

Zongyan Zhou

List of Publications by Year in descending order

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123
papers

7,210
citations

109321

35
h-index

56724

83
g-index

123
all docs

123
docs citations

123
times ranked

3066
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical simulation of fuel layered distribution iron ore sintering technology. <i>Ironmaking and Steelmaking</i> , 2022, 49, 83-100.	2.1	6
2	Powder deposition mechanism during powder spreading with different spreader geometries in powder bed fusion additive manufacturing. <i>Powder Technology</i> , 2022, 395, 802-810.	4.2	16
3	Particle scale modelling of melt pool dynamics and pore formation in selective laser melting additive manufacturing. <i>Powder Technology</i> , 2022, 397, 117012.	4.2	22
4	Numerical studies of mixing of ellipsoidal particles in a bladed mixer. <i>Powder Technology</i> , 2022, 398, 117065.	4.2	9
5	Influence of baffles on mixing and heat transfer characteristics in an internally heated rotating drum. <i>Powder Technology</i> , 2022, 398, 117129.	4.2	4
6	Discrete particle simulation for mixing of granular materials in ribbon mixers: A scale-up study. <i>Powder Technology</i> , 2022, 400, 117222.	4.2	8
7	Computer simulation of the packing of nanoparticles. <i>Powder Technology</i> , 2022, 401, 117317.	4.2	4
8	Modelling of keyhole dynamics and melt pool flow in laser powder bed fusion process. <i>Powder Technology</i> , 2022, 400, 117262.	4.2	16
9	Scaling up studies for mixing of granular materials in rotating drums. <i>Powder Technology</i> , 2022, 403, 117408.	4.2	7
10	Melt pool dynamics and pores formation in multi-track studies in laser powder bed fusion process. <i>Powder Technology</i> , 2022, 405, 117533.	4.2	9
11	Numerical studies of melt pool and gas bubble dynamics in laser powder bed fusion process. <i>Additive Manufacturing</i> , 2022, 56, 102913.	3.0	9
12	DEM study of particle segregation in the throat region of a blast furnace. <i>Powder Technology</i> , 2022, 407, 117660.	4.2	6
13	A three-phase model for simulation of heat transfer and melt pool behaviour in laser powder bed fusion process. <i>Powder Technology</i> , 2021, 381, 298-312.	4.2	32
14	Size segregation of granular materials during Paul-Wurth hopper charging and discharging process. <i>Powder Technology</i> , 2021, 378, 497-509.	4.2	5
15	Effect of particle shape on bubble dynamics in bubbling fluidized bed. <i>EPJ Web of Conferences</i> , 2021, 249, 06012.	0.3	3
16	Vibration induced segregation of single large particles. <i>EPJ Web of Conferences</i> , 2021, 249, 14006.	0.3	0
17	Investigation of laser-powder interaction in laser powder bed fusion process in additive manufacturing. <i>EPJ Web of Conferences</i> , 2021, 249, 12002.	0.3	0
18	Influence of satellite and agglomeration of powder on the processability of AlSi10Mg powder in Laser Powder Bed Fusion. <i>Journal of Materials Research and Technology</i> , 2021, 11, 2059-2073.	5.8	35

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19	Particle shape-induced axial segregation of binary mixtures of spheres and ellipsoids in a rotating drum. <i>Chemical Engineering Science</i> , 2021, 235, 116491.	3.8	14
20	Effects of spreader geometry on powder spreading process in powder bed additive manufacturing. <i>Powder Technology</i> , 2021, 384, 211-222.	4.2	57
21	DEM study of particle motion in novel high-speed seed metering device. <i>Advanced Powder Technology</i> , 2021, 32, 1438-1449.	4.1	35
22	Dynamic analysis of poured packing process of ellipsoidal particles. <i>Powder Technology</i> , 2021, 385, 444-454.	4.2	3
23	An improved potential flow model for funnel flow prediction in a central discharging packed bed. <i>Granular Matter</i> , 2021, 23, 1.	2.2	0
24	Radial segregation of a gaussian-dispersed mixture of superquadric particles in a horizontal rotating drum. <i>Powder Technology</i> , 2021, 394, 813-824.	4.2	14
25	Preface for the virtual special issue: Computational particle technology. <i>Powder Technology</i> , 2021, 397, 116151-116151.	4.2	0
26	Experimental and numerical studies of the gas-molten reduction behavior of blast furnace dust particles during in-flight process. <i>Powder Technology</i> , 2020, 361, 226-237.	4.2	9
27	Orientation of spheroidal particles in single jet bubbling fluidized beds. <i>Powder Technology</i> , 2020, 361, 363-373.	4.2	14
28	Segregation of granular binary mixtures with large particle size ratios during hopper discharging process. <i>Powder Technology</i> , 2020, 361, 435-445.	4.2	23
29	CFD-DEM modelling of mixing of granular materials in multiple jets fluidized beds. <i>Powder Technology</i> , 2020, 361, 315-325.	4.2	18
30	Experimental and numerical investigation on the packing of binary mixtures of spheres and ellipsoids. <i>Powder Technology</i> , 2020, 360, 1210-1219.	4.2	11
31	Adhesion effects on spreading of metal powders in selective laser melting. <i>Powder Technology</i> , 2020, 363, 602-610.	4.2	65
32	Effect of van der Waals force on bubble dynamics in bubbling fluidized beds of ellipsoidal particles. <i>Chemical Engineering Science</i> , 2020, 212, 115343.	3.8	19
33	Particle velocity distribution function around a single bubble in gas-solid fluidized beds. <i>Powder Technology</i> , 2020, 361, 33-44.	4.2	10
34	An experimental study of packing of ellipsoids under vibrations. <i>Powder Technology</i> , 2020, 361, 45-51.	4.2	10
35	Wall stress analysis in an unsteady hopper flow with ellipsoidal particles. <i>Powder Technology</i> , 2020, 361, 1-9.	4.2	9
36	A Discrete Element Method Study of Monodisperse Mixing of Ellipsoidal Particles in a Rotating Drum. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 12458-12470.	3.7	24

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37	Influence of particle shape on mixing rate in rotating drums based on super-quadric DEM simulations. <i>Advanced Powder Technology</i> , 2020, 31, 3540-3550.	4.1	52
38	Comparative investigation on the reduction behavior of blast furnace dust particles during in-flight process in hydrogen-rich and carbon monoxide atmospheres. <i>Powder Technology</i> , 2020, 366, 709-721.	4.2	13
39	Statistical analysis of monodispersed coarse particle motion in a gas-fluidized bed. <i>Powder Technology</i> , 2020, 363, 107-111.	4.2	4
40	Deformation of 3D printed agglomerates: Multiscale experimental tests and DEM simulation. <i>Chemical Engineering Science</i> , 2020, 217, 115526.	3.8	28
41	Numerical simulation of particle motion characteristics in quantitative seed feeding system. <i>Powder Technology</i> , 2020, 367, 643-658.	4.2	37
42	Particle shape-induced radial segregation of binary mixtures in a rotating drum. <i>Powder Technology</i> , 2019, 341, 157-166.	4.2	48
43	Bubble dynamics in bubbling fluidized beds of ellipsoidal particles. <i>AIChE Journal</i> , 2019, 65, e16736.	3.6	25
44	Micromechanical analysis of bubbles formed in fluidized beds operated with a continuous single jet. <i>Powder Technology</i> , 2019, 357, 398-407.	4.2	7
45	Radial segregation of binary-sized ellipsoids in a rotating drum. <i>Powder Technology</i> , 2019, 357, 322-330.	4.2	14
46	DEM analysis of compression breakage of 3D printed agglomerates with different structures. <i>Powder Technology</i> , 2019, 356, 1045-1058.	4.2	19
47	CFD-DEM modelling of mixing and segregation of binary mixtures of ellipsoidal particles in liquid fluidizations. <i>Journal of Hydrodynamics</i> , 2019, 31, 1190-1203.	3.2	12
48	Evaluation of reduction behavior of blast furnace dust particles during in-flight process with experiment aided mathematical modeling. <i>Applied Mathematical Modelling</i> , 2019, 75, 535-552.	4.2	8
49	How to generate valid local quantities of particle-fluid flows for establishing constitutive relations. <i>AIChE Journal</i> , 2019, 65, e16690.	3.6	21
50	Flow regimes of cohesionless ellipsoidal particles in a rotating drum. <i>Powder Technology</i> , 2019, 354, 174-187.	4.2	26
51	Particle shape effect on bubble dynamics in central air jet pseudo-2D fluidized beds: A CFD-DEM study. <i>Chemical Engineering Science</i> , 2019, 201, 448-466.	3.8	44
52	The demagnetization factor for randomly packed spheroidal particles. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 476, 417-422.	2.3	13
53	DEM simulation of the local ordering of tetrahedral granular matter. <i>Soft Matter</i> , 2019, 15, 2260-2268.	2.7	19
54	Flow and force analysis on the formation of expanded beds in gas fluidization of fine ellipsoids. <i>Powder Technology</i> , 2019, 357, 291-304.	4.2	3

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55	Particle scale modelling of mixing of ellipsoids and spheres in gas-fluidized beds by a modified drag correlation. Powder Technology, 2019, 343, 619-628.	4.2	22
56	Investigation of causes of layer inversion and prediction of inversion velocity in liquid fluidizations of binary particle mixtures. Powder Technology, 2019, 342, 418-432.	4.2	9
57	Flow and wall stress analysis of granular materials around blocks attached to a wall. Powder Technology, 2018, 330, 431-444.	4.2	9
58	Equivalent packing size of spheroidal particles: A microscopic test. Powder Technology, 2018, 333, 286-292.	4.2	13
59	Model A vs. Model B in the modelling of particle-fluid flow. Powder Technology, 2018, 329, 47-54.	4.2	24
60	Process optimization of metallurgical dust recycling by direct reduction in rotary hearth furnace. Powder Technology, 2018, 326, 101-113.	4.2	32
61	Size-induced segregation of granular materials during filling a conical hopper. Powder Technology, 2018, 340, 331-343.	4.2	22
62	Experimental study of the deformation and breakage of 3D printed agglomerates: Effects of packing density and inter-particle bond strength. Powder Technology, 2018, 340, 299-310.	4.2	18
63	Structure analysis on the packing of ellipsoids under one-dimensional vibration and periodic boundary conditions. Powder Technology, 2018, 335, 327-333.	4.2	9
64	Particle scale modelling of solid flow characteristics in liquid fluidizations of ellipsoidal particles. Powder Technology, 2018, 338, 677-691.	4.2	7
65	Particle scale modelling of bubble properties in central air jet gas-solid fluidized beds. Powder Technology, 2018, 339, 70-80.	4.2	20
66	Discrete particle simulation of solid flow in a melter-gasifier in smelting reduction process. Powder Technology, 2017, 314, 641-648.	4.2	19
67	Micromechanical analysis of flow behaviour of fine ellipsoids in gas fluidization. Chemical Engineering Science, 2017, 163, 11-26.	3.8	24
68	Effect of particle shape and size on effective thermal conductivity of packed beds. Powder Technology, 2017, 311, 157-166.	4.2	64
69	CFD-DEM simulation of raceway formation in an ironmaking blast furnace. Powder Technology, 2017, 314, 542-549.	4.2	80
70	Interparticle force analysis on the packing of fine ellipsoids. Powder Technology, 2017, 320, 610-624.	4.2	28
71	Transverse mixing of ellipsoidal particles in a rotating drum. EPJ Web of Conferences, 2017, 140, 06018.	0.3	8
72	Stress distribution in conical sandpiles formed with ellipsoidal particles. EPJ Web of Conferences, 2017, 140, 06023.	0.3	1

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73	A CFD-DEM study of single bubble formation in gas fluidization of spherical and non-spherical particles. EPJ Web of Conferences, 2017, 140, 15026.	0.3	5
74	DEM Simulation of Particle Stratification and Segregation in Stockpile Formation. EPJ Web of Conferences, 2017, 140, 15018.	0.3	8
75	DEM study of granular flow around blocks attached to inclined walls. EPJ Web of Conferences, 2017, 140, 03075.	0.3	0
76	CFD-DEM modeling of gas fluidization of fine ellipsoidal particles. AICHE Journal, 2016, 62, 62-77.	3.6	67
77	A GPU-based DEM approach for modelling of particulate systems. Powder Technology, 2016, 301, 1172-1182.	4.2	111
78	DEM simulation on the packing of fine ellipsoids. Chemical Engineering Science, 2016, 156, 64-76.	3.8	72
79	Particle scale study of heat transfer in packed and fluidized beds of ellipsoidal particles. Chemical Engineering Science, 2016, 144, 201-215.	3.8	79
80	Gas-solid flow and heat transfer in fluidized beds with tubes: Effects of material properties and tube array settings. Powder Technology, 2016, 296, 59-71.	4.2	58
81	Particle Scale Study of Heat Transfer in Packed and Fluidized Beds. Advances in Chemical Engineering, 2015, 46, 193-243.	0.9	4
82	Numerical Investigation of Burden Distribution in a Blast Furnace. Steel Research International, 2015, 86, 651-661.	1.8	44
83	Particle scale studies of heat transfer in a moving bed. Powder Technology, 2015, 281, 99-111.	4.2	53
84	A New Approach for Studying Softening and Melting Behavior of Particles in a Blast Furnace Cohesive Zone. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 977-992.	2.1	26
85	Discrete particle simulation of solid flow in a three-dimensional blast furnace sector model. Chemical Engineering Journal, 2015, 278, 339-352.	12.7	57
86	Lattice-Boltzmann simulation of fluid flow through packed beds of uniform ellipsoids. Powder Technology, 2015, 285, 146-156.	4.2	81
87	Particle scale simulation of softening-melting behaviour of multiple layers of particles in a blast furnace cohesive zone. Powder Technology, 2015, 279, 134-145.	4.2	31
88	Angle of repose and stress distribution of sandpiles formed with ellipsoidal particles. Granular Matter, 2014, 16, 695-709.	2.2	66
89	Flow characteristics and discharge rate of ellipsoidal particles in a flat bottom hopper. Powder Technology, 2014, 253, 70-79.	4.2	144
90	Periodic Boundary Conditions for Discrete Element Method Simulation of Particle Flow in Cylindrical Vessels. Industrial & Engineering Chemistry Research, 2014, 53, 8245-8256.	3.7	44

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91	Contact forces between viscoelastic ellipsoidal particles. Powder Technology, 2013, 248, 25-33.	4.2	75
92	Discrete modelling of the packing of ellipsoidal particles. , 2013, , .		4
93	Computational study of heat transfer in gas fluidization. , 2013, , .		0
94	Microscopic analysis of Hopper flow with ellipsoidal particles. , 2013, , .		0
95	Segregation of binary mixtures of spheres and ellipsoids. AIP Conference Proceedings, 2013, , .	0.4	8
96	Discrete element modeling of gas fluidization of fine ellipsoidal particles. AIP Conference Proceedings, 2013, , .	0.4	1
97	Contact analysis of different flow regimes in gas fluidization. , 2013, , .		1
98	Impaction of particle streams on a granular bed. , 2013, , .		1
99	Micromechanical modeling and analysis of different flow regimes in gas fluidization. Chemical Engineering Science, 2012, 84, 449-468.	3.8	106
100	Computational Study of the Effects of Material Properties on Heat Transfer in Gas Fluidization. Industrial & Engineering Chemistry Research, 2012, 51, 11572-11586.	3.7	53
101	Computational study of heat transfer in a bubbling fluidized bed with a horizontal tube. AIChE Journal, 2012, 58, 1422-1434.	3.6	113
102	Dynamic Simulation of the Packing of Ellipsoidal Particles. Industrial & Engineering Chemistry Research, 2011, 50, 9787-9798.	3.7	178
103	Linking discrete particle simulation to continuum process modelling for granular matter: Theory and application. Particology, 2011, 9, 342-357.	3.6	29
104	Discrete particle simulation of gas fluidization of ellipsoidal particles. Chemical Engineering Science, 2011, 66, 6128-6145.	3.8	198
105	Numerical simulation of the liquid-induced erosion in a weakly bonded sand assembly. Powder Technology, 2011, 211, 237-249.	4.2	32
106	Gas-solid flow in an ironmaking blast furnace-II: Discrete particle simulation. Powder Technology, 2011, 208, 72-85.	4.2	78
107	Gas-solid flow in an ironmaking blast furnace -I: Physical modelling. Powder Technology, 2011, 208, 86-97.	4.2	55
108	Numerical Investigation of the Transient Multiphase Flow in an Ironmaking Blast Furnace. ISIJ International, 2010, 50, 515-523.	1.4	56

#	ARTICLE	IF	CITATIONS
109	A new computational method for studying heat transfer in fluid bed reactors. Powder Technology, 2010, 197, 102-110.	4.2	120
110	Discrete particle simulation of particle-fluid flow: model formulations and their applicability. Journal of Fluid Mechanics, 2010, 661, 482-510.	3.4	605
111	The role of geometric constraints in random packing of non-spherical particles. Europhysics Letters, 2010, 92, 68005.	2.0	16
112	Investigation of Heat Transfer in Bubbling Fluidization with an Immersed Tube. , 2010, , .		2
113	Simulation of the Flow and Segregation of Particle Mixtures in Liquid Fluidization. , 2009, , .		15
114	Particle scale study of heat transfer in packed and bubbling fluidized beds. AIChE Journal, 2009, 55, 868-884.	3.6	261
115	Stress fields of solid flow in a model blast furnace. Granular Matter, 2009, 11, 269-280.	2.2	15
116	Averaging method of particulate systems and its application to particle-fluid flow in a fluidized bed. Science Bulletin, 2009, 54, 4309-4317.	9.0	10
117	Effect of Contact Resistance on Bulk Resistivity of Dry Coke Beds. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 388-396.	2.1	13
118	Discrete particle simulation of gas-solid flow in a blast furnace. Computers and Chemical Engineering, 2008, 32, 1760-1772.	3.8	85
119	Discrete particle simulation of particulate systems: A review of major applications and findings. Chemical Engineering Science, 2008, 63, 5728-5770.	3.8	1,172
120	Discrete particle simulation of particulate systems: Theoretical developments. Chemical Engineering Science, 2007, 62, 3378-3396.	3.8	1,516
121	Discrete Particle Simulation of Solid Flow in a Model Blast Furnace. ISIJ International, 2005, 45, 1828-1837.	1.4	93
122	Numerical simulation of the interaction forces between turbine meter and particles in a standpipe. Granular Matter, 2004, 5, 193-199.	2.2	3
123	A simplified mathematical model for gas-solid flow in a blast furnace. Progress in Computational Fluid Dynamics, 2004, 4, 39.	0.2	18