Capillary Bridges between Two Spherical Bodies

Langmuir 16, 9396-9405 DOI: 10.1021/la000657y

Citation Report

#	Article	IF	CITATIONS
1	Capillary forces and structuring in layers of colloid particles. Current Opinion in Colloid and Interface Science, 2001, 6, 383-401.	7.4	503
2	Nucleation, growth and breakage phenomena in agitated wet granulation processes: a review. Powder Technology, 2001, 117, 3-39.	4.2	1,021
3	Contribution of Micropore Destroying to Adhesion and Particle Agglomeration. Langmuir, 2002, 18, 4356-4361.	3.5	1
4	Mapping the Influence of Gravity on Pendular Liquid Bridges between Rigid Spheres. Langmuir, 2002, 18, 6180-6184.	3.5	54
6	The dynamic strength of partially saturated powder compacts: the effect of liquid properties. Powder Technology, 2002, 127, 149-161.	4.2	131
7	A two-dimensional study of the rupture of funicular liquid bridges. Chemical Engineering Science, 2002, 57, 677-692.	3.8	21
8	Capillary forces in tapping mode atomic force microscopy. Physical Review B, 2002, 66, .	3.2	260
9	A Micro-Scale Liquid Bridge Between Two Elastic Spheres: Deformation and Stability. Tribology Letters, 2003, 15, 453-464.	2.6	11
10	Dispersive forces of particle–surface interactions: direct AFM measurements and modelling. Powder Technology, 2003, 130, 102-109.	4.2	102
11	Effects of wetting hysteresis on pendular liquid bridges between rigid spheres. Powder Technology, 2003, 130, 63-69.	4.2	43
12	Modelling and measuring of cohesion in wet granular materials. Powder Technology, 2003, 133, 203-215.	4.2	136
13	Rupture energy and wetting behavior of pendular liquid bridges in relation to the spherical agglomeration process. Journal of Colloid and Interface Science, 2003, 261, 161-169.	9.4	40
14	3.1 Forming and Drying. , 2003, , 131-185.		5
15	Nucleation of liquid bridges and bubbles in nanoscale capillaries. Journal of Chemical Physics, 2003, 119, 9755-9764.	3.0	87
16	Simulation of fluid bridges and films. Physical Chemistry Chemical Physics, 2003, 5, 4880-4884.	2.8	4
17	Mixing and Condensation in a Wet Granular Medium. Physical Review Letters, 2003, 90, 168702.	7.8	47
18	Self-excited oscillatory dynamics of capillary bridges in electric fields. Applied Physics Letters, 2003, 82, 4187-4189.	3.3	31
19	Shear-induced solid-fluid transition in a wet granular medium. Physical Review E, 2003, 67, 052301.	2.1	27

#	Article	IF	CITATIONS
20	Capillary adhesive contact between a spherical rigid punch and a piezoelectric half space. Journal of Applied Physics, 2003, 94, 6899-6907.	2.5	7
21	Evaporation and instabilities of microscopic capillary bridges. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 803-808.	7.1	126
22	Where does a cohesive granular heap break?. European Physical Journal E, 2004, 14, 177-183.	1.6	25
23	On capillary bridges in wet granular materials. Physica A: Statistical Mechanics and Its Applications, 2004, 339, 7-15.	2.6	105
24	Wet granular matter under vertical agitation. Journal of Physics Condensed Matter, 2004, 16, S4213-S4218.	1.8	20
25	Capillary Bridges in Electric Fields. Langmuir, 2004, 20, 6770-6777.	3.5	26
26	Adhesion Force of a Wedge. Langmuir, 2004, 20, 2227-2232.	3.5	6
27	Evaluation of interactive forces between alkaline earth metal fluoride particles and single crystal substrate using atomic force microscopy. , 2004, , .		0
28	Nucleation on cylindrical plates: Sharp transitions and double barriers. Journal of Chemical Physics, 2005, 122, 194710.	3.0	6
29	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.	7.8	4
29 30	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001. Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, S477-S502.	7.8	4 94
29 30 31	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001. Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, S477-S502. Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261.	7.8 1.8 14.4	4 94 340
29 30 31 32	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001. Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, S477-S502. Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261. Capillary Forces between Two Spheres with a Fixed Volume Liquid Bridge:Â Theory and Experiment. Langmuir, 2005, 21, 10992-10997.	7.8 1.8 14.4 3.5	4 94 340 367
29 30 31 32 33	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, S477-S502.Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261.Capillary Forces between Two Spheres with a Fixed Volume Liquid Bridge:Â Theory and Experiment. Langmuir, 2005, 21, 10992-10997.Wet granular materials. Advances in Physics, 2006, 55, 1-45.	7.8 1.8 14.4 3.5 14.4	4 94 340 367 386
29 30 31 32 33 33	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, \$477-\$502.Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261.Capillary Forces between Two Spheres with a Fixed Volume Liquid Bridge:Â Theory and Experiment. Langmuir, 2005, 21, 10992-10997.Wet granular materials. Advances in Physics, 2006, 55, 1-45.Volume of a Nanoscale Water Bridge. Langmuir, 2006, 22, 1093-1098.	7.8 1.8 14.4 3.5 14.4 3.5	4 94 340 367 386
29 30 31 32 33 34	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, \$477-\$502.Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261.Capillary Forces between Two Spheres with a Fixed Volume Liquid Bridge:Â Theory and Experiment. Langmuir, 2005, 21, 10992-10997.Wet granular materials. Advances in Physics, 2006, 55, 1-45.Volume of a Nanoscale Water Bridge. Langmuir, 2006, 22, 1093-1098.Phase Transitions of Capillary-Held Liquids in a Slit-like Pore. Journal of Physical Chemistry B, 2006, 110, 25982-25993.	7.8 1.8 14.4 3.5 14.4 3.5 2.6	4 94 340 367 386 122 17
 29 30 31 32 33 34 35 36 	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.Mechanical properties of wet granular materials. Journal of Physics Condensed Matter, 2005, 17, S477-S502.Dynamics of wet granular matter. Advances in Physics, 2005, 54, 221-261.Capillary Forces between Two Spheres with a Fixed Volume Liquid Bridge:Â Theory and Experiment. Langmuir, 2005, 21, 10992-10997.Wet granular materials. Advances in Physics, 2006, 55, 1-45.Volume of a Nanoscale Water Bridge. Langmuir, 2006, 22, 1093-1098.Phase Transitions of Capillary-Held Liquids in a Slit-like Pore. Journal of Physical Chemistry B, 2006, 110, 25982-25993.Approach and Detachment of Two Elastic Spheres in Both Wet and Dry Conditions., 2006, , 1495.	 7.8 1.8 14.4 3.5 14.4 2.6 	4 94 340 367 386 122 17 0

#	ARTICLE	IF	CITATIONS
38	Capillary cohesion and mechanical strength of polydisperse granular materials. European Physical Journal E, 2006, 21, 349-357.	1.6	45
39	Stress transmission in wet granular materials. European Physical Journal E, 2006, 21, 359-69.	1.6	64
40	Force stability of pore-scale fluid bridges and ganglia in axisymmetric and non-axisymmetric configurations. Journal of Petroleum Science and Engineering, 2006, 52, 1-18.	4.2	18
41	Influence of liquid bridges on the mechanical behaviour of polydisperse granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 213-228.	3.3	176
42	Shear strength properties of wet granular materials. Physical Review E, 2006, 73, 051304.	2.1	199
43	Unclustering Transition in Freely Cooling Wet Granular Matter. Physical Review Letters, 2006, 97, 078001.	7.8	13
44	Adhesion and detachment mechanisms of sugar surfaces from the solid (glassy) to liquid (viscous) states. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19624-19629.	7.1	16
46	Grand canonical Monte Carlo simulation study of capillary condensation between nanoparticles. Journal of Chemical Physics, 2007, 127, 134702.	3.0	7
47	Theoretical Study on the Capillary Force between an Atomic Force Microscope Tip and a Nanoparticle. Chinese Physics Letters, 2007, 24, 2289-2292.	3.3	6
48	Chapter 28 Pendular capillary bridges. Handbook of Powder Technology, 2007, 11, 1317-1351.	0.1	9
49	Hydraulic contacts controlling water flow across porous grains. Physical Review E, 2007, 76, 026311.	2.1	11
50	Chaoticity of the wet granular gas. Physical Review E, 2007, 75, 061301.	2.1	3
51	Rigidity Percolation in Particle-Laden Foams. Physical Review Letters, 2007, 99, 168001.	7.8	28
52	Novel instrument to characterize dry granular materials at low consolidations. Review of Scientific Instruments, 2007, 78, 073901.	1.3	12
53	A Generalized Formulation for the Contact Between Elastic Spheres: Applicability to Both Wet and Dry Conditions. Journal of Tribology, 2007, 129, 274-282.	1.9	10
54	Equilibrium Capillary Forces with Atomic Force Microscopy. Physical Review Letters, 2007, 99, 104504.	7.8	31
55	Chapter 26 A Mechanistic Description of Granule Deformation and Breakage. Handbook of Powder Technology, 2007, , 1055-1120.	0.1	7
56	Shear Strength of Unsaturated Soils: Experiments, DEM Simulations, and Micromechanical Analysis. , 2007, , 83-91.		6

#	Article	IF	CITATIONS
57	Discrete particle simulation of particulate systems: Theoretical developments. Chemical Engineering Science, 2007, 62, 3378-3396.	3.8	1,516
58	Fluidization, bubbling and jamming of nanoparticle agglomerates. Chemical Engineering Science, 2007, 62, 6947-6956.	3.8	56
59	Effect of the crystallization of a solute on the cohesion in granular materials. Powder Technology, 2007, 175, 43-47.	4.2	14
60	Thermodynamics of capillary adhesion between rough surfaces. Journal of Colloid and Interface Science, 2007, 311, 171-185.	9.4	59
61	Detachment of liquid droplets from fibres—Experimental and theoretical evaluation of detachment force due to interfacial tension effects. Journal of Colloid and Interface Science, 2007, 312, 333-340.	9.4	41
62	Influence of liquid meniscus on surface forces. Journal of Friction and Wear, 2007, 28, 19-31.	0.5	7
63	Transient modeling of heat, mass and momentum transfer of an evaporating cerium nitrate solution droplet with a surrounding shell in a rf thermal argon–oxygen plasma under reduced pressure. International Journal of Heat and Mass Transfer, 2007, 50, 4468-4487.	4.8	11
64	Unsaturated water flow across soil aggregate contacts. Advances in Water Resources, 2008, 31, 1221-1232.	3.8	93
65	Computer simulation of evolving capillary bridges in granular media. Granular Matter, 2008, 10, 93-103.	2.2	13
66	A model of capillary cohesion for numerical simulations of 3D polydisperse granular media. International Journal for Numerical and Analytical Methods in Geomechanics, 2008, 32, 1365-1383.	3.3	60
67	On the Thermodynamic Stability of Liquid Capillary Bridges. Canadian Journal of Chemical Engineering, 2007, 85, 692-700.	1.7	24
68	Effect of vibration on flow properties of fine glass beads. AICHE Journal, 2008, 54, 886-896.	3.6	8
69	The strength of liquid bridges in random granular materials. Journal of Colloid and Interface Science, 2008, 319, 182-192.	9.4	25
70	Effect of alcohol–water exchange and surface scanning on nanobubbles and the attraction between hydrophobic surfaces. Journal of Colloid and Interface Science, 2008, 325, 267-274.	9.4	80
71	Measurement of dynamic properties of small volumes of fluid using MEMS. Sensors and Actuators B: Chemical, 2008, 130, 701-706.	7.8	18
72	Fluidization of nanoparticles: A simple equation for estimating the size of agglomerates. Chemical Engineering Journal, 2008, 140, 296-304.	12.7	55
73	Meniscus and viscous forces during separation of hydrophilic and hydrophobic surfaces with liquid-mediated contacts. Materials Science and Engineering Reports, 2008, 61, 78-106.	31.8	81
74	Modeling Time-Dependent Forces on Liquid Bridge Interactions Between Dissimilar Particles. Advanced Powder Technology, 2008, 19, 277-292.	4.1	8

		REPORT	
#	Article	IF	CITATIONS
75	Morphological clues to wet granular pileÂstability. Nature Materials, 2008, 7, 189-193.	27.5	288
76	Effect of Contact Angle Hysteresis on the Measurement of Capillary Forces. Langmuir, 2008, 24, 1391-1396.	3.5	96
77	The dissipated power in atomic force microscopy due to interactions with a capillary fluid layer. Journal of Applied Physics, 2008, 104, .	2.5	10
78	Capillary Interactions between a Probe Tip and a Nanoparticle. Chinese Physics Letters, 2008, 25, 1795-1798.	3.3	4
80	Thermal switches based on coplanar EWOD for satellite thermal control. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	9
81	Rupture Work of Pendular Bridges. Langmuir, 2008, 24, 160-169.	3.5	14
82	Capillary Forces between Chemically Different Substrates. Langmuir, 2008, 24, 10161-10168.	3.5	74
83	Capillary Adhesion in the Limit of Saturation:  Thermodynamics, Self-Consistent Field Modeling and Experiment. Langmuir, 2008, 24, 1308-1317.	3.5	22
84	Bubbling Suppression in Fluidized Beds of Fine and Ultrafine Powders. Particulate Science and Technology, 2008, 26, 197-213.	2.1	8
85	Liquid distribution and cohesion in wet granular assemblies beyond the capillary bridge regime. Journal of Physics Condensed Matter, 2008, 20, 494236.	1.8	71
86	Phase transitions far from equilibrium in wet granular matter. New Journal of Physics, 2008, 10, 053020.	2.9	39
87	Equation of state of wet granular matter. Physical Review E, 2008, 77, 011306.	2.1	9
88	Mechanisms by Which Methane Gas and Methane Hydrate Coexist In Ocean Sediments. , 2008, , .		6
89	Etude micromécanique de la cohésion par capillarité dans les milieux granulaires humides. European Journal of Environmental and Civil Engineering, 2008, 12, 279-290.	2.1	6
91	Cooling and Aggregation in Wet Granulates. Physical Review Letters, 2009, 102, 148002.	7.8	25
92	Dilute wet granular particles: Nonequilibrium dynamics and structure formation. Physical Review E, 2009, 80, 031306.	2.1	21
93	Cohesion and Internal Friction of Fine Glass Beads as Affected by Small Intensity Vertical Vibration. , 2009, , .		3
94	A response function perspective on yielding of wet granular matter. Europhysics Letters, 2009, 87, 14002.	2.0	10

#	Article	IF	CITATIONS
95	Some open problems in granular matter mechanics. Progress in Natural Science: Materials International, 2009, 19, 523-529.	4.4	37
96	Capillary forces between two solid spheres linked by a concave liquid bridge: Regions of existence and forces mapping. AICHE Journal, 2009, 55, 1103-1109.	3.6	82
97	Impact of surface tension and viscosity on solids motion in a conical high shear mixer granulator. AICHE Journal, 2009, 55, 3088-3098.	3.6	8
98	On the capillary stress tensor in wet granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2009, 33, 1289-1313.	3.3	114
99	The interaction between small clusters of cohesive particles and laminar flow: Coupled DEM/CFD approach. Journal of Petroleum Science and Engineering, 2009, 66, 24-32.	4.2	16
100	An Analytical Model for Capillary Pressure–Saturation Relation for Gas–Liquid System in a Packed-Bed of Spherical Particles. Transport in Porous Media, 2009, 77, 17-40.	2.6	26
101	Systematically altering the hydrophobic nanobubble bridging capillary force from attractive to repulsive. Journal of Colloid and Interface Science, 2009, 333, 800-806.	9.4	39
102	LAS acid reactive binder: Wettability and adhesion behaviour in detergent granulation. Powder Technology, 2009, 189, 385-393.	4.2	11
103	Nucleation and growth in fluidised hot melt granulation. Powder Technology, 2009, 189, 230-237.	4.2	29
104	Force transmission in dry and wet granular media. Powder Technology, 2009, 190, 258-263.	4.2	62
105	Avalanches in moistened beds of glass beads. Powder Technology, 2009, 196, 257-262.	4.2	15
106	Predicting discharge dynamics of wet cohesive particles from a rectangular hopper using the discrete element method (DEM). Chemical Engineering Science, 2009, 64, 5268-5275.	3.8	116
107	Normal capillary forces. Advances in Colloid and Interface Science, 2009, 146, 48-60.	14.7	492
108	Study of a nanoscale water cluster by atomic force microscopy. Faraday Discussions, 2009, 141, 415-421.	3.2	39
109	Bond anisotropy and cohesion of wet granular materials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 5123-5138.	3.4	48
110	Manipulating microobject by using liquid droplet as a transporting vehicle. Journal of Colloid and Interface Science, 2009, 329, 196-201.	9.4	15
111	Unsaturated Hydraulic Conductivity Measurements with Centrifuges: A Review. Vadose Zone Journal, 2009, 8, 531-547.	2.2	20
112	Repulsive Capillary Force between two Plates Linked by a Concave Molten Slag Bridge. ISIJ International, 2009, 49, 1814-1815.	1.4	1

# 113	ARTICLE Interfacial tension between a complex coacervate phase and its coexisting aqueous phase. Soft Matter, 2010, 6, 172-178.	IF 2.7	CITATIONS
114	Segregation of cohesive granular materials during discharge from a rectangular hopper. Granular Matter, 2010, 12, 193-200.	2.2	31
115	Mixing characteristics of wet granular matter in a bladed mixer. Powder Technology, 2010, 200, 171-189.	4.2	115
116	Softening Induced Instability of a Stretched Cohesive Granular Layer. Physical Review Letters, 2010, 105, 208001.	7.8	12
117	Simple Interaction Model for Partially Wet Granular Materials. , 2010, , .		2
118	Force transmission in cohesive granular media. , 2010, , .		7
119	Investigation of Macroscopic Interfacial Dynamics between Clathrate Hydrates and Surfactant Solutions. Langmuir, 2010, 26, 18119-18124.	3.5	55
120	Modeling the rupture of a capillary liquid bridge between a sphere and plane. Soft Matter, 2010, 6, 6178.	2.7	33
121	Fluidization of wet granulates under shear. Physical Review E, 2010, 82, 061305.	2.1	14
122	Interfacial mechanisms governing cyclopentane clathrate hydrate adhesion/cohesion. Physical Chemistry Chemical Physics, 2011, 13, 19796.	2.8	203
123	Effects of Cake Collapse Caused by Deposition of Fractal Aggregates on Pressure Drop during Ceramic Filtration. Environmental Science & Technology, 2011, 45, 4415-4421.	10.0	3
124	Application of Colloid Probe Atomic Force Microscopy to the Adhesion of Thin Films of Viscous and Viscoelastic Silicone Fluids. Langmuir, 2011, 27, 11489-11500.	3.5	14
125	Dynamics of wet particles in rotating drums: Effect of liquid surface tension. Physics of Fluids, 2011, 23, .	4.0	86
127	A capillary force model for interactions between two spheres. Particuology, 2011, 9, 381-386.	3.6	34
128	Liquid bridge force between two unequal-sized spheres or a sphere and a plane. Particuology, 2011, 9, 374-380.	3.6	57
129	From liquid to solid bonding in cohesive granular media. Mechanics of Materials, 2011, 43, 529-537.	3.2	15
130	Adhesive particulate flow: The discrete-element method and its application in energy and environmental engineering. Progress in Energy and Combustion Science, 2011, 37, 633-668.	31.2	211
131	Experimental analysis of the dynamic properties of wet granular matter in a rotating drum. Powder Technology, 2011, 214, 491-499.	4.2	23

#	Article	IF	CITATIONS
132	Adhesion models: From single to multiple asperity contacts. Advances in Colloid and Interface Science, 2011, 168, 210-222.	14.7	85
133	Accuracy of the toroidal approximation for the calculus of concave and convex liquid bridges between particles. Granular Matter, 2011, 13, 487-492.	2.2	18
134	Capillary effects on a particle rolling on a plane surface in the presence of a thin liquid film. Experiments in Fluids, 2011, 51, 1645-1655.	2.4	16
135	DEM and experimental analysis of the water retention curve in polydisperse granular media. Powder Technology, 2011, 208, 296-300.	4.2	21
136	Slumping dynamics in tilled sandy soils under natural rainfall and experimental flooding. Soil and Tillage Research, 2011, 114, 9-17.	5.6	8
137	Friction-formed liquid droplets. Nanotechnology, 2011, 22, 105703.	2.6	17
138	Theoretical Analysis of Meniscus Forces between Two Spherical Nanoparticles at Various Humidities. Applied Mechanics and Materials, 0, 148-149, 1562-1566.	0.2	0
139	The Comparison and Analysis of Pore Size Distribution between Cotton Yarn and Fabric. Advanced Materials Research, 0, 339, 676-679.	0.3	0
140	The Influence of Liquid Properties on Fabric Pore Size Distribution. Advanced Materials Research, 2011, 339, 710-713.	0.3	0
141	Solid-fluid transition and surface melting in wet granular matter. Europhysics Letters, 2011, 96, 26003.	2.0	9
142	Mechanical properties of the nanoscale molecular cluster of water meniscus by high-precision frequency modulation atomic force spectroscopy. Applied Physics Letters, 2012, 101, 053114.	3.3	25
143	Fluid Depletion in Shear Bands. Physical Review Letters, 2012, 109, 248001.	7.8	28
144	Effect of cohesion and shear modulus on the stability of a stretched granular layer. Physical Review E, 2012, 86, 061303.	2.1	7
145	Flexural fracturing of a cohesive granular layer. Physical Review E, 2012, 85, 012301.	2.1	6
146	CONVECTIVE ASSEMBLY OF PATTERNED MEDIA. , 2012, , 59-108.		1
147	Low-volume liquid delivery and nanolithography using a nanopipette combined with a quartz tuning fork-atomic force microscope. Nanoscale, 2012, 4, 6493.	5.6	28
148	Wet granular rafts: aggregation in two dimensions under shear flow. Soft Matter, 2012, 8, 11939.	2.7	16
149	Tuning suspension rheology using capillary forces. Soft Matter, 2012, 8, 6620.	2.7	98

#	Article	IF	CITATIONS
150	Nanoscale Capillary Interactions in Dynamic Atomic Force Microscopy. Journal of Physical Chemistry C, 2012, 116, 7757-7766.	3.1	42
151	Energy dissipation in the presence of sub-harmonic excitation in dynamic atomic force microscopy. Europhysics Letters, 2012, 99, 56002.	2.0	8
152	Spontaneous Formation of Stable Capillary Bridges for Firming Compact Colloidal Microstructures in Phase Separating Liquids: A Computational Study. Langmuir, 2012, 28, 2696-2703.	3.5	17
153	Coefficient of restitution for wet particles. Physical Review E, 2012, 86, 011303.	2.1	82
154	The effects of adsorbed water layers on the apparent height of nanostructures in ambient amplitude modulation atomic force microscopy. Journal of Chemical Physics, 2012, 137, 044201.	3.0	16
155	Wet granular matter: a truly complex fluid. Soft Matter, 2012, 8, 8271.	2.7	69
156	Wet granular flows in a bladed mixer: Experiments and simulations of monodisperse spheres. AICHE Journal, 2012, 58, 3354-3369.	3.6	52
157	Micromechanical cohesion force measurements to determine cyclopentane hydrate interfacial properties. Journal of Colloid and Interface Science, 2012, 376, 283-288.	9.4	91
158	Effect of pendular liquid bridges on the flow behavior of wet powders. Powder Technology, 2012, 217, 599-606.	4.2	15
159	Rheology of weakly wetted granular materials: a comparison of experimental and numerical data. Granular Matter, 2013, 15, 455-465.	2.2	37
160	A toroidal approximation of capillary forces in polydisperse granular assemblies. Granular Matter, 2013, 15, 573-581.	2.2	24
161	Liquid migration in sheared unsaturated granular media. Granular Matter, 2013, 15, 447-454.	2.2	36
162	Measurements of Cohesion Hysteresis between Cyclopentane Hydrates in Liquid Cyclopentane. Energy & Fuels, 2013, 27, 5168-5174.	5.1	9
163	Analog of surface melting in a macroscopic nonequilibrium system. Physical Review E, 2013, 88, 062201.	2.1	18
164	Curvature of Capillary Bridges as a Competition between Wetting and Confinement. Langmuir, 2013, 29, 15558-15564.	3.5	21
165	Surface Tension in Microsystems. Microtechnology and MEMS, 2013, , .	0.2	25
166	Constant mean curvature surfaces with boundary on a sphere. Applied Mathematics and Computation, 2013, 220, 316-323.	2.2	4
167	Compensation of stray capacitance of the quartz tuning fork for a quantitative force spectroscopy. Current Applied Physics, 2013, 13, 1899-1905.	2.4	9

		Citation R	EPORT	
#	Article		IF	Citations
168	Collapse of quasi-two-dimensional wet granular columns. Physical Review E, 2013, 87,		2.1	30
169	Gravity-Assisted Convective Assembly of Centimeter-Sized Uniform Two-Dimensional C Crystals. Langmuir, 2013, 29, 1796-1801.	Colloidal	3.5	44
170	Study of capillary interaction between two grains: a new experimental device with suc Granular Matter, 2013, 15, 49-56.	tion control.	2.2	31
171	Particle characterization and behavior relevant to fluidized bed combustion and gasific , 2013, , 42-76.	ation systems.		25
172	Surface Thermodynamic Analysis of Fluid Confined in a Cone and Comparison with the and Plate–Plate Geometries. Langmuir, 2013, 29, 12950-12958.	: Sphere–Plate	3.5	16
173	Macroscopic Investigation of Water Volume Effects on Interfacial Dynamic Behaviors b Clathrate Hydrate and Water. Langmuir, 2013, 29, 5793-5800.	petween	3.5	31
174	Universal features of the jamming phase diagram of wet granular materials. Physical Re 042203.	eview E, 2013, 88,	2.1	4
175	Discrete particle simulations and experiments on the collapse of wet granular columns Fluids, 2013, 25, .	. Physics of	4.0	24
176	Effects of cohesion on the flow patterns of granular materials in spouted beds. Physica 2013, 87, 022206.	ıl Review E,	2.1	20
177	Erosion dynamics of a wet granular medium. Physical Review E, 2013, 88, 032205.		2.1	18
178	Multiphysical Testing of Soils and Shales. Springer Series in Geomechanics and Geoen	gineering, 2013, , .	0.1	4
179	Micro-Scale Study of Rupture in Desiccating Granular Media. , 2013, , .			10
181	On liquid migration in sheared granular matter. , 2013, , .			1
182	Effect of cohesive force on the formation of a sandpile. AIP Conference Proceedings, 2	013,,.	0.4	4
183	Comparison of different capillary bridge models for application in the discrete element Granular Matter, 2014, 16, 911-920.	method.	2.2	44
184	Simulation of cohesive fine powders under a plane shear. Physical Review E, 2014, 90,	062207.	2.1	14
185	Capillary suspensions: Particle networks formed through the capillary force. Current O Colloid and Interface Science, 2014, 19, 575-584.	pinion in	7.4	108
186	Wetting of crossed fibers: Multiple steady states and symmetry breaking. Europhysics 105, 56006.	Letters, 2014,	2.0	26

#	Article	IF	CITATIONS
187	Capillary torque on a rolling particle in the presence of a liquid film at small capillary numbers. Chemical Engineering Science, 2014, 108, 87-93.	3.8	16
188	Restructuring and aging in a capillary suspension. Rheologica Acta, 2014, 53, 947-957.	2.4	36
189	Rupture of an evaporating liquid bridge between two grains. Acta Geophysica, 2014, 62, 1087-1108.	2.0	20
190	Dynamic and static measurement of interfacial capillary forces by a hybrid nanomechanical system. Nanoscale, 2014, 6, 5474-5478.	5.6	9
191	Increasing the apparent shear viscosity of polymer composites by uptake of a small amount of water. RSC Advances, 2014, 4, 24686-24691.	3.6	9
192	Observation of Universal Solidification in the Elongated Water Nanomeniscus. Journal of Physical Chemistry Letters, 2014, 5, 737-742.	4.6	16
193	Capillary adhesion at the nanometer scale. Physical Review E, 2014, 89, 062402.	2.1	31
194	Evaporation-induced evolution of the capillary force between two grains. Granular Matter, 2014, 16, 815-828.	2.2	29
195	DEM Simulation of Particle Behavior in Pan-type Pelletizer Considering the Effect of the Capillary Force. Journal of the Society of Powder Technology, Japan, 2014, 51, 828-836.	0.1	6
197	Contact Mechanics with Adhesion Forces. , 0, , 81-129.		1
198	Study on the absorbed suction of unsaturated soil based on the Horsfield close packing model. , 2015, , 547-554.		1
199	Pattern formation in wet granular matter under vertical vibrations. Physical Review E, 2015, 92, 012202.	2.1	14
200	Flow of wet granular materials: A numerical study. Physical Review E, 2015, 92, 022201.	2.1	48
201	Grain-scale modeling of arbitrary fluid saturation in random packings. Physical Review E, 2015, 92, 022206.	2.1	27
202	Percolation and jamming transitions in particulate systems with and without cohesion. Physical Review E, 2015, 92, 032204.	2.1	6
203	Bridging transitions for spheres and cylinders. Physical Review E, 2015, 92, 022407.	2.1	12
204	Prediction of inter-particle capillary forces for non-perfectly wettable granular assemblies. Granular Matter, 2015, 17, 537-543.	2.2	6
205	1/ <i>f</i> noise on the brink of wet granular melting. New Journal of Physics, 2015, 17, 083055.	2.9	6

		CITATION R	EPORT	
#	ARTICLE		IF	CITATIONS
206	The Fluid Joint: The Soft Spot of Micro―and Nanosystems. Advanced Materials, 2015,	, 27, 4254-4272.	21.0	38
207	Development of an extraction protocol for the removal of the fat phase within chocola Science and Technology, 2015, 64, 61-66.	te. LWT - Food	5.2	3
208	Microscale study of particle agglomeration in oil-based food suspensions: The effect of liquid. Powder Technology, 2015, 270, 528-536.	[:] binding	4.2	7
209	Hydrodynamics in bridging and aggregation of two colloidal particles in a near-critical b mixture. Soft Matter, 2015, 11, 5738-5747.	binary	2.7	18
210	Scaling behaviour of cohesive granular flows. Europhysics Letters, 2015, 112, 64004.		2.0	48
211	Capillary force between a probe tip with a power-law profile and a surface or a nanopar Modelling and Simulation in Materials Science and Engineering, 2015, 23, 015001.	rticle.	2.0	9
212	On the rheology of pendular gels and morphological developments in paste-like ternary on capillary attraction. Soft Matter, 2015, 11, 1500-1516.	y systems based	2.7	74
213	Towards Hydrodynamic Simulations of Wet Particle Systems. Procedia Engineering, 20	15, 102, 1531-1538.	1.2	9
214	Asymmetric capillary bridges between contacting spheres. Journal of Colloid and Interf 2015, 454, 192-199.	ace Science,	9.4	41
215	Experimental observations of the transition pressure drop characteristics of fibrous filt with oil-coated particles. Separation and Purification Technology, 2015, 149, 47-54.	ers loaded	7.9	26
216	Noncontact friction via capillary shear interaction at nanoscale. Nature Communication 7359.	ns, 2015, 6,	12.8	58
217	Characterization of wet granular avalanches in controlled relative humidity conditions. Technology, 2015, 279, 24-32.	Powder	4.2	7
218	Liquid clustering and capillary pressure in granular media. Journal of Fluid Mechanics, 2	.015, 762, .	3.4	47
219	Humidity-enhanced wet adhesion on insect-inspired fibrillar adhesive pads. Nature Con 2015, 6, 6621.	nmunications,	12.8	80
220	Role of contact-angle hysteresis for fluid transport in wet granular matter. Physical Rev 91, 042204.	view E, 2015,	2.1	18
221	Numerical simulation of particle–particle adhesion by dynamic liquid bridge. Chemica Science, 2015, 138, 607-615.	al Engineering	3.8	39
222	Laplace pressure evolution and four instabilities in evaporating two-grain liquid bridges Technology, 2015, 283, 137-151.	3. Powder	4.2	29
223	Identification of inter-particular forces by atomic force microscopy and how they relate rheological properties measured in shearing tests. Powder Technology, 2015, 284, 396	to powder 5-402.	4.2	9

#	ARTICLE	IF	CITATIONS
224	Discrete Element Method Simulations for Complex Granular Flows. Annual Review of Fluid Mechanics, 2015, 47, 21-46.	25.0	224
225	Particle–Particle Interaction. , 2016, , 161-212.		Ο
226	A model to predict liquid bridge formation between wet particles based on direct numerical simulations. AICHE Journal, 2016, 62, 1877-1897.	3.6	27
227	Modeling the mechanical behavior of sodium borohydride (NaBH 4) powder. Materials and Design, 2016, 108, 240-249.	7.0	8
228	Direct numerical simulation of gas-solid-liquid flows with capillary effects: An application to liquid bridge forces between spherical particles. Physical Review E, 2016, 94, 063301.	2.1	52
229	Contact force model including the liquid-bridge force for wet-particle simulation using the discrete element method. Advanced Powder Technology, 2016, 27, 652-660.	4.1	59
230	Influence of particle shape on the rheological behavior of three-phase non-brownian suspensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 497, 316-326.	4.7	31
231	Liquid morphologies and capillary forces between three spherical beads. Physical Review E, 2016, 94, 012907.	2.1	23
232	Tensile stress relaxation in unsaturated granular materials. Granular Matter, 2016, 18, 1.	2.2	5
233	Time step criteria in DEM simulation of wet particles in viscosity dominant systems. Powder Technology, 2016, 302, 100-107.	4.2	29
234	A cohesive granular material with tunable elasticity. Scientific Reports, 2016, 6, 35650.	3.3	37
235	Low internal pressure in femtoliter water capillary bridges reduces evaporation rates. Scientific Reports, 2016, 6, 22232.	3.3	9
236	Evaluation of adhesion in microsystems using equivalent rough surfaces modeled with spherical caps. European Journal of Mechanics, A/Solids, 2016, 57, 121-131.	3.7	9
237	Micro-mechanical failure analysis of wet granular matter. Acta Geotechnica, 2016, 11, 539-548.	5.7	18
238	Interfacial phenomena in gas hydrate systems. Chemical Society Reviews, 2016, 45, 1678-1690.	38.1	189
239	Micro–macro transition and simplified contact models for wet granular materials. Computational Particle Mechanics, 2016, 3, 449-462.	3.0	31
240	Simulating wet gas–solid fluidized beds using coarse-grid CFD-DEM. Chemical Engineering Science, 2016, 144, 224-238.	3.8	59
241	Structure of Particle Networks in Capillary Suspensions with Wetting and Nonwetting Fluids. Langmuir, 2016, 32, 1489-1501.	3.5	78

ARTICLE IF CITATIONS # The capillary bridge between two spheres: New closed-form equations in a two century old problem. 242 14.7 63 Advances in Colloid and Interface Science, 2016, 227, 53-62. Capillary bridges and capillary forces between two axisymmetric power–law particles. Particuology, 243 3.6 2016, 27, 122-127. Theoretical and experimental study of pendular regime in unsaturated granular media. European 244 2.1 15 Journal of Environmental and Civil Engineering, 2017, 21, 840-853. Simulating adhesion of wet fabrics to water: Gravity of liquid bridge-based theoretical model and 245 experimental verification. Textile Reseach Journal, 2017, 87, 769-779. Basic Mechanical Properties of Wet Granular Materials: A DEM Study. Journal of Engineering 246 2.9 32 Mechanics - ASCE, 2017, 143, . Liquid transport rates during binary collisions of unequally-sized particles. Powder Technology, 2017, 4.2 309,95-109 Distance-dependency of capillary bridges in thermodynamic equilibrium. Powder Technology, 2017, 312, 248 4.2 12 175-183. Normal viscous force of pendular liquid bridge between two relatively moving particles. Journal of 9.4 36 Colloid and Interface Science, 2017, 494, 255-265. Preparation and yielding behavior of pendular network suspensions. Journal of Rheology, 2017, 61, 250 2.6 20 217-228. Microscopic Evolution of Laboratory Volcanic Hybrid Earthquakes. Scientific Reports, 2017, 7, 40560. 3.3 The rupture force of liquid bridges in two and three particle systems. Powder Technology, 2017, 313, 252 21 4.2 18-26. Influence of mixing conditions on the rheological properties and structure of capillary suspensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 518, 85-97. Discrete simulation of granular and particle-fluid flows: from fundamental study to engineering 254 4.4 73 application. Reviews in Chemical Engineering, 2017, 33, . DEM simulation of wet granular-fluid flows in spouted beds: Numerical studies and experimental verifications. Powder Technology, 2017, 318, 337-349. 4.2 On the role of forces governing particulate interactions in pharmaceutical systems: A review. 256 5.220 International Journal of Pharmaceutics, 2017, 526, 516-537. Influence of Humidity on Grip and Release Adhesion Mechanisms for Gecko-Inspired Microfibrillar 34 Surfaces. ACS Applied Materials & amp; Interfaces, 2017, 9, 14497-14505. Free energy calculations along entropic pathways. III. Nucleation of capillary bridges and bubbles. 258 3.013 Journal of Chemical Physics, 2017, 146, 184104. Simulation and Experiments on the Capillary Force between a Circular Disk and a Parallel Substrate. 3.3 Chinese Physics Letters, 2017, 34, 056801.

#	Article	IF	CITATIONS
260	Discrete element method simulations and experiments of dry catalyst impregnation for spherical and cylindrical particles in a double cone blender. Powder Technology, 2017, 318, 23-32.	4.2	3
261	Liquid bridges at the root-soil interface. Plant and Soil, 2017, 417, 1-15.	3.7	92
262	Development of numerical algorithm to guide solder joint structure and component structural design during manufacturing. Microelectronics Reliability, 2017, 71, 134-142.	1.7	1
263	An analytical theory for the capillary bridge force between spheres. Journal of Fluid Mechanics, 2017, 812, 129-151.	3.4	30
264	Interfacial Properties and Mechanisms Dominating Gas Hydrate Cohesion and Adhesion in Liquid and Vapor Hydrocarbon Phases. Langmuir, 2017, 33, 11299-11309.	3.5	50
265	Tangential viscous force models for pendular liquid bridge of Newtonian fluid between moving particles. Chemical Engineering Science, 2017, 174, 365-373.	3.8	24
266	A study on the droplet dynamic behavior on the moving flat plate in the presence of the upper flat tip. Computers and Fluids, 2017, 156, 402-420.	2.5	1
267	Properties of pendular liquid bridges determined on Delaunay's roulettes. EPJ Web of Conferences, 2017, 140, 09042.	0.3	2
268	Liquid bridging of cylindrical colloids in near-critical solvents. Journal of Chemical Physics, 2017, 147, 104701.	3.0	9
269	Accretion Dynamics on Wet Granular Materials. Physical Review Letters, 2017, 118, 208001.	7.8	10
270	Shape and Dynamics of Adhesive Cells: Mechanical Response of Open Systems. Physical Review Letters, 2017, 118, 208102.	7.8	22
271	Contact angle mechanical influence in wet granular soils. Acta Geotechnica, 2017, 12, 67-83.	5.7	40
272	Drop morphologies on flexible fibers: influence of elastocapillary effects. Soft Matter, 2017, 13, 134-140.	2.7	13
273	Capillary force and rupture of funicular liquid bridges between three spherical bodies. Powder Technology, 2017, 305, 89-98.	4.2	79
274	Effect of cohesion on local compaction and granulation of sheared soft granular materials. EPJ Web of Conferences, 2017, 140, 03065.	0.3	5
275	A liquid bridge model for spherical particles applicable to asymmetric configurations. Chemical Engineering Science, 2018, 182, 28-43.	3.8	29
276	Effect of collision angle on particle-particle adhesion of colliding particles through liquid droplet. Advanced Powder Technology, 2018, 29, 1317-1322.	4.1	25
279	DEM simulations: mixing of dry and wet granular material with different contact angles. Granular Matter, 2018, 20, 1.	2.2	18

#	Article	IF	CITATIONS
280	Characterisation of pendular capillary bridges derived from experimental data using inverse problem method. Granular Matter, 2018, 20, 1.	2.2	20
281	Experimental and theoretical analyses on the effect of physical properties and humidity of fly ash impacting on a flat surface. Journal of Aerosol Science, 2018, 117, 85-99.	3.8	12
282	Coarse grain model for DEM simulation of dense and dynamic particle flow with liquid bridge forces. Chemical Engineering Research and Design, 2018, 132, 1060-1069.	5.6	55
283	A regime map for the normal surface impact of wet and dry agglomerates. AICHE Journal, 2018, 64, 1975-1985.	3.6	10
284	Influence of Topography on Adhesion and Bioadhesion. Advances in Polymer Science, 2018, , 19-50.	0.8	3
285	Patterning of a cohesionless granular layer under pure shear. Physical Review E, 2018, 97, 012901.	2.1	1
286	Negative normal stress differences <i>N</i> ₁ – <i>N</i> ₂ in a low concentration capillary suspension. Soft Matter, 2018, 14, 3254-3264.	2.7	6
287	Structure of capillary suspensions and their versatile applications in the creation of smart materials. MRS Communications, 2018, 8, 332-342.	1.8	11
288	Adhesive force model at a rough interface in the presence of thin water films: The role of relative humidity. International Journal of Mechanical Sciences, 2018, 140, 471-485.	6.7	15
289	Review of briquette binders and briquetting mechanism. Renewable and Sustainable Energy Reviews, 2018, 82, 477-487.	16.4	126
290	Magnetic resonance imaging of gas–solid fluidization with liquid bridging. AICHE Journal, 2018, 64, 2958-2971.	3.6	25
291	Hardening of particle/oil/water suspensions due to capillary bridges: Experimental yield stress and theoretical interpretation. Advances in Colloid and Interface Science, 2018, 251, 80-96.	14.7	27
292	Lubrication force model for a pendular liquid bridge of power-law fluid between two particles. Chemical Engineering Research and Design, 2018, 132, 1030-1036.	5.6	9
293	Analysis of interparticle forces and particle-wall interactions by powder bed pressure drops at incipient fluidization. Powder Technology, 2018, 325, 64-68.	4.2	12
294	Fractal approaches to characterize the structure of capillary suspensions using rheology and confocal microscopy. Journal of Rheology, 2018, 62, 183-196.	2.6	29
295	Liquid redistribution in sheared wet granular media. Physical Review E, 2018, 98, .	2.1	14
296	Stability of granular tunnel. Granular Matter, 2018, 20, 1.	2.2	5
297	Unsteady flows and inhomogeneous packing in damp granular heap flows. Physical Review E, 2018, 98, .	2.1	8

		CITATION REPORT		
#	Article		IF	Citations
298	Energy dissipation in sheared wet granular assemblies. Physical Review E, 2018, 98, .		2.1	7
299	Surface permeability of porous media particles and capillary transport. European Physic 2018, 41, 106.	cal Journal E,	1.6	3
300	Capillary bridge force between non-perfectly wettable spherical particles: An analytical the pendular regime. Powder Technology, 2018, 339, 827-837.	theory for	4.2	15
301	Gas-solid fluidization with liquid bridging: A review from a modeling perspective. Powd 2018, 336, 12-29.	er Technology,	4.2	46
302	Measurement for Contact Angle of Iron Ore Particles and Water. ISIJ International, 201	.8, 58, 379-400.	1.4	9
303	Mechanical strength of wet particle agglomerates. Mechanics Research Communicatic	ons, 2018, 92, 1-7.	1.8	16
304	DEM simulations of screening processes under the influence of moisture. Chemical Eng Research and Design, 2018, 136, 593-609.	gineering	5.6	18
305	Shear strength of wet granular materials: Macroscopic cohesion and effective stress. E Physical Journal E, 2018, 41, 68.	uropean	1.6	20
306	Statistical analysis of stress transmission in wet granular materials. International Journ Numerical and Analytical Methods in Geomechanics, 2018, 42, 1935-1956.	al for	3.3	10
307	Effect of geometry on the dewetting of granular chains by evaporation. Soft Matter, 20 6994-7002.	018, 14,	2.7	5
308	Modelling of partially wet particles in DEM simulations of a solid mixing process. Powd Technology, 2018, 338, 354-364.	er	4.2	10
309	Rheology and microstructure of unsaturated wet granular materials: Experiments and s Journal of Rheology, 2018, 62, 1175-1186.	simulations.	2.6	32
310	Adhesive force measurement of steady-state water nano-meniscus: Effective surface te nanoscale. Scientific Reports, 2018, 8, 8462.	ension at	3.3	19
311	On the capillary bridge between spherical particles of unequal size: analytical and expe approaches. Continuum Mechanics and Thermodynamics, 2019, 31, 225-237.	rimental	2.2	19
312	Capillary Interaction in Wet Granular Assemblies: Part 1. , 2019, , 239-275.			0
313	Capillary Interaction in Wet Granular Assemblies: Part 2. , 2019, , 277-309.			0
314	Competing forces on a liquid bridge between parallel and orthogonal dissimilar fibers. 2019, 15, 6967-6977.	Soft Matter,	2.7	23
315	Nucleation of Capillary Bridges and Bubbles in Nanoconfined CO2. Langmuir, 2019, 35	, 15401-15409.	3.5	8

	C	ITATION REPORT	
#	Article	IF	CITATIONS
316	Scaling Law for Cracking in Shrinkable Granular Packings. Physical Review Letters, 2019, 123, 15800	4. 7.8	8
317	Application of the Discrete Element Method for Manufacturing Process Simulation in the Pharmaceutical Industry. Pharmaceutics, 2019, 11, 414.	4.5	67
318	Surface Permeability of Particulate Porous Media. Transport in Porous Media, 2019, 130, 637-654.	2.6	2
319	Few-cycle Regime Atomic Force Microscopy. Scientific Reports, 2019, 9, 12721.	3.3	7
320	Agglomeration of wet particles in dense granular flows. European Physical Journal E, 2019, 42, 127.	1.6	16
321	Operating stability analysis of continuous gas–liquid–solid FBR under super-condensed mode. Advanced Powder Technology, 2019, 30, 751-765.	4.1	2
322	Numerical Study on Concrete Pumping Behavior via Local Flow Simulation with Discrete Element Method. Materials, 2019, 12, 1415.	2.9	23
323	Effect of capillary bridges on the interfacial adhesion of wearable electronics to epidermis. International Journal of Solids and Structures, 2019, 174-175, 85-97.	2.7	5
324	Liquid redistribution upon the liquid-bridge rupture between two unequal particles with a minimal energy method. Powder Technology, 2019, 354, 165-173.	4.2	14
325	Toward a Holistic Approach To Assess Particle Agglomeration: Impact of Intrinsic Materials Properties. Industrial & Engineering Chemistry Research, 2019, 58, 10394-10401.	3.7	4
326	Capillary transport in particulate porous media at low levels of saturation. Journal of Applied Physics, 2019, 125, 185301.	2.5	3
327	Crack formation and self-closing in shrinkable, granular packings. Soft Matter, 2019, 15, 4689-4702.	2.7	18
328	Magnetically stimulating capillary effect for reversible wet adhesions. Soft Matter, 2019, 15, 2817-28	325. 2.7	5
329	Experimental and theoretical studies of the relationship between dry and humid normal restitution coefficients. Journal of Aerosol Science, 2019, 129, 16-27.	3.8	18
330	Numerical simulation of wet particle flows in an intensive mixer. Powder Technology, 2019, 346, 301-315.	4.2	18
331	Capillary bridges between unequal-sized spherical particles: Rupture distances and capillary forces. Powder Technology, 2019, 346, 462-476.	4.2	16
332	A paradigm shift towards compositionally zero-sum binderless 3D printing of magnesium alloys via capillary-mediated bridging. Acta Materialia, 2019, 165, 294-306.	7.9	47
333	Multiscale modeling of unsaturated granular materials based on thermodynamic principles. Continuum Mechanics and Thermodynamics, 2019, 31, 341-359.	2.2	14

#	Article	IF	CITATIONS
334	Multiscale structures in particle–fluid systems: Characterization, modeling, and simulation. Chemical Engineering Science, 2019, 198, 198-223.	3.8	85
335	Extension of process models to predict batch screening results under the influence of moisture based on DEM simulations. Powder Technology, 2019, 342, 698-713.	4.2	7
336	Effect of liquid bridging on bubbles injected into a fluidized bed: A magnetic resonance imaging study. Powder Technology, 2019, 343, 813-820.	4.2	21
337	Exact calculation of axisymmetric capillary bridge properties between two unequal-sized spherical particles. Mathematics and Mechanics of Solids, 2019, 24, 2767-2784.	2.4	12
338	Modeling the effect of moisture on the flowability of a granular material. Meccanica, 2019, 54, 667-681.	2.0	9
339	A review of moisture migration in bulk material. Particulate Science and Technology, 2020, 38, 247-260.	2.1	9
340	The Effect of Grain Size and Shape on Sliding Friction of Wet Granular Media. Zeitschrift Fur Physikalische Chemie, 2020, 234, 107-116.	2.8	1
341	Capillary bridges between spherical particles under suction control: Rupture distances and capillary forces. Powder Technology, 2020, 360, 622-634.	4.2	17
342	Elucidation of the role of cohesion in the macroscopic behaviour of coarse particulate systems using DEM. Powder Technology, 2020, 361, 374-388.	4.2	11
343	Adhesion-force micro-scale study of desiccating granular material. Geotechnique, 2020, 70, 1133-1144.	4.0	10
344	Modeling of capillary pressure in horizontal rough-walled fractures in the presence of liquid bridges. Journal of Petroleum Science and Engineering, 2020, 185, 106642.	4.2	7
345	A novel energy-efficient kapok filter paper with high DHC for solid-oil mixed aerosol: Performance and loading behavior evolution mechanism. Separation and Purification Technology, 2020, 235, 116180.	7.9	9
346	Capillary forces on wet particles with a liquid bridge transition from convex to concave. Powder Technology, 2020, 363, 59-73.	4.2	31
347	Steady state rheology of homogeneous and inhomogeneous cohesive granular materials. Granular Matter, 2020, 22, 1.	2.2	17
348	Stress wave in monosized bead string with various water contents. Advanced Powder Technology, 2020, 31, 993-1000.	4.1	2
349	Temporal evolution of concentration and microstructure of colloidal films during vertical drying: a lattice Boltzmann simulation study. Soft Matter, 2020, 16, 523-533.	2.7	11
350	Fast, flexible particle simulations — An introduction to MercuryDPM. Computer Physics Communications, 2020, 249, 107129.	7.5	59
351	Discrete element analysis of normal elastic impact of wet particles. Powder Technology, 2020, 362, 628-634.	4.2	16

#	Article	IF	CITATIONS
352	Flexible and Transparent Ferroferric Oxide-Modified Silver Nanowire Film for Efficient Electromagnetic Interference Shielding. ACS Applied Materials & Interfaces, 2020, 12, 2826-2834.	8.0	62
353	CFD-DEM study of air entrainment in falling particle plumes. Powder Technology, 2020, 361, 836-848.	4.2	18
354	Approach the powder contact force, voidage, tensile stress, wall frictional stress and state diagram of powder bed by simple pressure drop monitoring. Advanced Powder Technology, 2020, 31, 433-438.	4.1	5
355	Exploiting air cushion effects to optimise a superhydrophobic/hydrophilic patterned liquid ring sealed air bearing. Tribology International, 2020, 144, 106129.	5.9	10
356	An original method for measuring liquid surface tension from capillary bridges between two equal-sized spherical particles. Powder Technology, 2020, 363, 349-359.	4.2	20
357	The role of inter-particle friction on rheology and texture of wet granular flows. European Physical Journal E, 2020, 43, 65.	1.6	5
358	Modeling of capillary force between particles with unequal contact angle. Powder Technology, 2020, 376, 390-397.	4.2	14
359	Numerical study of the formation and drying kinetics of a capillary bridge of trehalose solution between two parallel hydrophilic fibres. Chemical Engineering Science, 2020, 226, 115849.	3.8	0
360	Bridging transitions and capillary forces for colloids in a slit. Journal of Chemical Physics, 2020, 153, 014901.	3.0	4
361	CFD-DEM Simulation of a Coating Process in a Fluidized Bed Rotor Granulator. Processes, 2020, 8, 1090.	2.8	22
362	Closed-Form Expressions for Contact Angle Hysteresis: Capillary Bridges between Parallel Platens. Colloids and Interfaces, 2020, 4, 13.	2.1	5
363	Migration of Liquid Bridges at the Interface of Spheres and Plates with an Imposed Thermal Gradient. Langmuir, 2020, 36, 6268-6276.	3.5	5
364	The shape of two-dimensional liquid bridges. Journal of Physics Condensed Matter, 2020, 32, 034002.	1.8	8
365	Improved analytical energy balance model for evaluating agglomeration from a binary collision of identical wet particles. Chemical Engineering Science, 2020, 223, 115738.	3.8	8
366	Cohesion-controlled granular material. Physical Review E, 2020, 101, 032904.	2.1	22
367	Evolution of wet agglomerates inside inertial shear flow of dry granular materials. Physical Review E, 2020, 101, 032906.	2.1	16
368	Numerical Investigation of Funicular Liquid Bridge Interactions Between Spherical Particles. Chemical Engineering and Technology, 2020, 43, 830-837.	1.5	11
369	Additive rheology of complex granular flows. Nature Communications, 2020, 11, 1476.	12.8	59

ARTICLE IF CITATIONS # Effective pair interaction of patchy particles in critical fluids. Journal of Chemical Physics, 2020, 152, 370 3.0 5 114902. Microstructure and yielding of capillary force induced gel. Rheologica Acta, 2020, 59, 291-306. 371 2.4 Dynamic behavior of humid granular avalanches: Optical measurements to characterize the precursor 372 2.1 5 activity. Physical Review E, 2020, 101, 022902. On liquid bridge adhesion to fibrous surfaces under normal and shear forces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 589, 124473. A DEM approach to study desiccation processes in slurry soils. Computers and Geotechnics, 2020, 120, 374 4.7 31 103448. Binderless briquetting technology for lignite briquettes: a review. Energy, Ecology and Environment, 2021, <u>6, 69-79</u>. Capillary force in adhesive contact between hydrogel microspheres. Colloids and Surfaces A: 376 4.7 3 Physicochemical and Engineering Aspects, 2021, 611, 125828. Physical mechanisms behind the wet adhesion: From amphibian toe-pad to biomimetics. Colloids and 5.0 14 Surfaces B: Biointerfaces, 2021, 199, 111531. Study of grain-scale effects in bulk handling using discrete element simulations. Powder Technology, 378 4.2 3 2021, 382, 284-299. Drift-diffusive liquid migration in partly saturated sheared granular media. Journal of Fluid 379 3.4 Mechanics, 2021, 915, Separation efficiency of liquidâ€"solid undergoing vibration based on breakage of liquid bridge. 380 3 3.6 Particuology, 2022, 61, 103-110. Nonequilibrium Structure Diagram of Pendular Suspensions under Large-Amplitude Oscillatory Shear. 3.5 Langmuir, 2021, 37, 6208-6218. Impact dynamics and power-law scaling behavior of wet agglomerates. Computational Particle 382 3.0 6 Mechanics, 2022, 9, 537-550. Capillaryâ€bridge forces between solid particles: Insights from lattice Boltzmann simulations. AICHE 3.6 Journal, 2021, 67, e17350. Humidity-control assists high-efficient coal fly ash removal by PTFE membrane. Chinese Journal of 384 3.5 3 Chemical Engineering, 2021, 40, 88-95. Numerical analysis of capillary bridges and coalescence in a triplet of spheres. Granular Matter, 2021, 23, 1. Causes and Effects of Sand and Dust Storms: What Has Past Research Taught Us? A Survey. Journal of 386 2.314 Risk and Financial Management, 2021, 14, 326. Evolution and fluidization behaviors of wet agglomerates based on formation-fragmentation 3.8 competition mechanism. Chemical Engineering Science, 2022, 247, 116933.

#	Article	IF	CITATIONS
388	Liquid Force and Rupture Distance between Two Particles. Advances in Materials Science and Engineering, 2021, 2021, 1-9.	1.8	2
389	Liquid Transfer for Viscoelastic Solutions. Langmuir, 2021, 37, 10348-10353.	3.5	3
390	Assessing filter cake strength via discrete element method simulations. Chemical Engineering Research and Design, 2021, 173, 215-223.	5.6	3
391	Visual Simulation of Soil-Structure Destruction with Seepage Flows. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 2021, 4, 1-18.	1.6	3
392	Lateral and Normal Capillary Force Evolution of a Reciprocating Liquid Bridge. Langmuir, 2021, 37, 11737-11749.	3.5	9
393	Numerical investigation of elbow erosion in the conveying of dry and wet particles. Powder Technology, 2021, 393, 265-279.	4.2	16
394	Liquid bridge splitting enhances normal capillary adhesion and resistance to shear on rough surfaces. Journal of Colloid and Interface Science, 2022, 607, 514-529.	9.4	19
395	Normal collision between partially wetted particles by using direct numerical simulation. Chemical Engineering Science, 2022, 247, 117090.	3.8	4
396	Soft actuators by electrochemical oxidation of liquid metal surfaces. Soft Matter, 2021, 17, 1921-1928.	2.7	14
397	The effect of liquid bridge model details on the dynamics of wet fluidized beds. AICHE Journal, 2018, 64, 437-456.	3.6	25
398	Effect of Capillary and Cemented Bonds on the Strength of Unsaturated Sands. Springer Proceedings in Physics, 2007, , 185-193.	0.2	3
399	Scanning Probe Studies of Nanoscale Adhesion Between Solids in the Presence of Liquids and Monolayer Films. , 2007, , 951-980.		13
400	Micro-scale Testing of Capillary Bridge Evolution due to Evaporation. Springer Series in Geomechanics and Geoengineering, 2013, , 233-238.	0.1	2
401	Capillary Forces in Atomic Force Microscopy and Liquid Nanodispensing. Microtechnology and MEMS, 2013, , 279-305.	0.2	8
402	A general(ized) local rheology for wet granular materials. New Journal of Physics, 2017, 19, 043014.	2.9	52
403	Review on the Dynamics of Isothermal Liquid Bridges. Applied Mechanics Reviews, 2020, 72, .	10.1	35
404	Shape of Liquid Bridges in a Horizontal Fracture. Journal of Fluid Flow, Heat and Mass Transfer, 0, , .	0.0	2
406	Model development of tangential hydrodynamic force on particles with pendular liquid bridge of power-law fluid, Journal of Non-Newtonian Fluid Mechanics, 2021, 298, 104676.	2.4	1

#	Article	IF	CITATIONS
408	Discrete element simulation of impact disaggregation for wet granule agglomerate. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 154501.	0.5	1
410	Understanding and Manipulation of Nanoparticle Contact Forces by Capillary Bridges. , 2019, , 31-65.		Ο
411	On-line moisture content estimation of saw dust via machine vision. Open Engineering, 2020, 10, 336-349.	1.6	1
412	Development of a Dynamic-Physical Process Model for Sieving. , 2020, , 141-198.		0
413	Stretching and rupture of a viscous liquid bridge between two spherical particles. Asia-Pacific Journal of Chemical Engineering, 2021, 16, .	1.5	2
414	Theoretical and experimental insight into the homogeneous expansion of wet particles in a fluidized bed. Powder Technology, 2022, 397, 117016.	4.2	4
415	Scale-up and flow behavior of cohesive granular material in a four-bladed mixer: effect of system and particle size. Advanced Powder Technology, 2021, 32, 4481-4495.	4.1	6
416	A review of methods, applications and limitations for incorporating fluid flow in the discrete element method. Journal of Rock Mechanics and Geotechnical Engineering, 2022, 14, 1005-1024.	8.1	29
417	Capillary Interactions, Aggregate Formation, and the Rheology of Particle-Laden Flows: A Lattice Boltzmann Study. Industrial & Engineering Chemistry Research, 2022, 61, 1863-1870.	3.7	2
418	Development of a setup to characterize capillary liquid bridges between liquid infused surfaces. AIP Advances, 2022, 12, .	1.3	1
419	Machine-Learned Free Energy Surfaces for Capillary Condensation and Evaporation in Mesopores. Entropy, 2022, 24, 97.	2.2	0
420	A comparison of models of linear collisions between spherical particles in the pendular regime. Powder Technology, 2022, 398, 117112.	4.2	4
421	Automated Manipulation of Miniature Objects Underwater Using Air Capillary Bridges: Pick-and-Place, Surface Cleaning, and Underwater Origami. ACS Applied Materials & Interfaces, 2022, 14, 9855-9863.	8.0	2
422	The behavior of capillary suspensions at diverse length scales: From single capillary bridges to bulk. Current Opinion in Colloid and Interface Science, 2022, 58, 101557.	7.4	11
423	Liquid‣uspended and Liquidâ€Bridged Liquid Metal Microdroplets. Small, 2022, 18, e2108069.	10.0	9
424	Field-induced formation and manipulation of a microscale liquid ball on an outside wall of the pulled pipette. Current Applied Physics, 2022, 36, 112-116.	2.4	0
425	Capillary bridges between unsaturated nano-mineral particles: a molecular dynamics study. Physical Chemistry Chemical Physics, 2022, 24, 8398-8407.	2.8	0
426	A numerical model of discrete element – Liquid bridge – Liquid thin film system for wet deforming granular medium at low saturation. Powder Technology, 2022, 399, 117217.	4.2	3

#	Article	IF	CITATIONS
427	Role of cohesion in the formation of kink wave fronts in vibrofluidized granular materials. Mechanics Research Communications, 2022, 120, 103855.	1.8	0
428	Reorientation of Suspended Ceramic Particles in Robocasted Green Filaments during Drying. Materials, 2022, 15, 2100.	2.9	2
429	Early Detection of Agglomeration in Fluidized Beds by Means of Frequency Analysis of Pressure Fluctuations. Energy & Fuels, 2022, 36, 4924-4932.	5.1	6
430	Geometric similarity on interparticle force evaluation for scaled-up DEM particles. Powder Technology, 2022, 404, 117483.	4.2	5
431	Microscopic Investigation on Mechanical Response of Wet Granular Materials. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2022, 29, 101-105.	0.0	0
432	The roles of the reversibility and irreversibility of capillary bonds on the impact dynamics of agglomerates. Acta Geotechnica, 2023, 18, 217-233.	5.7	5
433	Investigation of the influence of impact velocity and liquid bridge volume on the maximum liquid bridge length. Advanced Powder Technology, 2022, 33, 103630.	4.1	4
434	Mathematical study on gravity effect of the liquid bridge between two rigid spheres. Powder Technology, 2022, 407, 117662.	4.2	3
435	Fluidization characteristics of wet particles in a spouted bed using computational fluid dynamics and discrete element method. Powder Technology, 2022, 407, 117649.	4.2	3
436	Wet mono-sized granular packing: effects of initial clusters and filling strategy. Powder Technology, 2022, 407, 117678.	4.2	2
437	Estimation of the Fluidization Behavior of Nonspherical Wet Particles with Liquid Transfer. Industrial & Engineering Chemistry Research, 2022, 61, 10254-10263.	3.7	5
438	Experimental and numerical studies of a three-dimensional bonded contact model of cemented granular soils. Computational Particle Mechanics, 2023, 10, 445-463.	3.0	3
439	Granular fluidity in cohesive split-bottom granular flows. Physical Review Fluids, 2022, 7, .	2.5	0
440	Studies on rheological behavior of native and octenyl succinic anhydride modified buckwheat (<i>Fagopyrum esculentum</i>) starch gel and improved flow properties thereof. Journal of Food Process Engineering, 2023, 46, .	2.9	5
441	Review: The Calibration of DEM Parameters for the Bulk Modelling of Cohesive Materials. Processes, 2023, 11, 5.	2.8	10
442	Review of CFD-DEM Modeling of Wet Fluidized Bed Granulation and Coating Processes. Processes, 2023, 11, 382.	2.8	4
443	Failure of partially saturated frozen soils: A micromechanical analysis. Cold Regions Science and Technology, 2023, 210, 103842.	3.5	1
444	Liquid Cohesion Induced Particle Agglomeration Enhances Clogging in Rock Fractures. Geophysical Research Letters, 2023, 50, .	4.0	5

#	Article	IF	Citations
445	Multiphase lattice Boltzmann modeling of cyclic water retention behavior in unsaturated sand based on X-ray computed tomography. Canadian Geotechnical Journal, 2023, 60, 1429-1446.	2.8	1
446	A Predictive Model of Capillary Forces and Contact Diameters between Two Plates Based on Artificial Neural Network. Micromachines, 2023, 14, 754.	2.9	0
447	Comparing particle shape representations and contact models for DEM simulation of bulk cohesive behaviour. Computers and Geotechnics, 2023, 159, 105449.	4.7	8
448	Rupture distances and capillary forces of liquid bridges: Closed-form expressions and ANNs-trained prediction models. Powder Technology, 2023, 427, 118702.	4.2	1
449	Recent Advances in MercuryDPM. Mathematics in Computer Science, 2023, 17, .	0.4	3
450	Liquid Metal Actuators: A Comparative Analysis of Surface Tension Controlled Actuation. Advanced Materials, 2024, 36, .	21.0	6
451	A state-of-the-art review of experimental and computational studies of granular materials: Properties, advances, challenges, and future directions. Progress in Materials Science, 2023, 138, 101157.	32.8	10
452	A Simplified Method for Bearing-Capacity Analysis of Energy Piles Integrating Temperature-Dependent Model of Soil–Water Characteristic Curve. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2023, 149, .	3.0	4
453	Mechanisms of rheological modifiers for quick mixing method in 3D concrete printing. Cement and Concrete Composites, 2023, 142, 105218.	10.7	2
454	Numerical simulation of particle mixing and granulation performance in rotating drums during the iron ore sintering process. Powder Technology, 2023, 429, 118890.	4.2	2
455	CFD-DEM Coupling Simulation and Cross-Scale Correlation Analysis of a Liquid-Containing Gas–Solid Spouted Fluidized Bed Reactor. Industrial & Engineering Chemistry Research, 2023, 62, 15240-15254.	3.7	1
456	Surfactants to enable quick nozzle mixing in 3D concrete printing. Cement and Concrete Composites, 2023, 142, 105226.	10.7	2
457	Capillary Bridge in Contact with Ice Particles Can Be Related to the Thin Liquid Film on Ice. Journal of Cold Regions Engineering - ASCE, 2024, 38, .	1.1	0
458	Partially saturated granular flow in a rotating drum: The role of cohesion. Physics of Fluids, 2023, 35,	4.0	Ο
459	A machine learning model of liquid bridge force and its application in discrete element method. Construction and Building Materials, 2024, 411, 134174.	7.2	0
460	Importance of liquid bridge forces in dynamics of rock-ice avalanches: insights from discrete element simulations. Computers and Geotechnics, 2024, 165, 105904.	4.7	0
461	Effect of nuclei particle shape and baffle setting on the drum granulation in iron ore sintering process. Powder Technology, 2024, 433, 119222.	4.2	0
462	The combined effect of cohesion and finite size on the collapse of wet granular columns. Soft Matter, 2023, 19, 9520-9530.	2.7	0

#	Article	IF	CITATIONS
463	The force and dynamic response of low-velocity projectile impact into 3D dense wet granular media. Powder Technology, 2023, , 119309.	4.2	0
464	Capillary force-driven formation of native starch granule oleogels for 3D printing. Food Hydrocolloids, 2024, 150, 109725.	10.7	0
465	Interparticle forces and their effects in particulate systems. Powder Technology, 2024, 436, 119445.	4.2	0
466	Proposal of a formula for estimating the tensile strength of solidification with arbitrary particle size distribution. Powder Technology, 2024, 436, 119449.	4.2	0
467	A generalized analytical energy balance model for evaluating agglomeration from a binary collision of wet particles. Heliyon, 2024, 10, e26320.	3.2	0
468	Numerical Study on Effect of Aggregate Moisture on Mixing Process. Materials, 2024, 17, 898.	2.9	0