB-VOF method based numerical study. Physics of Fluids, 2018, 30, .	1.6	49
53	Discrete particle modeling of granular temperature distribution in a bubbling fluidized bed. Particuology, 2012, 10, 428-437.	2.0	48
54	Development and validation of a novel Digital Image Analysis method for fluidized bed Particle Image Velocimetry. Powder Technology, 2012, 230, 193-202.	2.1	48

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55	Numerical study of coalescence and breakup in a bubble column using a hybrid volume of fluid and discrete bubble model approach. Chemical Engineering Science, 2014, 119, 134-146.	1.9	47
56	Characterization of the pneumatic behavior of a novel spouted bed apparatus with two adjustable gas inlets. Chemical Engineering Science, 2008, 63, 791-814.	1.9	46
57	Simulation of particle mixing and segregation in bidisperse gas fluidized beds. Chemical Engineering Science, 2014, 108, 258-269.	1.9	45
58	Experimental and simulation study of heat transfer in fluidized beds with heat production. Chemical Engineering Journal, 2017, 317, 242-257.	6.6	45
59	Direct numerical simulation of wall-to liquid heat transfer in dispersed gasâ€“liquid two-phase flow using a volume of fluid approach. Chemical Engineering Science, 2013, 102, 268-282.	1.9	44
60	Large Eddy Simulation for Dispersed Bubbly Flows: A Review. International Journal of Chemical Engineering, 2013, 2013, 1-22.	1.4	44
61	A novel approach to determine wet restitution coefficients through a unified correlation and energy analysis. AIChE Journal, 2015, 61, 769-779.	1.8	44
62	Direct numerical simulation for flow and heat transfer through random open-cell solid foams: Development of an IBM based CFD model. Catalysis Today, 2016, 273, 140-150.	2.2	44
63	Detailed 3D Modeling of Mass Transfer Processes in Two-Phase Flows with Dynamic Interfaces. Chemical Engineering and Technology, 2006, 29, 1027-1033.	0.9	43
64	Gasâ^'Solid Turbulent Flow in a Circulating Fluidized Bed Riser: Numerical Study of Binary Particle Systems. Industrial & Engineering Chemistry Research, 2009, 48, 8098-8108.	1.8	42
65	Investigations on the spouting stability in a prismatic spouted bed and apparatus optimization. Advanced Powder Technology, 2015, 26, 718-733.	2.0	42
66	Eulerâ^'Euler Modeling of Flow, Mass Transfer, and Chemical Reaction in a Bubble Column. Industrial & Engineering Chemistry Research, 2009, 48, 47-57.	1.8	41
67	Use of Particle Imaging Velocimetry to measure liquid velocity profiles in liquid and liquid/gas flows through spacer filled channels. Journal of Membrane Science, 2010, 362, 143-153.	4.1	41
68	Direct numerical simulation of particle impact on thin liquid films using a combined volume of fluid and immersed boundary method. Chemical Engineering Science, 2012, 69, 530-540.	1.9	41
69	Numerical investigation of closures for interface forces acting on single air-bubbles in water using Volume of Fluid and Front Tracking models. Chemical Engineering Science, 2005, 60, 6169-6175.	1.9	40
70	Numerical and experimental study on spout elevation in spoutâ€fluidized beds. AIChE Journal, 2012, 58, 2524-2535.	1.8	40
71	Direct numerical simulation of fluid flow accompanied by coupled mass and heat transfer in dense fluidâ€“particle systems. Chemical Engineering Science, 2014, 116, 645-656.	1.9	40
72	Experimental study of hydrodynamics and thermal behavior of a pseudoâ€2D spoutâ€fluidized bed with liquid injection. AIChE Journal, 2015, 61, 1146-1159.	1.8	40

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73	Scale-Adaptive Simulation of a square cross-sectional bubble column. Chemical Engineering Science, 2015, 131, 101-108.	1.9	40
74	Experimental study of oblique impact of particles on wet surfaces. Chemical Engineering Research and Design, 2016, 110, 209-219.	2.7	40
75	Magnetic particle tracking for nonspherical particles in a cylindrical fluidized bed. AICHE Journal, 2017, 63, 5335-5342.	1.8	40
76	Lane change in flows through pillared microchannels. Physics of Fluids, 2017, 29, 113102.	1.6	40
77	Experimental investigations of a pseudo-2D spout fluidized bed with draft plates. Chemical Engineering Science, 2013, 102, 524-543.	1.9	38
78	Bubble Size Distribution in Two-Dimensional Gasâ€“Solid Fluidized Beds. Industrial & Engineering Chemistry Research, 2012, 51, 6571-6579.	1.8	36
79	Direct Numerical Simulation (DNS) of mass, momentum and heat transfer in dense fluid-particle systems. Current Opinion in Chemical Engineering, 2014, 5, 84-89.	3.8	35
80	Collision dynamics of wet solids: Rebound and rotation. Powder Technology, 2017, 316, 218-224.	2.1	35
81	Immersed boundary method (IBM) based direct numerical simulation of openâ€cell solid foams: Hydrodynamics. AICHE Journal, 2017, 63, 1152-1173.	1.8	35
82	Bubbles in spacers: Direct observation of bubble behavior in spacer filled membrane channels. Journal of Membrane Science, 2009, 333, 38-44.	4.1	34
83	Direct Numerical Simulation of Fluid Flow and Mass Transfer in Dense Fluidâ€“Particle Systems. Industrial & Engineering Chemistry Research, 2013, 52, 11266-11274.	1.8	34
84	Experimental and numerical investigations of a pseudo-2D spout fluidized bed with draft plates. Powder Technology, 2015, 270, 537-547.	2.1	34
85	Drag and heat transfer closures for realistic numerically generated random open-cell solid foams using an immersed boundary method. Chemical Engineering Science, 2018, 183, 260-274.	1.9	34
86	Extension of PIV for measuring granular temperature field in dense fluidized beds. AICHE Journal, 2007, 53, 108-118.	1.8	33
87	Improved digital image analysis technique for the evaluation of segregation in pseudo-2D beds. Powder Technology, 2013, 244, 61-74.	2.1	33
88	Numerical investigation of collision dynamics of wet particles via force balance. Chemical Engineering Research and Design, 2018, 132, 1143-1159.	2.7	32
89	Segregation dynamics in dense polydisperse gas-fluidized beds. Powder Technology, 2013, 246, 695-706.	2.1	31
90	Discrete bubble modeling for a micro-structured bubble column. Chemical Engineering Science, 2013, 100, 496-505.	1.9	31

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91	Determination and comparison of rotational velocity in a pseudo 2â€Ð fluidized bed using magnetic particle tracking and discrete particle modeling. AICHE Journal, 2015, 61, 3198-3207.	1.8	31
92	Effect of bed size on hydrodynamics in 3â€Ð gasâ€“solid fluidized beds. AICHE Journal, 2015, 61, 1492-1506.	1.8	31
93	CFD modeling of multiphase flow in an alkaline water electrolyzer. Chemical Engineering Science, 2020, 227, 115926.	1.9	31
94	On the relationship between operating pressure and granular temperature: A discrete particle simulation study. Powder Technology, 2008, 182, 250-256.	2.1	30
95	Discrete particle simulations of an electric-field enhanced fluidized bed. Powder Technology, 2008, 183, 196-206.	2.1	30
96	Solids velocity fields in a cold-flow Gasâ€“Solid Vortex Reactor. Chemical Engineering Science, 2015, 123, 220-230.	1.9	30
97	Effect of superficial gas velocity on the particle temperature distribution in a fluidized bed with heat production. Chemical Engineering Science, 2016, 140, 279-290.	1.9	30
98	Experimental and numerical study of wall-induced granular convection. Powder Technology, 2008, 184, 166-176.	2.1	29
99	Numerical investigation of the drag closure for bubbles in bubble swarms. Chemical Engineering Science, 2011, 66, 3309-3316.	1.9	29
100	A sharp-interface Immersed Boundary Method to simulate convective and conjugate heat transfer through highly complex periodic porous structures. Chemical Engineering Science, 2018, 191, 1-18.	1.9	29
101	On image pre-processing for PIV of single- and two-phase flows over reflecting objects. Experiments in Fluids, 2010, 49, 525-530.	1.1	28
102	Numerical modeling of carbon dioxide chemisorption in sodium hydroxide solution in a micro-structured bubble column. Chemical Engineering Science, 2015, 137, 685-696.	1.9	28
103	Experimental studies of bubbly flow in a pseudo-2D micro-structured bubble column reactor using digital image analysis. Chemical Engineering Science, 2015, 130, 18-30.	1.9	28
104	Detailed computational and experimental fluid dynamics of fluidized beds. Applied Mathematical Modelling, 2006, 30, 1459-1471.	2.2	27
105	Experimental study on orientation and de-mixing phenomena of elongated particles in gas-fluidized beds. Powder Technology, 2018, 329, 332-344.	2.1	27
106	Gasâ^'Solid Turbulent Flow in a Circulating Fluidized Bed Riser: Experimental and Numerical Study of Monodisperse Particle Systems. Industrial & Engineering Chemistry Research, 2009, 48, 8091-8097.	1.8	26
107	Direct numerical simulation of effective drag in dense gasâ€“liquidâ€“solid three-phase flows. Chemical Engineering Science, 2017, 158, 561-568.	1.9	26
108	Aspect ratio of bubbles in different liquid media: A novel correlation. Chemical Engineering Science, 2020, 215, 115383.	1.9	26

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109	Direct Numerical Simulations of gasâ€“liquidâ€“solid three phase flows. Chemical Engineering Science, 2013, 100, 293-299.	1.9	25
110	Numerical and experimental investigation of induced flow and dropletâ€“droplet interactions in a liquid spray. Chemical Engineering Science, 2015, 138, 17-30.	1.9	25
111	Numerical study of homogeneous bubbly flow: Influence of the inlet conditions to the hydrodynamic behavior. International Journal of Multiphase Flow, 2009, 35, 1077-1099.	1.6	24
112	Bubble formation at a central orifice in a gasâ€“solid fluidized bed predicted by three-dimensional two-fluid model simulations. Chemical Engineering Journal, 2014, 245, 217-227.	6.6	24
113	Competing Marangoni effects form a stagnant cap on the interface of a hydrogen bubble attached to a microelectrode. Electrochimica Acta, 2021, 385, 138298.	2.6	24
114	Numerical investigation of hydrodynamics and mass transfer for in-line fiber arrays in laminar cross-flow at low Reynolds numbers. Chemical Engineering Science, 2005, 60, 1837-1847.	1.9	23
115	Lagrangian modelling of dilute granular flowâ€”modified stochastic DSMC versus deterministic DPM. Chemical Engineering Science, 2014, 105, 132-142.	1.9	23
116	Experimental study of monodisperse granular flow through an inclined rotating chute. Powder Technology, 2013, 246, 235-246.	2.1	22
117	Dynamics of wet particleâ€“wall collisions: Influence of wetting condition. Chemical Engineering Research and Design, 2018, 135, 21-29.	2.7	22
118	Numerical Investigation on the Effect of Pressure on Fluidization in a 3D Fluidized Bed. Industrial & Engineering Chemistry Research, 2014, 53, 17487-17498.	1.8	21
119	On an efficient hybrid soft and hard sphere collision integration scheme for DEM. Chemical Engineering Science, 2016, 153, 363-373.	1.9	20
120	Particle image velocimetry measurements in an aerated stirred tank. Chemical Engineering Communications, 2002, 189, 1208-1221.	1.5	19
121	Experimental Study of Large Scale Fluidized Beds at Elevated Pressure. Industrial & Engineering Chemistry Research, 2012, 51, 1962-1969.	1.8	19
122	Measurement of Turbulent Mixing in a Confined Wake Flow Using Combined PIV and PLIF. Canadian Journal of Chemical Engineering, 2003, 81, 1149-1158.	0.9	17
123	Novel phenomenological discrete bubble model of freely bubbling dense gasâ€“solid fluidized beds: Application to twoâ€dimensional beds. AICHE Journal, 2012, 58, 3306-3317.	1.8	17
124	On the treatment of bed-to-wall heat transfer in CFD-DEM simulations of gas-fluidized beds. Chemical Engineering Science, 2021, 236, 116492.	1.9	17
125	Effect of operating pressure on particle temperature distribution in a fluidized bed with heat production. Chemical Engineering Science, 2017, 169, 299-309.	1.9	16
126	Cutting bubbles with a single wire. Chemical Engineering Science, 2017, 157, 138-146.	1.9	16

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127	A numerical study of cutting bubbles with a wire mesh. Chemical Engineering Science, 2017, 165, 25-32.	1.9	16
128	An improved subgrid scale model for frontâ€tracking based simulations of mass transfer from bubbles. AICHE Journal, 2020, 66, e16889.	1.8	16
129	Discrete Particle Simulation Study on the Influence of the Restitution Coefficient on Spout Fluidized-Bed Dynamics. Chemical Engineering and Technology, 2009, 32, 454-462.	0.9	15
130	Effect of Superficial Gas Velocity on the Solid Temperature Distribution in Gas Fluidized Beds with Heat Production. Industrial & Engineering Chemistry Research, 2017, 56, 8729-8737.	1.8	15
131	CFD modeling of a prismatic spouted bed with two adjustable gas inlets. Canadian Journal of Chemical Engineering, 2009, 87, 318-328.	0.9	14
132	On the accuracy of Landweber and Tikhonov reconstruction techniques in gasâ€solid fluidized bed applications. AICHE Journal, 2015, 61, 4102-4113.	1.8	14
133	Experimental and numerical investigation of a micro-structured bubble column with chemisorption. Chemical Engineering Science, 2017, 169, 225-234.	1.9	14
134	Interfaceâ€resolved simulations of normal collisions of spheres on a wet surface. AICHE Journal, 2017, 63, 4774-4787.	1.8	14
135	Numerical Investigation of Gas Holdup and Phase Mixing in Bubble Column Reactors. Industrial & Engineering Chemistry Research, 2012, 51, 1949-1961.	1.8	13
136	Numerical Analysis of the Effect of Gas Sparging on Bubble Column Hydrodynamics. Industrial & Engineering Chemistry Research, 2011, 50, 4320-4328.	1.8	12
137	Particle mixing rates using the two-fluid model. Particuology, 2018, 36, 13-26.	2.0	12
138	Tracking of particles using TFM in gas-solid fluidized beds. Advanced Powder Technology, 2018, 29, 2538-2547.	2.0	12
139	Hydrodynamic and Heat Transfer Study of a Fluidized Bed by Discrete Particle Simulations. Processes, 2020, 8, 463.	1.3	12
140	Large-Eddy Simulation of a Particle-Laden Turbulent Channel Flow. ERCOFTAC Series, 2004, , 271-278.	0.1	11
141	Asymmetry-induced particle drift in a rotating flow. Physics of Fluids, 2005, 17, 072106.	1.6	10
142	Solids volume fraction measurements on riser flow using a temporalâ€histogram based DIA method. AICHE Journal, 2016, 62, 2681-2698.	1.8	10
143	Gasâ€“liquid mass transfer enhancement by catalyst particles, a modelling study. Chemical Engineering Science, 2016, 145, 233-244.	1.9	10
144	A combined experimental and simulation study of fluid-particle heat transfer in dense arrays of stationary particles. Chemical Engineering Science, 2017, 169, 310-320.	1.9	10

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145	Modelling compression ignition engines by incorporation of the flamelet generated manifolds combustion closure. Combustion Theory and Modelling, 2019, 23, 414-438.	1.0	10
146	Bubble Behaviour in Fluidised Beds at Elevated Pressures. Macromolecular Materials and Engineering, 2011, 296, 270-277.	1.7	9
147	Multi-Level Modelling of Dispersed Gas-Liquid Two-Phase Flows. Heat and Mass Transfer, 2004, , 139-157.	0.2	9
148	Threeâ€Ðimensional Computational Fluid Dynamics Modeling of a Prismatic Spouted Bed. Chemical Engineering and Technology, 2009, 32, 470-481.	0.9	8
149	Immersed Boundary Method applied to single phase flow past crossing cylinders. Chemical Engineering Science, 2013, 100, 33-38.	1.9	7
150	Scaling method of CFD-DEM simulations for gas-solid flows in risers. Chemical Engineering Science: X, 2020, 6, 100054.	1.5	7
151	CFD-DEM simulations of riser geometry effect and cluster phenomena. Advanced Powder Technology, 2021, 32, 3234-3247.	2.0	7
152	An experimental study of dynamic jet behaviour in a scaled cold flow spray dryer model using PIV. Canadian Journal of Chemical Engineering, 2014, 92, 2013-2020.	0.9	6
153	CFD modeling of droplet permeability in fluidized beds. International Journal of Multiphase Flow, 2022, 152, 104069.	1.6	5
154	Numerical simulation of dense gas-particle flows using the Euler Lagrange approach. Progress in Computational Fluid Dynamics, 2007, 7, 152.	0.1	4
155	Bubble properties of heterogeneous bubbly flows in a square bubble column. , 2010, , .		4
156	Hybrid PIV/PTV measurements of velocity and position distributions of gasâ€conveyed particles in small, narrow channels. AICHE Journal, 2015, 61, 3616-3627.	1.8	4
157	Eulerâ€“Lagrange Modeling of the Hydrodynamics of Dense Multiphase Flows. Advances in Chemical Engineering, 2015, 46, 137-191.	0.5	4
158	Borescopy in pressurized gasâ€solid fluidized beds. AICHE Journal, 2018, 64, 3303-3311.	1.8	4
159	Borescopic particle image velocimetry in bubbling gasâ€“solid fluidized beds. Particuology, 2019, 43, 66-75.	2.0	4
160	Trajectory integrated smoothening of exchange fields for discrete phase simulations. Computers and Fluids, 2019, 186, 15-23.	1.3	4
161	DNS of droplet impact on a solid particle: Effect of wettability on solid conjugate heat transfer. International Journal of Heat and Mass Transfer, 2020, 158, 119859.	2.5	4
162	Chapter 23 Multi-level computational fluid dynamics models for the description of particle mixing and granulation in fluidized beds. Handbook of Powder Technology, 2007, 11, 1071-1107.	0.1	3

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163	Incorporation of flamelets generated manifold method in coarse-grained Euler-Lagrange simulations of pulverized coal combustion. Chemical Engineering Science, 2022, 260, 117838.	1.9	3
164	Single Contaminated Drops Falling through Stagnant Liquid at Low Reynolds Numbers. Fluids, 2022, 7, 55.	0.8	1
165	Immersed boundary method applied to single phase flow past crossing cylinders â€“ Heat transfer. Chemical Engineering Science, 2015, 123, 322-327.	1.9	0
166	10.1063/1.1978921.1. , 2005, , .		0
167	Extending the Flamelet Generated Manifold for Soot and NOx Modeling in Diesel Spray Combustion. The Proceedings of the International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines, 2017, 2017.9, A105.	0.1	0