

Yixiang Gan

List of Publications by Citations

Source: <https://exaly.com/author-pdf/6999041/yixiang-gan-publications-by-citations.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

133
papers

2,440
citations

24
h-index

44
g-index

144
ext. papers

3,003
ext. citations

3.9
avg, IF

5.73
L-index

#	Paper	IF	Citations
133	Experimental observations of stress-driven grain boundary migration. <i>Science</i> , 2009 , 326, 1686-90	33.3	455
132	Three-dimensional modeling of the mechanical property of linearly elastic open cell foams. <i>International Journal of Solids and Structures</i> , 2005 , 42, 6628-6642	3.1	96
131	Discrete element modelling of pebble beds: With application to uniaxial compression tests of ceramic breeder pebble beds. <i>Journal of the Mechanics and Physics of Solids</i> , 2010 , 58, 129-144	5	81
130	Scalable surface area characterization by electrokinetic analysis of complex anion adsorption. <i>Langmuir</i> , 2014 , 30, 15143-52	4	70
129	Contact mechanics of fractal surfaces by spline assisted discretisation. <i>International Journal of Solids and Structures</i> , 2015 , 59, 121-131	3.1	63
128	Computer simulation of packing structure in pebble beds. <i>Fusion Engineering and Design</i> , 2010 , 85, 1782-1787	1.7	58
127	Status of ceramic breeder pebble bed thermo-mechanics R&D and impact on breeder material mechanical strength. <i>Fusion Engineering and Design</i> , 2012 , 87, 1130-1137	1.7	54
126	Discrete element method for effective thermal conductivity of packed pebbles accounting for the Smoluchowski effect. <i>Fusion Engineering and Design</i> , 2018 , 127, 192-201	1.7	52
125	X-ray tomography investigations of mono-sized sphere packing structures in cylindrical containers. <i>Powder Technology</i> , 2017 , 318, 471-483	5.2	50
124	Dynamic contact angle hysteresis in liquid bridges. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018 , 555, 365-371	5.1	49
123	Static friction at fractal interfaces. <i>Tribology International</i> , 2016 , 93, 229-238	4.9	42
122	The Role of Surface Structure in Normal Contact Stiffness. <i>Experimental Mechanics</i> , 2016 , 56, 359-368	2.6	41
121	Experimental and numerical determination of mechanical properties of polygonal wood particles and their flow analysis in silos. <i>Granular Matter</i> , 2013 , 15, 811-826	2.6	40
120	The effects of packing structure on the effective thermal conductivity of granular media: A grain scale investigation. <i>International Journal of Thermal Sciences</i> , 2019 , 142, 266-279	4.1	36
119	3D printable geomaterials. <i>Geotechnique</i> , 2016 , 66, 323-332	3.4	36
118	Mechanics of binary and polydisperse spherical pebble assembly. <i>Fusion Engineering and Design</i> , 2012 , 87, 853-858	1.7	35
117	Disorder characterization of porous media and its effect on fluid displacement. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	33

116	Evaporation Limited Radial Capillary Penetration in Porous Media. <i>Langmuir</i> , 2016 , 32, 9899-904	4	33
115	Effects of surface structure deformation on static friction at fractal interfaces. <i>Geotechnique Letters</i> , 2013 , 3, 52-58	1.7	32
114	Solution based synthesis of mixed-phase materials in the Li ₂ TiO ₃ -SiO ₄ system. <i>Journal of Nuclear Materials</i> , 2015 , 456, 151-161	3.3	31
113	A micromechanical model for effective conductivity in granular electrode structures. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2013 , 29, 682-698	2	29
112	Performance optimization for shell-and-tube PCM thermal energy storage. <i>Journal of Energy Storage</i> , 2020 , 30, 101421	7.8	25
111	An FDEM study of particle breakage under rotational point loading. <i>Engineering Fracture Mechanics</i> , 2019 , 212, 221-237	4.2	24
110	Applying grid nanoindentation and maximum likelihood estimation for N-A-S-H gel in geopolymer paste: Investigation and discussion. <i>Cement and Concrete Research</i> , 2020 , 135, 106112	10.3	24
109	Thermal Discrete Element Analysis of EU Solid Breeder Blanket Subjected to Neutron Irradiation. <i>Fusion Science and Technology</i> , 2014 , 66, 83-90	1.1	24
108	Identification of material parameters of a thermo-mechanical model for pebble beds in fusion blankets. <i>Fusion Engineering and Design</i> , 2007 , 82, 189-206	1.7	24
107	Influence of gas pressure on the effective thermal conductivity of ceramic breeder pebble beds. <i>Fusion Engineering and Design</i> , 2017 , 118, 45-51	1.7	23
106	An improved semi-analytical solution for stress at round-tip notches. <i>Engineering Fracture Mechanics</i> , 2015 , 149, 134-143	4.2	23
105	Radical-functionalized plasma polymers: Stable biomimetic interfaces for bone implant applications. <i>Applied Materials Today</i> , 2019 , 16, 456-473	6.6	23
104	Interfacial electro-mechanical behaviour at rough surfaces. <i>Extreme Mechanics Letters</i> , 2016 , 9, 422-429	3.9	23
103	Maximum likelihood estimation for nanoindentation on sodium aluminosilicate hydrate gel of geopolymer under different silica modulus and curing conditions. <i>Composites Part B: Engineering</i> , 2020 , 198, 108185	10	22
102	Effective thermal conductivity of a compacted pebble bed in a stagnant gaseous environment: An analytical approach together with DEM. <i>Fusion Engineering and Design</i> , 2018 , 130, 80-88	1.7	22
101	Experimental and numerical investigation on hydrothermal performance of nanofluids in micro-tubes. <i>Energy</i> , 2020 , 193, 116658	7.9	22
100	Particle-shape-, temperature-, and concentration-dependent thermal conductivity and viscosity of nanofluids. <i>Physical Review E</i> , 2019 , 99, 043109	2.4	21
99	Tuning capillary penetration in porous media: Combining geometrical and evaporation effects. <i>International Journal of Heat and Mass Transfer</i> , 2018 , 123, 239-250	4.9	20

98	Mechanics of a crushable pebble assembly using discrete element method. <i>Journal of Nuclear Materials</i> , 2012 , 430, 90-95	3.3	20
97	Influence of plate material on the contact strength of Li ₄ SiO ₄ pebbles in crush tests and evaluation of the contact strength in pebble-pebble contact. <i>Engineering Fracture Mechanics</i> , 2013 , 100, 28-37	4.2	20
96	Numerical and experimental characterization of ceramic pebble beds under cycling mechanical loading. <i>Fusion Engineering and Design</i> , 2016 , 112, 162-168	1.7	20
95	Modes of wall induced granular crystallisation in vibrational packing. <i>Granular Matter</i> , 2019 , 21, 1	2.6	19
94	Discrete element simulation of dynamic behaviour of partially saturated sand. <i>International Journal of Mechanics and Materials in Design</i> , 2016 , 12, 495-507	2.5	19
93	Measurement of Young's modulus of anisotropic materials using microcompression testing. <i>Journal of Materials Research</i> , 2012 , 27, 2752-2759	2.5	19
92	Microstructure and mechanical properties of hard <i>Acrocomia mexicana</i> fruit shell. <i>Scientific Reports</i> , 2018 , 8, 9668	4.9	19
91	Crush probability analysis of ceramic breeder pebble beds under mechanical stresses. <i>Journal of Nuclear Materials</i> , 2011 , 417, 706-709	3.3	18
90	Stress-Dependent Electrical Contact Resistance at Fractal Rough Surfaces. <i>Journal of Engineering Mechanics - ASCE</i> , 2017 , 143,	2.4	17
89	A Discrete Element Method to simulate the mechanical behavior of ellipsoidal particles for a fusion breeding blanket. <i>Fusion Engineering and Design</i> , 2017 , 121, 22-31	1.7	17
88	Thermo-mechanical modelling of pebble bed-wall interfaces. <i>Fusion Engineering and Design</i> , 2010 , 85, 24-32	1.7	17
87	Roughness effects of gas diffusion layers on droplet dynamics in PEMFC flow channels. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 17869-17881	6.7	17
86	Modeling the effective conductivity of the solid and the pore phase in granular materials using resistor networks. <i>Powder Technology</i> , 2019 , 351, 54-65	5.2	16
85	Size-Dependent Crush Analysis of Lithium Orthosilicate Pebbles. <i>Fusion Science and Technology</i> , 2014 , 66, 136-141	1.1	16
84	The role of particle morphology on concrete fracture behaviour: A meso-scale modelling approach. <i>Cement and Concrete Research</i> , 2020 , 134, 106096	10.3	14
83	Cyclic behavior of ceramic pebble beds under mechanical loading. <i>Fusion Engineering and Design</i> , 2018 , 134, 11-21	1.7	14
82	Failure initiation and propagation of Li ₄ SiO ₄ pebbles in fusion blankets. <i>Fusion Engineering and Design</i> , 2013 , 88, 8-16	1.7	13
81	A particle-water based model for water retention hysteresis. <i>Geotechnique Letters</i> , 2013 , 3, 152-161	1.7	13

80	3d tomography analysis of the packing structure of spherical particles in slender prismatic containers. <i>International Journal of Materials Research</i> , 2020 , 111, 65-77	0.5	13
79	Two-dimensional modeling of the self-limiting oxidation in silicon and tungsten nanowires. <i>Theoretical and Applied Mechanics Letters</i> , 2016 , 6, 195-199	1.8	13
78	Numerical study on mechanical and hydraulic behaviour of blast-induced fractured rock. <i>Engineering With Computers</i> , 2020 , 36, 915-929	4.5	13
77	Nanoindentation on micromechanical properties and microstructure of geopolymer with nano-SiO ₂ and nano-TiO ₂ . <i>Cement and Concrete Composites</i> , 2021 , 117, 103883	8.6	13
76	Physical properties of Australian hurd used as aggregate for hemp concrete. <i>Materials Today Communications</i> , 2020 , 24, 100986	2.5	12
75	Contact stiffness of multiscale surfaces by truncation analysis. <i>International Journal of Mechanical Sciences</i> , 2017 , 131-132, 305-316	5.5	12
74	Modeling acoustic emission in the Brazilian test using moment tensor inversion. <i>Computers and Geotechnics</i> , 2020 , 123, 103567	4.4	11
73	Dual hierarchical particle jetting of a particle ring undergoing radial explosion. <i>Soft Matter</i> , 2018 , 14, 4422-4431	3.6	11
72	The pore-load modulus of ordered nanoporous materials with surface effects. <i>AIP Advances</i> , 2016 , 6, 035324	1.5	11
71	Atomistic Study of Dynamic Contact Angles in CO-Water-Silica System. <i>Langmuir</i> , 2019 , 35, 5324-5332	4	10
70	Thermo-mechanical analyses of HELICA and HEXCALIBER mock-ups. <i>Journal of Nuclear Materials</i> , 2009 , 386-388, 1060-1064	3.3	10
69	Modelling Imbibition Processes in Heterogeneous Porous Media. <i>Transport in Porous Media</i> , 2019 , 126, 615-631	3.1	10
68	Analytical estimation of the effective thermal conductivity of a granular bed in a stagnant gas including the Smoluchowski effect. <i>Granular Matter</i> , 2019 , 21, 1	2.6	9
67	Pore-scale modelling of gravity-driven drainage in disordered porous media. <i>International Journal of Multiphase Flow</i> , 2019 , 114, 19-27	3.6	9
66	Evolution of fabric in spherical granular assemblies under the influence of various loading conditions through DEM. <i>Granular Matter</i> , 2020 , 22, 1	2.6	9
65	Fingering patterns in hierarchical porous media. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	9
64	Mechanics of binary crushable granular assembly through discrete element method. <i>Nuclear Materials and Energy</i> , 2016 , 9, 237-241	2.1	9
63	Modified smoothed particle hydrodynamics approach for modelling dynamic contact angle hysteresis. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2019 , 35, 472-485	2	8

62	Effect of Wetting Transition during Multiphase Displacement in Porous Media. <i>Langmuir</i> , 2020 , 36, 2449-2458	4.4	8
61	An LBM-PNM framework for immiscible flow: With applications to droplet spreading on porous surfaces. <i>Chemical Engineering Science</i> , 2020 , 218, 115577	4.4	8
60	Dynamics of Viscous Entrapped Saturated Zones in Partially Wetted Porous Media. <i>Transport in Porous Media</i> , 2018 , 125, 193-210	3.1	8
59	Tuning capillary flow in porous media with hierarchical structures. <i>Physics of Fluids</i> , 2021 , 33, 034107	4.4	8
58	Discrete Element Analysis of Heat Transfer in the Breeder Beds of the European Solid Breeder Blanket Concept. <i>Fusion Science and Technology</i> , 2019 , 75, 283-298	1.1	7
57	Analytical solutions for elastic response of coated mesoporous materials to pore pressure. <i>International Journal of Engineering Science</i> , 2016 , 107, 68-76	5.7	7
56	The promise and challenges of utility-scale compressed air energy storage in aquifers. <i>Applied Energy</i> , 2021 , 286, 116513	10.7	7
55	Tailoring porous media for controllable capillary flow. <i>Journal of Colloid and Interface Science</i> , 2019 , 539, 379-387	9.3	7
54	A reliable approach for calculating thermophysical properties of liquid using molecular dynamics simulations. <i>Chemical Physics Letters</i> , 2018 , 712, 44-53	2.5	7
53	Improved Mathematical Model for Analysis of the Payne Effect of Magnetorheological Elastomers. <i>Journal of Aerospace Engineering</i> , 2018 , 31, 04018046	1.4	7
52	Nanoscratch on mechanical properties of interfacial transition zones (ITZs) in fly ash-based geopolymer composites. <i>Composites Science and Technology</i> , 2021 , 214, 109001	8.6	7
51	Mechanical properties in crumple-formed paper derived materials subjected to compression. <i>Heliyon</i> , 2017 , 3, e00329	3.6	6
50	Explosively driven hierarchical particle jetting. <i>Chemical Engineering Science</i> , 2019 , 202, 250-269	4.4	6
49	Contact behaviour of simulated rough spheres generated with spherical harmonics. <i>International Journal of Solids and Structures</i> , 2020 , 193-194, 54-68	3.1	6
48	Modelling wrinkling interactions produced by patterned defects in metal thin films. <i>Extreme Mechanics Letters</i> , 2015 , 4, 175-185	3.9	6
47	Precipitation of (Ti, Zr, Nb, Ta, Hf)C high entropy carbides in a steel matrix. <i>Materialia</i> , 2020 , 9, 100540	3.2	6
46	Long-term thermo-mechanical behaviour of energy piles in clay. <i>Environmental Geotechnics</i> , 2020 , 7, 237-248	2.4	6
45	Effects of variable injection rate on reservoir responses and implications for CO ₂ storage in saline aquifers 2019 , 9, 652-671		5

44	Stress-dependent electrical transport and its universal scaling in granular materials. <i>Extreme Mechanics Letters</i> , 2018 , 22, 83-88	3.9	5
43	Spherical ceramic pebbles subjected to multiple non-concentrated surface loads. <i>International Journal of Solids and Structures</i> , 2012 , 49, 658-671	3.1	5
42	Phase transitions and cyclic pseudotachylyte formation in simulated faults. <i>Philosophical Magazine</i> , 2012 , 92, 3405-3417	1.6	5
41	Permeability of Uniformly Graded 3D Printed Granular Media. <i>Geophysical Research Letters</i> , 2021 , 48,	4.9	5
40	Enhancing Spontaneous Droplet Motion on Structured Surfaces with Tailored Wedge Design. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2000520	4.6	5
39	Universality of the emergent scaling in finite random binary percolation networks. <i>PLoS ONE</i> , 2017 , 12, e0172298	3.7	4
38	Modeling twinning, detwinning, and dynamic recrystallization of magnesium alloys. <i>MRS Bulletin</i> , 2019 , 44, 873-877	3.2	4
37	Thermo-mechanical analysis of pebble beds in HELICA mock-up experiments. <i>Fusion Engineering and Design</i> , 2008 , 83, 1313-1316	1.7	4
36	Multiscale modeling of the effective elastic properties of fluid-filled porous materials. <i>International Journal of Solids and Structures</i> , 2019 , 162, 36-44	3.1	4
35	Coarse-grained modeling of multiphase interactions at microscale. <i>Journal of Chemical Physics</i> , 2018 , 149, 124505	3.9	4
34	Desiccation crack formation and prevention in thin bentonite layers. <i>Environmental Geotechnics</i> , 1-15	1.2	3
33	Morphodynamics of a dense particulate medium under radial explosion. <i>Soft Matter</i> , 2020 , 16, 1498-1513	3.6	3
32	Size effect analysis of quasi-brittle fracture with localizing gradient damage model. <i>International Journal of Damage Mechanics</i> , 105678952098387	3	3
31	Effects of topological disorder in unsaturated granular media via a pore-scale lattice Boltzmann investigation. <i>Advances in Water Resources</i> , 2021 , 149, 103855	4.7	3
30	An experimental investigation on cemented sand particles using different loading paths: Failure modes and fabric quantifications. <i>Construction and Building Materials</i> , 2020 , 258, 119487	6.7	2
29	Discrete element simulation of surface mechanical attrition treatment with rough-surface sonotrode. <i>International Journal of Mechanical Sciences</i> , 2019 , 161-162, 105060	5.5	2
28	Static friction between rigid fractal surfaces. <i>Physical Review E</i> , 2015 , 92, 032405	2.4	2
27	Cracking to curling transition in drying colloidal films. <i>European Physical Journal E</i> , 2020 , 43, 64	1.5	2

26	Predicting mechanical properties of 316L stainless steel subjected to SMAT: A sequential DEM-FEM investigation. <i>International Journal of Mechanical Sciences</i> , 2021 , 193, 106173	5.5	2
25	Cyclic thermo-mechanical performance of granular beds: Effect of elastoplasticity. <i>Powder Technology</i> , 2021 , 394, 705-713	5.2	2
24	The onset of shock-induced particle jetting. <i>Powder Technology</i> , 2018 , 336, 220-229	5.2	1
23	Towards idealized thermal stratification in a novel phase change emulsion storage tank. <i>Applied Energy</i> , 2022 , 310, 118526	10.7	1
22	Morphological characterisation of 2D packing with bi-disperse particles. <i>International Journal of Advances in Engineering Sciences and Applied Mathematics</i> , 2021 , 13, 89-97	0.6	1
21	Modeling the Influence of Particle Shape on Mechanical Compression and Effective Transport Properties in Granular Lithium-Ion Battery Electrodes. <i>Energy Technology</i> , 2021 , 9, 2000886	3.5	1
20	Stress-dependent electrical impedance behaviours at fractal rough interfaces. <i>Surface Topography: Metrology and Properties</i> , 2021 , 9, 025014	1.5	1
19	Effect of Grain Shape on Quasi-Static Fluid-Fluid Displacement in Porous Media. <i>Water Resources Research</i> , 2021 , 57, e2020WR029415	5.4	1
18	Towards the End of Drying of Granular Materials: Enhanced Evaporation and Drying-Induced Collapse. <i>Water Resources Research</i> , 2021 , 57, e2021WR030125	5.4	1
17	Packing of wet monodisperse spheres. <i>Powder Technology</i> , 2021 , 378, 60-64	5.2	1
16	DEM simulations of vibrated sphere packings in slender prismatic containers. <i>Powder Technology</i> , 2021 , 393, 31-59	5.2	1
15	A pore-resolved interface tracking algorithm for simulating multiphase flow in arbitrarily structured porous media. <i>Advances in Water Resources</i> , 2022 , 162, 104152	4.7	1
14	Mechanically robust nitrogen-rich plasma polymers: Biofunctional interfaces for surface engineering of biomedical implants. <i>Materials Today Advances</i> , 2021 , 12, 100188	7.4	1
13	Electrical transport in granular metals. <i>EPJ Web of Conferences</i> , 2017 , 140, 05010	0.3	0
12	Self-repair of cracks and defects in clay: a review of evidence, mechanisms, theories and nomenclature. <i>Acta Geotechnica</i> , 2021 , 16, 3741	4.9	0
11	Mechanical, Acoustic and Thermal Performances of Australian Hempcretes. <i>Lecture Notes in Civil Engineering</i> , 2022 , 753-761	0.3	0
10	Rupture of Liquid Bridges on Porous Tips: Competing Mechanisms of Spontaneous Imbibition and Stretching. <i>Langmuir</i> , 2020 , 36, 13642-13648	4	0
9	Compaction mechanics of a polydisperse crushable spherical granular assembly using discrete element method. <i>International Journal of Advances in Engineering Sciences and Applied Mathematics</i> , 2021 , 13, 114-121	0.6	0

8	Phase change material thermal energy storage design of packed bed units. <i>Journal of Energy Storage</i> , 2022 , 51, 104576	7.8	0
7	Numerical investigation of microscale dynamic contact angles of the CO ₂ /water/Silica system using coarse-grained molecular approach. <i>Computational Mechanics</i> , 2020 , 66, 707-722	4	
6	The distribution of saturated clusters in wetted granular materials. <i>EPJ Web of Conferences</i> , 2017 , 140, 09031	0.3	
5	Measurement of effective thermal conductivity of compacted granular media by the transient plane source technique. <i>EPJ Web of Conferences</i> , 2017 , 140, 02016	0.3	
4	Thermo-Mechanical Modelling of Pebble Beds in Fusion Blankets and its Implementation by a Return-Mapping Algorithm. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 981, 1		
3	Measurements of the relative permeability to CO ₂ -and-brine multiphase fluid of Paaratte formation at near-reservoir conditions 2021 , 11, 697-711		
2	Numerical Simulation of Liquid Patch Formation and Retention in Porous Media. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019 , 410-417	0.1	
1	Droplet Transport: Enhancing Spontaneous Droplet Motion on Structured Surfaces with Tailored Wedge Design (Adv. Mater. Interfaces 2/2021). <i>Advanced Materials Interfaces</i> , 2021 , 8, 2170010	4.6	