

Chuan-Yu Wu

List of Publications by Year in descending order

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138
papers

5,687
citations

94433

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all docs

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docs citations

145
times ranked

3232
citing authors

#	ARTICLE	IF	CITATIONS
1	GPU-enhanced DEM analysis of flow behaviour of irregularly shaped particles in a full-scale twin screw granulator. <i>Particuology</i> , 2022, 61, 30-40.	3.6	18
2	Numerical analysis of frictional charging and electrostatic interaction of particles. <i>AICHE Journal</i> , 2022, 68, e17444.	3.6	7
3	Infiltration and resuspension of dilute particle suspensions in micro cavity flow. <i>Powder Technology</i> , 2022, 395, 400-411.	4.2	6
4	Effect of electrostatic interactions on particle dispersion in a rotating spherical container. <i>Powder Technology</i> , 2022, 398, 117063.	4.2	2
5	Elastoplastic frictional collisions with Collisional-SPH. <i>Tribology International</i> , 2022, 168, 107438.	5.9	7
6	Numerical analysis of die filling with a forced feeder using GPU-enhanced discrete element methods. <i>International Journal of Pharmaceutics</i> , 2022, 622, 121861.	5.2	2
7	DEM analysis of residence time distribution during twin screw granulation. <i>Powder Technology</i> , 2021, 377, 924-938.	4.2	32
8	Lateral migration of a neutrally buoyant particle in Couette flow with thermal convection. <i>International Journal of Multiphase Flow</i> , 2021, 138, 103612.	3.4	9
9	Inertial migration of a non-neutrally buoyant particle in a linear shear flow with thermal convection. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	2
10	Inertial migration of a neutrally buoyant circular particle in a planar Poiseuille flow with thermal fluids. <i>Physics of Fluids</i> , 2021, 33, .	4.0	9
11	Powder flow during linear and rotary die filling. <i>International Journal of Pharmaceutics</i> , 2021, 602, 120654.	5.2	3
12	Discrete element modelling of ribbon milling: A comparison of approaches. <i>Powder Technology</i> , 2021, 388, 63-69.	4.2	1
13	Effects of friction on stress on a plate penetrating into granular media. <i>Physics of Fluids</i> , 2021, 33, .	4.0	1
14	Investigation of powder flowability at low stresses by DEM modelling. <i>Chemical Engineering Science</i> , 2020, 211, 115307.	3.8	4
15	Discrete element analysis of normal elastic impact of wet particles. <i>Powder Technology</i> , 2020, 362, 628-634.	4.2	16
16	Impact of feed material properties on the milling of pharmaceutical ribbons: A PBM analysis. <i>International Journal of Pharmaceutics</i> , 2020, 590, 119954.	5.2	6
17	Modelling Complex Particle-Fluid Flow with a Discrete Element Method Coupled with Lattice Boltzmann Methods (DEM-LBM). <i>ChemEngineering</i> , 2020, 4, 55.	2.4	11
18	Data on rotary die filling performance of various pharmaceutical powders. <i>Data in Brief</i> , 2020, 32, 106220.	1.0	1

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19	The effects of screw-to-roll speed ratio on ribbon porosity during roll compaction. International Journal of Pharmaceutics, 2020, 588, 119770.	5.2	5
20	Flow behaviour of pharmaceutical powders during rotary die filling with a paddle feeder. International Journal of Pharmaceutics, 2020, 585, 119547.	5.2	12
21	Data on the drug release profiles and powder characteristics of the ethyl cellulose based microparticles prepared by the ultra-fine particle processing system. Data in Brief, 2020, 29, 105269.	1.0	2
22	The effect of particle shape on the packed bed effective thermal conductivity based on DEM with polyhedral particles on the GPU. Chemical Engineering Science, 2020, 219, 115584.	3.8	29
23	Investigation of powder flowability at low stresses: Influence of particle size and size distribution. Powder Technology, 2020, 364, 98-114.	4.2	30
24	Migration and agglomeration of adhesive microparticle suspensions in a pressure-driven duct flow. AICHE Journal, 2020, 66, e16974.	3.6	19
25	Coarse graining DEM simulations of a powder die-filling system. Powder Technology, 2020, 371, 83-95.	4.2	34
26	Determination of the flow/no-flow transition from a flat bottom hopper. Powder Technology, 2019, 358, 55-61.	4.2	20
27	Suction filling of pharmaceutical powders. Powder Technology, 2019, 355, 438-448.	4.2	9
28	Huperzine A loaded multiparticulate disintegrating tablet: Drug release mechanism of ethyl cellulose microparticles and pharmacokinetic study. Powder Technology, 2019, 355, 649-656.	4.2	4
29	Evolutions of temperature and density during roll compaction of a pharmaceutical excipient. International Journal of Pharmaceutics, 2019, 572, 118822.	5.2	8
30	Size-induced segregation during die filling. International Journal of Pharmaceutics: X, 2019, 1, 100032.	1.6	1
31	Analysis of inertial migration of neutrally buoyant particle suspensions in a planar Poiseuille flow with a coupled lattice Boltzmann method-discrete element method. Physics of Fluids, 2019, 31, 063301.	4.0	25
32	A numerical investigation into the effect of angular particle shape on blast furnace burden topography and percolation using a GPU solved discrete element model. Chemical Engineering Science, 2019, 204, 9-26.	3.8	37
33	Unified size-density and size-topology relations in random packings of dry adhesive polydisperse spheres. Physical Review E, 2019, 99, 022901.	2.1	6
34	Validation study on a scaling law model of the DEM in industrial gas-solid flows. Powder Technology, 2019, 343, 101-112.	4.2	65
35	Mechanistic analysis of solid-liquid flow during injection. Particuology, 2019, 44, 136-145.	3.6	0
36	Three-dimensional discrete element modelling of three point bending tests: The effect of surface energy on the tensile strength. Powder Technology, 2018, 337, 119-126.	4.2	14

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37	A hierarchical simulation methodology for rotary kilns including granular flow and heat transfer. <i>Minerals Engineering</i> , 2018, 119, 244-262.	4.3	22
38	Predictive modeling of die filling of the pharmaceutical granules using the flexible neural tree. <i>Neural Computing and Applications</i> , 2018, 29, 467-481.	5.6	9
39	DEM-PBM modeling of abrasion dominated ribbon breakage. <i>AIChE Journal</i> , 2018, 64, 1191-1204.	3.6	3
40	The effect of dry granulation on flow behaviour of pharmaceutical powders during die filling. <i>Powder Technology</i> , 2018, 337, 78-83.	4.2	19
41	Mechanistic investigation on the performance of Huperzine A loaded microparticles based on ultra-fine particle processing system. <i>Powder Technology</i> , 2018, 326, 370-378.	4.2	4
42	Interfacial strength of bilayer pharmaceutical tablets. <i>Powder Technology</i> , 2018, 337, 36-42.	4.2	11
43	Evaluation of Streptococcus thermophilus IFFI 6038 Microcapsules Prepared Using an Ultra-fine Particle Processing System. <i>AAPS PharmSciTech</i> , 2018, 19, 1020-1028.	3.3	6
44	Computational intelligence modelling of pharmaceutical tableting processes using bio-inspired optimization algorithms. <i>Advanced Powder Technology</i> , 2018, 29, 2966-2977.	4.1	26
45	An experimental study of die filling of pharmaceutical powders using a rotary die filling system. <i>International Journal of Pharmaceutics</i> , 2018, 553, 84-96.	5.2	22
46	Large-scale GPU based DEM modeling of mixing using irregularly shaped particles. <i>Advanced Powder Technology</i> , 2018, 29, 2476-2490.	4.1	64
47	Ball indentation on powder beds for assessing powder flowability: Analysis of operation window. <i>Powder Technology</i> , 2017, 310, 300-306.	4.2	26
48	On elastic-plastic normal contact force models, with and without adhesion. <i>Powder Technology</i> , 2017, 315, 339-346.	4.2	54
49	Ocular Cubosome Drug Delivery System for Timolol Maleate: Preparation, Characterization, Cytotoxicity, Ex Vivo, and In Vivo Evaluation. <i>AAPS PharmSciTech</i> , 2017, 18, 2919-2926.	3.3	80
50	Nanoporous mannitol carrier prepared by non-organic solvent spray drying technique to enhance the aerosolization performance for dry powder inhalation. <i>Scientific Reports</i> , 2017, 7, 46517.	3.3	31
51	Editorial for the special issue on simulation and modelling of particulate systems. <i>Powder Technology</i> , 2017, 314, 1.	4.2	3
52	DEM-PBM modeling of impact dominated ribbon milling. <i>AIChE Journal</i> , 2017, 63, 3692-3705.	3.6	19
53	Thermal properties of compacted pharmaceutical excipients. <i>International Journal of Pharmaceutics</i> , 2017, 534, 119-127.	5.2	13
54	Formation Mechanism and In Vitro Evaluation of Risperidone-Containing PLGA Microspheres Fabricated by Ultrafine Particle Processing System. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3363-3371.	3.3	9

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55	On the submerging of a spherical intruder into granular beds. EPJ Web of Conferences, 2017, 140, 02027.	0.3	1
56	On Identification of Critical Material Attributes for Compression Behaviour of Pharmaceutical Diluent Powders. Materials, 2017, 10, 845.	2.9	27
57	The Effects of Relative Humidity on the Flowability and Dispersion Performance of Lactose Mixtures. Materials, 2017, 10, 592.	2.9	30
58	Flowability assessment of weakly consolidated powders. EPJ Web of Conferences, 2017, 140, 03085.	0.3	0
59	DEM Analysis of the Effects of Die Shape and Orientation on Die Filling Processes. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 437-449.	0.5	1
60	Finite Element Modeling of Powder Compaction. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 451-462.	0.5	2
61	Bulk Solid Characterization. , 2016, , 17-38.		1
62	Particle Characterization. , 2016, , 39-65.		0
63	Particles in Fluids. , 2016, , 67-81.		3
64	Gas-Solid Systems. , 2016, , 83-118.		1
65	Liquid-Solid Systems. , 2016, , 119-133.		0
66	Mechanics of Bulk Solids. , 2016, , 135-159.		1
67	Particle-Particle Interaction. , 2016, , 161-212.		0
68	Discrete Element Methods. , 2016, , 213-242.		0
69	Finite Element Modeling. , 2016, , 243-277.		0
70	Dynamic impact milling model with a particle-scale breakage kernel. Computer Aided Chemical Engineering, 2016, , 475-480.	0.5	4
71	Numerical Study of the Orientation of Cylindrical Particles in a Circulating Fluidized Bed. Industrial & Engineering Chemistry Research, 2016, 55, 12806-12817.	3.7	12
72	Finite element analysis of thermomechanical behaviour of powders during tableting. Chemical Engineering Research and Design, 2016, 110, 141-151.	5.6	23

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73	The application of terahertz pulsed imaging in characterising density distribution of roll-compacted ribbons. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2016, 106, 20-25.	4.3	16
74	A novel use of friability testing for characterising ribbon milling behaviour. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2016, 104, 82-88.	4.3	3
75	An experimental investigation of temperature rise during compaction of pharmaceutical powders. <i>International Journal of Pharmaceutics</i> , 2016, 513, 97-108.	5.2	15
76	DEM-CFD analysis of contact electrification and electrostatic interactions during fluidization. <i>Powder Technology</i> , 2016, 304, 208-217.	4.2	43
77	Effect of particle shape on flow in discrete element method simulation of a rotary batch seed coater. <i>Powder Technology</i> , 2016, 296, 29-36.	4.2	79
78	DEM-CFD modeling of particle systems with long-range electrostatic interactions. <i>AIChE Journal</i> , 2015, 61, 1792-1803.	3.6	37
79	DEM analysis of the effect of electrostatic interaction on particle mixing for carrier-based dry powder inhaler formulations. <i>Particuology</i> , 2015, 23, 25-30.	3.6	34
80	The use of positron emission particle tracking (PEPT) to study milling of roll-compacted microcrystalline cellulose ribbons. <i>Powder Technology</i> , 2015, 285, 74-79.	4.2	10
81	Numerical analysis of contact electrification of non-spherical particles in a rotating drum. <i>Powder Technology</i> , 2015, 285, 110-122.	4.2	29
82	DEM analysis of the effect of particle-wall impact on the dispersion performance in carrier-based dry powder inhalers. <i>International Journal of Pharmaceutics</i> , 2015, 487, 32-38.	5.2	21
83	Contact electrification and charge distribution on elongated particles in a vibrating container. <i>Chemical Engineering Science</i> , 2015, 125, 238-247.	3.8	19
84	Numerical Modelling of Agglomeration and Deagglomeration in Dry Powder Inhalers: A Review. <i>Current Pharmaceutical Design</i> , 2015, 21, 5915-5922.	1.9	30
85	A linear model of elasto-plastic and adhesive contact deformation. <i>Granular Matter</i> , 2014, 16, 151-162.	2.2	62
86	Three-dimensional DEM-CFD analysis of air-flow-induced detachment of API particles from carrier particles in dry powder inhalers. <i>Acta Pharmaceutica Sinica B</i> , 2014, 4, 52-59.	12.0	32
87	A hybrid DEM/CFD approach for solid-liquid flows. <i>Journal of Hydrodynamics</i> , 2014, 26, 19-25.	3.2	30
88	Numerical analysis of contact electrification using DEM-CFD. <i>Powder Technology</i> , 2013, 248, 34-43.	4.2	70
89	DEM analysis of particle adhesion during powder mixing for dry powder inhaler formulation development. <i>Granular Matter</i> , 2013, 15, 417-426.	2.2	35
90	The effects of lubrication on roll compaction, ribbon milling and tableting. <i>Chemical Engineering Science</i> , 2013, 86, 9-18.	3.8	31

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91	Particulate mixing in a plough share mixer using DEM with realistic shaped particles. Powder Technology, 2013, 248, 103-120.	4.2	67
92	An investigation of the comparative behaviour of alternative contact force models during inelastic collisions. Powder Technology, 2013, 233, 30-46.	4.2	198
93	Micro-mechanics and dynamics of cohesive particle systems. Granular Matter, 2013, 15, 389-390.	2.2	4
94	Modeling gas-particle two-phase flows with complex and moving boundaries using DEM-CFD with an immersed boundary method. AIChE Journal, 2013, 59, 1075-1087.	3.6	54
95	A DEM model for contact electrification of irregular shaped particles. , 2013, , .		0
96	The influence of aspect ratio and roughness on flowability. AIP Conference Proceedings, 2013, , .	0.4	9
97	An energy-based splash function for the impact of particles with granular beds. AIP Conference Proceedings, 2013, , .	0.4	1
98	DEM analysis of effects of particle properties and mixing conditions on particle attachment processes. , 2013, , .		2
99	Cooperative dynamics of a group of intruders subsiding in granular media: A DEM study. , 2013, , .		2
100	Characterization of Powder Flowability for Die Filling. Particulate Science and Technology, 2012, 30, 378-389.	2.1	18
101	Modelling die filling with charged particles using DEM/CFD. Particuology, 2012, 10, 229-235.	3.6	32
102	Numerical modelling of suction filling using DEM/CFD. Chemical Engineering Science, 2012, 73, 231-238.	3.8	41
103	A comparative study of roll compaction of free-flowing and cohesive pharmaceutical powders. International Journal of Pharmaceutics, 2012, 428, 39-47.	5.2	35
104	The saltations of different sized particles in aeolian sand transport. Geomorphology, 2011, 134, 217-223.	2.6	3
105	3D DEM/CFD analysis of size-induced segregation during die filling. Powder Technology, 2011, 206, 177-188.	4.2	78
106	The effects of air and particle density difference on segregation of powder mixtures during die filling. Chemical Engineering Science, 2011, 66, 661-673.	3.8	43
107	An investigation of the comparative behaviour of alternative contact force models during elastic collisions. Powder Technology, 2011, 210, 189-197.	4.2	144
108	Numerical analysis of density-induced segregation during die filling. Powder Technology, 2010, 197, 111-119.	4.2	44

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109	Roller compaction of moist pharmaceutical powders. International Journal of Pharmaceutics, 2010, 391, 90-97.	5.2	32
110	Predicting the pressure distribution during roll compaction from uniaxial compaction measurements. Chemical Engineering Journal, 2010, 164, 410-417.	12.7	21
111	Quantitative investigation of powder flow during die filling using positron emission particle tracking. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2010, 224, 169-175.	2.5	6
112	Competing Flow of Dissimilar Granular Materials in Air. , 2009, , .		1
113	Predicting Rebound Kinematics of Elastic and Rigid Particles Resulting from Oblique Impacts. , 2009, , .		0
114	A semi-analytical model for oblique impacts of elastoplastic spheres. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 937-960.	2.1	76
115	A coupled DEM/CFD analysis of the effect of air on powder flow during die filling. AIChE Journal, 2009, 55, 49-62.	3.6	84
116	DEM/CFD modelling of the deposition of dilute granular systems in a vertical container. Science Bulletin, 2009, 54, 4318-4326.	9.0	9
117	A comparative study of compaction properties of binary and bilayer tablets. Powder Technology, 2009, 189, 285-294.	4.2	55
118	Characterisation of density distributions in roller-compacted ribbons using micro-indentation and X-ray micro-computed tomography. European Journal of Pharmaceutics and Biopharmaceutics, 2009, 72, 173-182.	4.3	92
119	Numerical and experimental investigation of capping mechanisms during pharmaceutical tablet compaction. Powder Technology, 2008, 181, 121-129.	4.2	146
120	DEM simulations of die filling during pharmaceutical tableting. Particuology, 2008, 6, 412-418.	3.6	69
121	The effect of lubrication on density distributions of roller compacted ribbons. International Journal of Pharmaceutics, 2008, 362, 52-59.	5.2	46
122	REBOUND BEHAVIOUR OF SPHERES DURING ELASTIC-PLASTIC OBLIQUE IMPACTS. International Journal of Modern Physics B, 2008, 22, 1095-1102.	2.0	11
123	Numerical and experimental investigations of the flow of powder into a confined space. Mechanics of Materials, 2006, 38, 304-324.	3.2	75
124	Predicting the Tensile Strength of Compacted Multi-Component Mixtures of Pharmaceutical Powders. Pharmaceutical Research, 2006, 23, 1898-1905.	3.5	66
125	Modelling the mechanical behaviour of pharmaceutical powders during compaction. Powder Technology, 2005, 152, 107-117.	4.2	255
126	A simple predictive model for the tensile strength of binary tablets. European Journal of Pharmaceutical Sciences, 2005, 25, 331-336.	4.0	105

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127	Energy dissipation during normal impact of elastic and elastic-plastic spheres. International Journal of Impact Engineering, 2005, 32, 593-604.	5.0	178
128	Experimental and numerical study of die filling, powder transfer and die compaction. Powder Metallurgy, 2005, 48, 68-76.	1.7	61
129	Large scale industrial DEM modelling. Engineering Computations, 2004, 21, 169-204.	1.4	292
130	Flow behaviour of powders during die filling. Powder Metallurgy, 2004, 47, 127-136.	1.7	74
131	Experimental and numerical investigations of powder transfer. Powder Technology, 2003, 138, 216-228.	4.2	38
132	The flow of powder into simple and stepped dies. Powder Technology, 2003, 134, 24-39.	4.2	110
133	Rebound behaviour of spheres for plastic impacts. International Journal of Impact Engineering, 2003, 28, 929-946.	5.0	200
134	Coefficients of restitution for elastoplastic oblique impacts. Advanced Powder Technology, 2003, 14, 435-448.	4.1	67
135	DEM modelling of industrial granular flows: 3D case studies and the effect of particle shape on hopper discharge. Applied Mathematical Modelling, 2002, 26, 89-111.	4.2	548
136	A theoretical model for the contact of elastoplastic bodies. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2001, 216, 421-431.	2.1	92
137	Impact behaviour of elastoplastic spheres with a rigid wall. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2000, 214, 1107-1114.	2.1	27
138	Conduction Modelling Using Smoothed Particle Hydrodynamics. Journal of Computational Physics, 1999, 148, 227-264.	3.8	490