

# Julian Talbot

## List of Publications by Year in Descending Order

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

125  
papers

4,192  
citations

38  
h-index

60  
g-index

131  
ext. papers

4,356  
ext. citations

3.4  
avg, IF

5.08  
L-index

#	Paper	IF	Citations
125	Weak clogging in constricted channel flow.. <i>Physical Review E</i> , <b>2022</b> , 105, 014604	2.4	
124	The Iris billiard: Critical geometries for global chaos. <i>Chaos</i> , <b>2020</b> , 30, 123105	3.3	1
123	Evaluation of affinity sensor response kinetics towards dimeric ligands linked with spacers of different rigidity: Immobilized recombinant granulocyte colony-stimulating factor based synthetic receptor binding with genetically engineered dimeric analyte derivatives. <i>Biosensors and Bioelectronics</i> , <b>2020</b> , 151, 112112	11.8	15
122	Recurrence dynamics of particulate transport with reversible blockage: From a single channel to a bundle of coupled channels. <i>Physical Review E</i> , <b>2019</b> , 99, 042119	2.4	1
121	Modelling of immunosensor response: the evaluation of binding kinetics between an immobilized receptor and structurally-different genetically engineered ligands. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 297, 126770	8.5	13
120	Special issue on transport in narrow channels. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 270201	1.8	4
119	Granular silo flow of inelastic dumbbells: Clogging and its reduction. <i>Physical Review E</i> , <b>2018</b> , 98, 022904	2.4	8
118	Stochastic models of multi-channel particulate transport with blockage. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 304004	1.8	3
117	Effect of crowding and confinement on first-passage times: A model study. <i>Physical Review E</i> , <b>2016</b> , 93, 062120	2.4	1
116	Diminishing blocking interval in particle-conveying channel bundles. <i>European Physical Journal B</i> , <b>2016</b> , 89, 1	1.2	1
115	Stochastic model of channel blocking with an inhomogeneous flux of entering particles. <i>Europhysics Letters</i> , <b>2015</b> , 110, 20005	1.6	10
114	Cascading blockages in channel bundles. <i>Physical Review E</i> , <b>2015</b> , 92, 052141	2.4	7
113	First-Passage Times in d-Dimensional Heterogeneous Media. <i>Physical Review Letters</i> , <b>2015</b> , 115, 240601	7.4	28
112	Route optimisation and solving Zermelo's navigation problem during long distance migration in cross flows. <i>Ecology Letters</i> , <b>2014</b> , 17, 137-43	10	58
111	Work fluctuation theorem for a granular motor. <i>European Physical Journal: Special Topics</i> , <b>2013</b> , 216, 213-218	2.3	1
110	Stochastic model of single-file flow with reversible blockage. <i>Europhysics Letters</i> , <b>2013</b> , 104, 60005	1.6	9
109	Effect of dynamic and static friction on an asymmetric granular piston. <i>Physical Review E</i> , <b>2012</b> , 85, 021310	10	13

108	Homogeneous cooling of hard ellipsoids. <i>Granular Matter</i> , <b>2012</b> , 14, 91-97	2.6	24
107	Kinetic analysis of a chiral granular motor. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2011</b> , 2011, P03009	1.9	8
106	Kinetics of a frictional granular motor. <i>Physical Review Letters</i> , <b>2011</b> , 107, 138001	7.4	44
105	Going against the flow: finding the optimal path. <i>European Journal of Physics</i> , <b>2010</b> , 31, 205-213	0.8	3
104	Analysis of a class of granular motors in the brownian limit. <i>Physical Review E</i> , <b>2010</b> , 82, 011135	2.4	8
103	Cantor set dynamics of a granular piston. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2010</b> , 2010, P05004	1.9	4
102	Dynamics of sheared inelastic dumbbells. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 660, 475-498	3.7	13
101	Orientalional ordering in sheared inelastic dumbbells. <i>Physical Review E</i> , <b>2009</b> , 80, 031304	2.4	24
100	Equilibrium adsorption on a random site surface. <i>Journal of Physical Chemistry B</i> , <b>2008</b> , 112, 13051-8	3.4	1
99	Exact solution of a one-dimensional Boltzmann equation for a granular tracer particle. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2007</b> , 373, 313-323	3.3	6
98	Reversible adsorption on a random site surface. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2007</b> , 376, 27-37	3.3	5
97	Angular velocity distribution of a granular planar rotator in a thermalized bath. <i>Physical Review E</i> , <b>2007</b> , 75, 051307	2.4	9
96	Exactly solvable model of reversible adsorption on a disordered substrate. <i>Physical Review E</i> , <b>2007</b> , 76, 051106	2.4	1
95	Application of the Gillespie algorithm to a granular intruder particle. <i>Journal of Physics A</i> , <b>2006</b> , 39, 10947-10957		
94	Convection in vibrated annular granular beds. <i>Physical Review E</i> , <b>2005</b> , 71, 061301	2.4	14
93	Boltzmann equation for a granular capped rectangle in a thermalized bath of hard disks. <i>Physical Review E</i> , <b>2005</b> , 71, 051306	2.4	9
92	Anisotropic energy distribution in three-dimensional vibrofluidized granular systems. <i>Physical Review E</i> , <b>2004</b> , 69, 061308	2.4	7
91	Thermalization of an anisotropic granular particle. <i>Physical Review E</i> , <b>2004</b> , 69, 051106	2.4	16

90	Kinetics and equilibrium of multicomponent adsorption on chirally templated surfaces. <i>Journal of Computational Chemistry</i> , <b>2004</b> , 25, 1779-86	3.5	10
89	SLOW DYNAMICS, AGING AND HISTORY-DEPENDENT EFFECTS IN THE PARKING-LOT MODEL. <i>Fractals</i> , <b>2003</b> , 11, 185-196	3.2	8
88	Optimum Monte Carlo simulations: some exact results. <i>Journal of Physics A</i> , <b>2003</b> , 36, 9009-9023		4
87	Mass and size effects in three-dimensional vibrofluidized granular mixtures. <i>Physical Review E</i> , <b>2003</b> , 68, 021304	2.4	41
86	Torroidal convection roll in a three-dimensional granular system. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2002</b> , 314, 672-677	3.3	5
85	Wall-enhanced convection in vibrofluidized granular systems. <i>Physical Review Letters</i> , <b>2002</b> , 89, 064301	7.4	41
84	Kinetics of Heterogeneous Adsorption: Mean-Field Theory and Simulations. <i>Langmuir</i> , <b>2002</b> , 18, 1112-1118	4.8	11
83	Aging and response properties in the parking-lot model. <i>European Physical Journal E</i> , <b>2001</b> , 5, 445-449	1.5	15
82	The Distribution of Electron Donor/Acceptor Potential on Protein Surfaces. <i>Journal of Physical Chemistry B</i> , <b>2001</b> , 105, 725-729	3.4	14
81	A Brownian Dynamics Study of the Initial Stages of Hen Egg-White Lysozyme Adsorption at a Solid Interface. <i>Journal of Physical Chemistry B</i> , <b>2001</b> , 105, 3610-3613	3.4	103
80	From car parking to protein adsorption: an overview of sequential adsorption processes. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2000</b> , 165, 287-324	5.1	333
79	Equilibria and kinetics of polydisperse mixture adsorption. <i>Journal of Chemical Physics</i> , <b>2000</b> , 112, 3868-3874	3.7	4
78	Adsorption-desorption model and its application to vibrated granular materials. <i>Physical Review E</i> , <b>2000</b> , 61, 5429-38	2.4	41
77	Enhanced saturation coverages in adsorption-desorption processes. <i>Journal of Chemical Physics</i> , <b>2000</b> , 112, 1483-1488	3.9	12
76	Mobility of adsorbed proteins: a Brownian dynamics study. <i>Biophysical Journal</i> , <b>2000</b> , 78, 110-20	2.9	71
75	Sluggish kinetics in the parking lot model. <i>Journal of Physics A</i> , <b>1999</b> , 32, 2997-3003		13
74	A Model for the Adsorption Equilibria of Solutes with Multiple Adsorption Orientations. <i>Langmuir</i> , <b>1999</b> , 15, 3321-3333	4	10
73	Coverage and Structure of Films of Spherical Particles Deposited after Diffusing in a Gravitational Field. <i>Journal of Statistical Physics</i> , <b>1998</b> , 92, 891-908	1.5	4

72	A Particle-Level Model of Irreversible Protein Adsorption with a Postadsorption Transition. <i>Journal of Colloid and Interface Science</i> , <b>1998</b> , 207, 317-323	9.3	78
71	Nearest-neighbor functions in a one-dimensional generalized ballistic deposition model. <i>Physical Review E</i> , <b>1998</b> , 57, 1661-1667	2.4	6
70	Distribution function analysis of the structure of depleted particle configurations. <i>Physical Review E</i> , <b>1997</b> , 56, R1299-R1301	2.4	18
69	Molecular thermodynamics of binary mixture adsorption: A scaled particle theory approach. <i>Journal of Chemical Physics</i> , <b>1997</b> , 106, 4696-4706	3.9	33
68	Effect of diffusion and convection on the flux of depositing particles near a preadsorbed particle. <i>Korean Journal of Chemical Engineering</i> , <b>1997</b> , 14, 117-124	2.8	2
67	Analysis of adsorption selectivity in a one-dimensional model system. <i>AIChE Journal</i> , <b>1997</b> , 43, 2471-2478	3.6	45
66	Time dependent desorption: A memory function approach. <i>Adsorption</i> , <b>1996</b> , 2, 89-94	2.6	16
65	Kinetics of irreversible adsorption with a particle conformational change: A density expansion approach. <i>Physical Review E</i> , <b>1996</b> , 53, 785-798	2.4	24
64	Effect of transport mechanisms on the irreversible adsorption of large molecules. <i>Physical Review E</i> , <b>1995</b> , 51, 5985-5993	2.4	15
63	Percolation and structural properties of particle deposits. <i>Physical Review E</i> , <b>1995</b> , 51, 1353-1363	2.4	19
62	Response to [Comment on Negative velocity correlation in hard sphere fluids][J. Chem. Phys. 103, 9512 (1995)]. <i>Journal of Chemical Physics</i> , <b>1995</b> , 103, 9514-9514	3.9	3
61	Percus-Yevick-like integral equation for random sequential addition. <i>Journal of Chemical Physics</i> , <b>1995</b> , 103, 1607-1613	3.9	13
60	Chemical potentials of hard molecular solutes in hard sphere fluids. Monte Carlo stimulations and analytical approximations. <i>Journal of Chemical Physics</i> , <b>1995</b> , 102, 2109-2112	3.9	10
59	Algorithm to Compute the Free Area in a 2-D Configuration of Anisotropic Particles. <i>Molecular Simulation</i> , <b>1994</b> , 13, 61-75	2	1
58	Adhesion of hard spheres under the influence of double-layer, van der Waals, and gravitational potentials at a solid/liquid interface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1994</b> , 91, 3004-8	11.5	25
57	An adsorption-desorption process on a line: kinetics of the approach to closest packing. <i>Journal of Physics A</i> , <b>1994</b> , 27, L195-L200		31
56	A Lattice Model for the Adsorption Kinetics of Proteins on Solid Surfaces. <i>The Journal of Physical Chemistry</i> , <b>1994</b> , 98, 4906-4912		2
55	A structural comparison of random sequential adsorption and equilibrium configurations of spherocylinders. <i>Journal of Chemical Physics</i> , <b>1994</b> , 101, 9164-9180	3.9	14

54	Irreversible adsorption of macromolecules at a liquid-solid interface: Theoretical studies of the effects of conformational change. <i>Journal of Chemical Physics</i> , <b>1994</b> , 101, 7064-7073	3.9	43
53	Exactly solvable models of irreversible adsorption with particle spreading. <i>Physical Review E</i> , <b>1994</b> , 49, 5525-5534	2.4	17
52	Restructuring effects in irreversible deposition of spheres on a plane. <i>Physical Review E</i> , <b>1994</b> , 49, 3239-3252	3.9	18
51	Analysis of steric hindrance effects on adsorption kinetics and equilibria. <i>AIChE Journal</i> , <b>1994</b> , 40, 1685-1696	3.6	65
50	New Equations for Multicomponent Adsorption Kinetics. <i>Langmuir</i> , <b>1994</b> , 10, 1663-1666	4	58
49	Molecular Dynamics Simulation of the Elastic Deformation of Nanometer Diameter Metal Clusters. <i>Materials Research Society Symposia Proceedings</i> , <b>1994</b> , 332, 99		
48	Transport properties of the hard ellipsoid fluid. <i>Journal of Chemical Physics</i> , <b>1993</b> , 99, 6087-6097	3.9	20
47	Irreversible adsorption on nonuniform surfaces: the random site model. <i>The Journal of Physical Chemistry</i> , <b>1993</b> , 97, 4256-4258		65
46	First-layer formation in ballistic deposition of spherical particles: Kinetics and structure. <i>Journal of Chemical Physics</i> , <b>1993</b> , 99, 9296-9303	3.9	30
45	Effect of the Bulk Diffusion on the Jamming Limit Configurations for Irreversible Adsorption. <i>Europhysics Letters</i> , <b>1993</b> , 21, 135-140	1.6	25
44	Estimation of free energy via single particle sampling in Monte Carlo simulations. <i>Journal of Chemical Physics</i> , <b>1993</b> , 98, 1531-1533	3.9	5
43	Exact solution of a generalized ballistic-deposition model. <i>Physical Review E</i> , <b>1993</b> , 48, 480-488	2.4	38
42	The random spheres model as a representation of a random solid: A study using a one-dimensional system of penetrable rods. <i>Journal of Chemical Physics</i> , <b>1993</b> , 98, 2232-2240	3.9	
41	Polydisperse mixture adsorption kinetics. <i>AIChE Journal</i> , <b>1993</b> , 39, 1322-1329	3.6	2
40	Kinetics of irreversible adsorption of mixtures of pointlike and fixed-size particles: Asymptotic behavior in D dimensions. <i>Physical Review A</i> , <b>1992</b> , 45, 4162-4164	2.6	13
39	Analytic model for a ballistic deposition process. <i>Physical Review Letters</i> , <b>1992</b> , 68, 958-961	7.4	57
38	Influence of bulk diffusion on the adsorption of hard spheres on a flat surface. <i>Journal of Chemical Physics</i> , <b>1992</b> , 97, 3813-3820	3.9	77
37	Molecular rattling in two-dimensional fluids: Simulations and theory. <i>Journal of Chemical Physics</i> , <b>1992</b> , 96, 593-604	3.9	22

36	Random sequential adsorption of anisotropic particles. II. Low coverage kinetics. <i>Journal of Chemical Physics</i> , <b>1992</b> , 97, 5219-5228	3.9	84
35	A statistical model for the dynamical properties of hard particle fluids. <i>Molecular Physics</i> , <b>1992</b> , 75, 43-58	1.7	7
34	Saturation coverage in random sequential adsorption of very elongated particles. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1992</b> , 191, 248-252	3.3	19
33	Random sequential adsorption of anisotropic particles. I. Jamming limit and asymptotic behavior. <i>Journal of Chemical Physics</i> , <b>1992</b> , 97, 5212-5218	3.9	157
32	Random sequential addition: A distribution function approach. <i>Journal of Statistical Physics</i> , <b>1991</b> , 63, 167-202	1.5	88
31	Random sequential adsorption of polydisperse mixtures: asymptotic kinetics and structure. <i>Journal of Physics A</i> , <b>1991</b> , 24, L913-L917		24
30	Properties of jamming configurations built up by the adsorption of Brownian particles onto solid surfaces. <i>Physical Review A</i> , <b>1991</b> , 44, 6926-6928	2.6	52
29	New analytical and numerical results on virial coefficients for 2-D hard convex bodies. <i>Molecular Physics</i> , <b>1991</b> , 73, 773-787	1.7	21
28	Random sequential addition of hard spheres. <i>Molecular Physics</i> , <b>1991</b> , 72, 1397-1406	1.7	65
27	Asymptotic behavior of particle deposition. <i>Physical Review Letters</i> , <b>1991</b> , 66, 1603-1605	7.4	54
26	Comment on 'Is there a glassy phase transition in two dimensions?'. <i>Journal of Physics A</i> , <b>1990</b> , 23, 837-840		4
25	Structure of the hard ellipsoid fluid. <i>Journal of Chemical Physics</i> , <b>1990</b> , 92, 3048-3057	3.9	43
24	A comparison between molecular-dynamics and theoretical results for the structure of fluids of hard ellipsoids. <i>Molecular Physics</i> , <b>1990</b> , 70, 285-297	1.7	41
23	Short-time correlations in liquids: Molecular-dynamics simulation of hard spheroids. <i>Physical Review Letters</i> , <b>1990</b> , 65, 2828-2831	7.4	16
22	Generalized random sequential adsorption. <i>Journal of Chemical Physics</i> , <b>1990</b> , 93, 8352-8360	3.9	80
21	Molecular theory of vapor phase nucleation: The physically consistent cluster. <i>Journal of Chemical Physics</i> , <b>1990</b> , 92, 1266-1274	3.9	98
20	Random sequential adsorption of mixtures. <i>Physical Review A</i> , <b>1989</b> , 40, 422-427	2.6	67
19	Surface exclusion effects in adsorption processes. <i>Journal of Chemical Physics</i> , <b>1989</b> , 91, 4401-4409	3.9	305

18	Unexpected asymptotic behavior in random sequential adsorption of nonspherical particles. <i>Physical Review A</i> , <b>1989</b> , 40, 4808-4811	2.6	91
17	Accuracy of Enskog theory for rotational versus translational motion: A molecular-dynamics study. <i>Physical Review A</i> , <b>1989</b> , 39, 4330-4332	2.6	19
16	Kinetics of random sequential adsorption. <i>Physical Review Letters</i> , <b>1989</b> , 62, 175-178	7.4	181
15	Molecular dynamics simulation using hard particles. <i>Computer Physics Reports</i> , <b>1989</b> , 9, 301-353		100
14	Static and dynamic correlations in fluids with internal quantum states: Computer simulations and theory. <i>Physical Review A</i> , <b>1988</b> , 38, 1381-1394	2.6	32
13	Phase transitions in systems of grafted rods. <i>Physical Review Letters</i> , <b>1988</b> , 61, 1376-1379	7.4	39
12	Random sequential adsorption of squares on a lattice. <i>The Journal of Physical Chemistry</i> , <b>1988</b> , 92, 4826-4829		27
11	Computer simulation of a classical fluid with internal quantum states. <i>Physical Review A</i> , <b>1987</b> , 35, 942-944		14
10	On the orientational properties of some one-dimensional model systems. <i>Journal of Statistical Physics</i> , <b>1987</b> , 49, 1221-1234	1.5	19
9	Hard spheres in the isobaric-isoenthalpic ensemble. <i>Molecular Physics</i> , <b>1986</b> , 59, 625-635	1.7	10
8	A comparison of perturbative schemes and integral equation theories with computer simulations for fluids at high pressures. <i>Journal of Chemical Physics</i> , <b>1986</b> , 85, 2187-2192	3.9	61
7	A molecular dynamics simulation of the uniaxial phase of N <sub>2</sub> adsorbed on graphite. <i>Surface Science</i> , <b>1986</b> , 169, 71-90	1.8	31
6	The second virial coefficient of planar dumb-bells. <i>Molecular Physics</i> , <b>1985</b> , 54, 1065-1071	1.7	18
5	The planar dumbbell fluid. <i>Journal of Chemical Physics</i> , <b>1985</b> , 83, 6419-6424	3.9	42
4	Reorientation of N <sub>2</sub> adsorbed on graphite in various computer simulated phases. <i>Molecular Physics</i> , <b>1985</b> , 54, 183-195	1.7	19
3	Molecular-dynamics simulation of fluid N <sub>2</sub> adsorbed on a graphite surface. <i>Faraday Discussions of the Chemical Society</i> , <b>1985</b> , 80, 91		46
2	A molecular dynamics simulation of nitrogen adsorbed on graphite. <i>Molecular Physics</i> , <b>1984</b> , 51, 1331-1356		109
1	Studies of the Orientational Ordering Transition in Nitrogen Adsorbed on Graphite. <i>Physical Review Letters</i> , <b>1983</b> , 51, 192-195	7.4	81



