

# Chuan-Yu Wu

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7057622/publications.pdf>

Version: 2024-02-01

138  
papers

5,687  
citations

94433

37  
h-index

79698

73  
g-index

145  
all docs

145  
docs citations

145  
times ranked

3232  
citing authors

#	ARTICLE	IF	CITATIONS
1	DEM modelling of industrial granular flows: 3D case studies and the effect of particle shape on hopper discharge. <i>Applied Mathematical Modelling</i> , 2002, 26, 89-111.	4.2	548
2	Conduction Modelling Using Smoothed Particle Hydrodynamics. <i>Journal of Computational Physics</i> , 1999, 148, 227-264.	3.8	490
3	Large scale industrial DEM modelling. <i>Engineering Computations</i> , 2004, 21, 169-204.	1.4	292
4	Modelling the mechanical behaviour of pharmaceutical powders during compaction. <i>Powder Technology</i> , 2005, 152, 107-117.	4.2	255
5	Rebound behaviour of spheres for plastic impacts. <i>International Journal of Impact Engineering</i> , 2003, 28, 929-946.	5.0	200
6	An investigation of the comparative behaviour of alternative contact force models during inelastic collisions. <i>Powder Technology</i> , 2013, 233, 30-46.	4.2	198
7	Energy dissipation during normal impact of elastic and elastic-plastic spheres. <i>International Journal of Impact Engineering</i> , 2005, 32, 593-604.	5.0	178
8	Numerical and experimental investigation of capping mechanisms during pharmaceutical tablet compaction. <i>Powder Technology</i> , 2008, 181, 121-129.	4.2	146
9	An investigation of the comparative behaviour of alternative contact force models during elastic collisions. <i>Powder Technology</i> , 2011, 210, 189-197.	4.2	144
10	The flow of powder into simple and stepped dies. <i>Powder Technology</i> , 2003, 134, 24-39.	4.2	110
11	A simple predictive model for the tensile strength of binary tablets. <i>European Journal of Pharmaceutical Sciences</i> , 2005, 25, 331-336.	4.0	105
12	A theoretical model for the contact of elastoplastic bodies. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2001, 216, 421-431.	2.1	92
13	Characterisation of density distributions in roller-compacted ribbons using micro-indentation and X-ray micro-computed tomography. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2009, 72, 173-182.	4.3	92
14	A coupled DEM/CFD analysis of the effect of air on powder flow during die filling. <i>AIChE Journal</i> , 2009, 55, 49-62.	3.6	84
15	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
16	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
17	3D DEM/CFD analysis of size-induced segregation during die filling. <i>Powder Technology</i> , 2011, 206, 177-188.	4.2	78
18	A semi-analytical model for oblique impacts of elastoplastic spheres. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2009, 465, 937-960.	2.1	76

#	ARTICLE	IF	CITATIONS
19	Numerical and experimental investigations of the flow of powder into a confined space. <i>Mechanics of Materials</i> , 2006, 38, 304-324.	3.2	75
20	Flow behaviour of powders during die filling. <i>Powder Metallurgy</i> , 2004, 47, 127-136.	1.7	74
21	Numerical analysis of contact electrification using DEM+CFD. <i>Powder Technology</i> , 2013, 248, 34-43.	4.2	70
22	DEM simulations of die filling during pharmaceutical tableting. <i>Particuology</i> , 2008, 6, 412-418.	3.6	69
23	Coefficients of restitution for elastoplastic oblique impacts. <i>Advanced Powder Technology</i> , 2003, 14, 435-448.	4.1	67
24	Particulate mixing in a plough share mixer using DEM with realistic shaped particles. <i>Powder Technology</i> , 2013, 248, 103-120.	4.2	67
25	Predicting the Tensile Strength of Compacted Multi-Component Mixtures of Pharmaceutical Powders. <i>Pharmaceutical Research</i> , 2006, 23, 1898-1905.	3.5	66
26	Validation study on a scaling law model of the DEM in industrial gas-solid flows. <i>Powder Technology</i> , 2019, 343, 101-112.	4.2	65
27	Large-scale GPU based DEM modeling of mixing using irregularly shaped particles. <i>Advanced Powder Technology</i> , 2018, 29, 2476-2490.	4.1	64
28	A linear model of elasto-plastic and adhesive contact deformation. <i>Granular Matter</i> , 2014, 16, 151-162.	2.2	62
29	Experimental and numerical study of die filling, powder transfer and die compaction. <i>Powder Metallurgy</i> , 2005, 48, 68-76.	1.7	61
30	A comparative study of compaction properties of binary and bilayer tablets. <i>Powder Technology</i> , 2009, 189, 285-294.	4.2	55
31	Modeling gas-particle two-phase flows with complex and moving boundaries using DEM+CFD with an immersed boundary method. <i>AIChE Journal</i> , 2013, 59, 1075-1087.	3.6	54
32	On elastic-plastic normal contact force models, with and without adhesion. <i>Powder Technology</i> , 2017, 315, 339-346.	4.2	54
33	The effect of lubrication on density distributions of roller compacted ribbons. <i>International Journal of Pharmaceutics</i> , 2008, 362, 52-59.	5.2	46
34	Numerical analysis of density-induced segregation during die filling. <i>Powder Technology</i> , 2010, 197, 111-119.	4.2	44
35	The effects of air and particle density difference on segregation of powder mixtures during die filling. <i>Chemical Engineering Science</i> , 2011, 66, 661-673.	3.8	43
36	DEM-CFD analysis of contact electrification and electrostatic interactions during fluidization. <i>Powder Technology</i> , 2016, 304, 208-217.	4.2	43

#	ARTICLE	IF	CITATIONS
37	Numerical modelling of suction filling using DEM/CFD. <i>Chemical Engineering Science</i> , 2012, 73, 231-238.	3.8	41
38	Experimental and numerical investigations of powder transfer. <i>Powder Technology</i> , 2003, 138, 216-228.	4.2	38
39	DEM-CFD modeling of particle systems with long-range electrostatic interactions. <i>AIChE Journal</i> , 2015, 61, 1792-1803.	3.6	37
40	A numerical investigation into the effect of angular particle shape on blast furnace burden topography and percolation using a GPU solved discrete element model. <i>Chemical Engineering Science</i> , 2019, 204, 9-26.	3.8	37
41	A comparative study of roll compaction of free-flowing and cohesive pharmaceutical powders. <i>International Journal of Pharmaceutics</i> , 2012, 428, 39-47.	5.2	35
42	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
43	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
44	Coarse graining DEM simulations of a powder die-filling system. <i>Powder Technology</i> , 2020, 371, 83-95.	4.2	34
45	Roller compaction of moist pharmaceutical powders. <i>International Journal of Pharmaceutics</i> , 2010, 391, 90-97.	5.2	32
46	Modelling die filling with charged particles using DEM/CFD. <i>Particuology</i> , 2012, 10, 229-235.	3.6	32
47	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
48	DEM analysis of residence time distribution during twin screw granulation. <i>Powder Technology</i> , 2021, 377, 924-938.	4.2	32
49	The effects of lubrication on roll compaction, ribbon milling and tableting. <i>Chemical Engineering Science</i> , 2013, 86, 9-18.	3.8	31
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	A hybrid DEM/CFD approach for solid-liquid flows. <i>Journal of Hydrodynamics</i> , 2014, 26, 19-25.	3.2	30
52	The Effects of Relative Humidity on the Flowability and Dispersion Performance of Lactose Mixtures. <i>Materials</i> , 2017, 10, 592.	2.9	30
53	Investigation of powder flowability at low stresses: Influence of particle size and size distribution. <i>Powder Technology</i> , 2020, 364, 98-114.	4.2	30
54	Numerical Modelling of Agglomeration and Deagglomeration in Dry Powder Inhalers: A Review. <i>Current Pharmaceutical Design</i> , 2015, 21, 5915-5922.	1.9	30

#	ARTICLE	IF	CITATIONS
55	Numerical analysis of contact electrification of non-spherical particles in a rotating drum. Powder Technology, 2015, 285, 110-122.	4.2	29
56	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
57	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
58	On Identification of Critical Material Attributes for Compression Behaviour of Pharmaceutical Diluent Powders. Materials, 2017, 10, 845.	2.9	27
59	Ball indentation on powder beds for assessing powder flowability: Analysis of operation window. Powder Technology, 2017, 310, 300-306.	4.2	26
60	Computational intelligence modelling of pharmaceutical tableting processes using bio-inspired optimization algorithms. Advanced Powder Technology, 2018, 29, 2966-2977.	4.1	26
61	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
62	Finite element analysis of thermomechanical behaviour of powders during tableting. Chemical Engineering Research and Design, 2016, 110, 141-151.	5.6	23
63	A hierarchical simulation methodology for rotary kilns including granular flow and heat transfer. Minerals Engineering, 2018, 119, 244-262.	4.3	22
64	An experimental study of die filling of pharmaceutical powders using a rotary die filling system. International Journal of Pharmaceutics, 2018, 553, 84-96.	5.2	22
65	Predicting the pressure distribution during roll compaction from uniaxial compaction measurements. Chemical Engineering Journal, 2010, 164, 410-417.	12.7	21
66	DEM analysis of the effect of particle-wall impact on the dispersion performance in carrier-based dry powder inhalers. International Journal of Pharmaceutics, 2015, 487, 32-38.	5.2	21
67	Determination of the flow/no-flow transition from a flat bottom hopper. Powder Technology, 2019, 358, 55-61.	4.2	20
68	Contact electrification and charge distribution on elongated particles in a vibrating container. Chemical Engineering Science, 2015, 125, 238-247.	3.8	19
69	DEM-PBM modeling of impact dominated ribbon milling. AIChE Journal, 2017, 63, 3692-3705.	3.6	19
70	The effect of dry granulation on flow behaviour of pharmaceutical powders during die filling. Powder Technology, 2018, 337, 78-83.	4.2	19
71	Migration and agglomeration of adhesive microparticle suspensions in a pressure-driven duct flow. AIChE Journal, 2020, 66, e16974.	3.6	19
72	Characterization of Powder Flowability for Die Filling. Particulate Science and Technology, 2012, 30, 378-389.	2.1	18

#	ARTICLE	IF	CITATIONS
73	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
74	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
75	Discrete element analysis of normal elastic impact of wet particles. <i>Powder Technology</i> , 2020, 362, 628-634.	4.2	16
76	An experimental investigation of temperature rise during compaction of pharmaceutical powders. <i>International Journal of Pharmaceutics</i> , 2016, 513, 97-108.	5.2	15
77	Three-dimensional discrete element modelling of three point bending tests: The effect of surface energy on the tensile strength. <i>Powder Technology</i> , 2018, 337, 119-126.	4.2	14
78	Thermal properties of compacted pharmaceutical excipients. <i>International Journal of Pharmaceutics</i> , 2017, 534, 119-127.	5.2	13
79	Numerical Study of the Orientation of Cylindrical Particles in a Circulating Fluidized Bed. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 12806-12817.	3.7	12
80	Flow behaviour of pharmaceutical powders during rotary die filling with a paddle feeder. <i>International Journal of Pharmaceutics</i> , 2020, 585, 119547.	5.2	12
81	REBOUND BEHAVIOUR OF SPHERES DURING ELASTIC-PLASTIC OBLIQUE IMPACTS. <i>International Journal of Modern Physics B</i> , 2008, 22, 1095-1102.	2.0	11
82	Interfacial strength of bilayer pharmaceutical tablets. <i>Powder Technology</i> , 2018, 337, 36-42.	4.2	11
83	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
84	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
85	DEM/CFD modelling of the deposition of dilute granular systems in a vertical container. <i>Science Bulletin</i> , 2009, 54, 4318-4326.	9.0	9
86	The influence of aspect ratio and roughness on flowability. <i>AIP Conference Proceedings</i> , 2013, , .	0.4	9
87	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
88	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
89	Suction filling of pharmaceutical powders. <i>Powder Technology</i> , 2019, 355, 438-448.	4.2	9
90	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

#	ARTICLE	IF	CITATIONS
91	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
92	Evolutions of temperature and density during roll compaction of a pharmaceutical excipient. <i>International Journal of Pharmaceutics</i> , 2019, 572, 118822.	5.2	8
93	Numerical analysis of frictional charging and electrostatic interaction of particles. <i>AIChE Journal</i> , 2022, 68, e17444.	3.6	7
94	Elastoplastic frictional collisions with Collisional-SPH. <i>Tribology International</i> , 2022, 168, 107438.	5.9	7
95	Quantitative investigation of powder flow during die filling using positron emission particle tracking. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2010, 224, 169-175.	2.5	6
96	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
97	Unified size-density and size-topology relations in random packings of dry adhesive polydisperse spheres. <i>Physical Review E</i> , 2019, 99, 022901.	2.1	6
98	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
99	Infiltration and resuspension of dilute particle suspensions in micro cavity flow. <i>Powder Technology</i> , 2022, 395, 400-411.	4.2	6
100	The effects of screw-to-roll speed ratio on ribbon porosity during roll compaction. <i>International Journal of Pharmaceutics</i> , 2020, 588, 119770.	5.2	5
101	Micro-mechanics and dynamics of cohesive particle systems. <i>Granular Matter</i> , 2013, 15, 389-390.	2.2	4
102	Dynamic impact milling model with a particle-scale breakage kernel. <i>Computer Aided Chemical Engineering</i> , 2016, , 475-480.	0.5	4
103	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
104	Huperzine A loaded multiparticulate disintegrating tablet: Drug release mechanism of ethyl cellulose microparticles and pharmacokinetic study. <i>Powder Technology</i> , 2019, 355, 649-656.	4.2	4
105	Investigation of powder flowability at low stresses by DEM modelling. <i>Chemical Engineering Science</i> , 2020, 211, 115307.	3.8	4
106	The saltations of different sized particles in aeolian sand transport. <i>Geomorphology</i> , 2011, 134, 217-223.	2.6	3
107	Particles in Fluids. , 2016, , 67-81.		3
108	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

#	ARTICLE	IF	CITATIONS
109	Editorial for the special issue on simulation and modelling of particulate systems. Powder Technology, 2017, 314, 1.	4.2	3
110	DEM-PBM modeling of abrasion dominated ribbon breakage. AICHE Journal, 2018, 64, 1191-1204.	3.6	3
111	Powder flow during linear and rotary die filling. International Journal of Pharmaceutics, 2021, 602, 120654.	5.2	3
112	DEM analysis of effects of particle properties and mixing conditions on particle attachment processes. , 2013, , .		2
113	Cooperative dynamics of a group of intruders subsiding in granular media: A DEM study. , 2013, , .		2
114	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
115	Inertial migration of a non-neutrally buoyant particle in a linear shear flow with thermal convection. Physical Review Fluids, 2021, 6, .	2.5	2
116	Finite Element Modeling of Powder Compaction. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 451-462.	0.5	2
117	Effect of electrostatic interactions on particle dispersion in a rotating spherical container. Powder Technology, 2022, 398, 117063.	4.2	2
118	Numerical analysis of die filling with a forced feeder using GPU-enhanced discrete element methods. International Journal of Pharmaceutics, 2022, 622, 121861.	5.2	2
119	Competing Flow of Dissimilar Granular Materials in Air. , 2009, , .		1
120	An energy-based splash function for the impact of particles with granular beds. AIP Conference Proceedings, 2013, , .	0.4	1
121	Bulk Solid Characterization. , 2016, , 17-38.		1
122	Gas-Solid Systems. , 2016, , 83-118.		1
123	Mechanics of Bulk Solids. , 2016, , 135-159.		1
124	On the submerging of a spherical intruder into granular beds. EPJ Web of Conferences, 2017, 140, 02027.	0.3	1
125	Size-induced segregation during die filling. International Journal of Pharmaceutics: X, 2019, 1, 100032.	1.6	1
126	Data on rotary die filling performance of various pharmaceutical powders. Data in Brief, 2020, 32, 106220.	1.0	1



#	ARTICLE	IF	CITATIONS
127	Discrete element modelling of ribbon milling: A comparison of approaches. Powder Technology, 2021, 388, 63-69.	4.2	1
128	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
129	Effects of friction on stress on a plate penetrating into granular media. Physics of Fluids, 2021, 33, .	4.0	1
130	Predicting Rebound Kinematics of Elastic and Rigid Particles Resulting from Oblique Impacts. , 2009, , .		0
131	A DEM model for contact electrification of irregular shaped particles. , 2013, , .		0
132	Particle Characterization. , 2016, , 39-65.		0
133	Liquidâ€“Solid Systems. , 2016, , 119-133.		0
134	Particleâ€“Particle Interaction. , 2016, , 161-212.		0
135	Discrete Element Methods. , 2016, , 213-242.		0
136	Finite Element Modeling. , 2016, , 243-277.		0
137	Flowability assessment of weakly consolidated powders. EPJ Web of Conferences, 2017, 140, 03085.	0.3	0
138	Mechanistic analysis of solidâ€“liquid flow during injection. Particuology, 2019, 44, 136-145.	3.6	0