

Julian Talbot

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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 | From car parking to protein adsorption: an overview of sequential adsorption processes. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2000 , 165, 287-324 | 5.1 | 333 |
| 124 | Surface exclusion effects in adsorption processes. <i>Journal of Chemical Physics</i> , 1989 , 91, 4401-4409 | 3.9 | 305 |
| 123 | Kinetics of random sequential adsorption. <i>Physical Review Letters</i> , 1989 , 62, 175-178 | 7.4 | 181 |
| 122 | Random sequential adsorption of anisotropic particles. I. Jamming limit and asymptotic behavior. <i>Journal of Chemical Physics</i> , 1992 , 97, 5212-5218 | 3.9 | 157 |
| 121 | A molecular dynamics simulation of nitrogen adsorbed on graphite. <i>Molecular Physics</i> , 1984 , 51, 1331-1356 | 5.6 | 109 |
| 120 | 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> , 2001 , 105, 3610-3613 | 3.4 | 103 |
| 119 | Molecular dynamics simulation using hard particles. <i>Computer Physics Reports</i> , 1989 , 9, 301-353 | 5.6 | 100 |
| 118 | Molecular theory of vapor phase nucleation: The physically consistent cluster. <i>Journal of Chemical Physics</i> , 1990 , 92, 1266-1274 | 3.9 | 98 |
| 117 | Unexpected asymptotic behavior in random sequential adsorption of nonspherical particles. <i>Physical Review A</i> , 1989 , 40, 4808-4811 | 2.6 | 91 |
| 116 | Random sequential addition: A distribution function approach. <i>Journal of Statistical Physics</i> , 1991 , 63, 167-202 | 1.5 | 88 |
| 115 | Random sequential adsorption of anisotropic particles. II. Low coverage kinetics. <i>Journal of Chemical Physics</i> , 1992 , 97, 5219-5228 | 3.9 | 84 |
| 114 | Studies of the Orientational Ordering Transition in Nitrogen Adsorbed on Graphite. <i>Physical Review Letters</i> , 1983 , 51, 192-195 | 7.4 | 81 |
| 113 | Generalized random sequential adsorption. <i>Journal of Chemical Physics</i> , 1990 , 93, 8352-8360 | 3.9 | 80 |
| 112 | A Particle-Level Model of Irreversible Protein Adsorption with a Postadsorption Transition. <i>Journal of Colloid and Interface Science</i> , 1998 , 207, 317-323 | 9.3 | 78 |
| 111 | Influence of bulk diffusion on the adsorption of hard spheres on a flat surface. <i>Journal of Chemical Physics</i> , 1992 , 97, 3813-3820 | 3.9 | 77 |
| 110 | Mobility of adsorbed proteins: a Brownian dynamics study. <i>Biophysical Journal</i> , 2000 , 78, 110-20 | 2.9 | 71 |
| 109 | Random sequential adsorption of mixtures. <i>Physical Review A</i> , 1989 , 40, 422-427 | 2.6 | 67 |

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| 108 | Irreversible adsorption on nonuniform surfaces: the random site model. <i>The Journal of Physical Chemistry</i> , 1993 , 97, 4256-4258 | | 65 |
| 107 | Analysis of steric hindrance effects on adsorption kinetics and equilibria. <i>AIChE Journal</i> , 1994 , 40, 1685-1696 | | 65 |
| 106 | Random sequential addition of hard spheres. <i>Molecular Physics</i> , 1991 , 72, 1397-1406 | 1.7 | 65 |
| 105 | A comparison of perturbative schemes and integral equation theories with computer simulations for fluids at high pressures. <i>Journal of Chemical Physics</i> , 1986 , 85, 2187-2192 | 3.9 | 61 |
| 104 | Route optimisation and solving Zermelo's navigation problem during long distance migration in cross flows. <i>Ecology Letters</i> , 2014 , 17, 137-43 | 10 | 58 |
| 103 | New Equations for Multicomponent Adsorption Kinetics. <i>Langmuir</i> , 1994 , 10, 1663-1666 | 4 | 58 |
| 102 | Analytic model for a ballistic deposition process. <i>Physical Review Letters</i> , 1992 , 68, 958-961 | 7.4 | 57 |
| 101 | Asymptotic behavior of particle deposition. <i>Physical Review Letters</i> , 1991 , 66, 1603-1605 | 7.4 | 54 |
| 100 | Properties of jamming configurations built up by the adsorption of Brownian particles onto solid surfaces. <i>Physical Review A</i> , 1991 , 44, 6926-6928 | 2.6 | 52 |
| 99 | Molecular-dynamics simulation of fluid N ₂ adsorbed on a graphite surface. <i>Faraday Discussions of the Chemical Society</i> , 1985 , 80, 91 | | 46 |
| 98 | Analysis of adsorption selectivity in a one-dimensional model system. <i>AIChE Journal</i> , 1997 , 43, 2471-2478 | 3.6 | 45 |
| 97 | Kinetics of a frictional granular motor. <i>Physical Review Letters</i> , 2011 , 107, 138001 | 7.4 | 44 |
| 96 | Irreversible adsorption of macromolecules at a liquid-solid interface: Theoretical studies of the effects of conformational change. <i>Journal of Chemical Physics</i> , 1994 , 101, 7064-7073 | 3.9 | 43 |
| 95 | Structure of the hard ellipsoid fluid. <i>Journal of Chemical Physics</i> , 1990 , 92, 3048-3057 | 3.9 | 43 |
| 94 | The planar dumbbell fluid. <i>Journal of Chemical Physics</i> , 1985 , 83, 6419-6424 | 3.9 | 42 |
| 93 | Mass and size effects in three-dimensional vibrofluidized granular mixtures. <i>Physical Review E</i> , 2003 , 68, 021304 | 2.4 | 41 |
| 92 | Wall-enhanced convection in vibrofluidized granular systems. <i>Physical Review Letters</i> , 2002 , 89, 064301 | 7.4 | 41 |
| 91 | Adsorption-desorption model and its application to vibrated granular materials. <i>Physical Review E</i> , 2000 , 61, 5429-38 | 2.4 | 41 |

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| 90 | A comparison between molecular-dynamics and theoretical results for the structure of fluids of hard ellipsoids. <i>Molecular Physics</i> , 1990 , 70, 285-297 | 1.7 | 41 |
| 89 | Phase transitions in systems of grafted rods. <i>Physical Review Letters</i> , 1988 , 61, 1376-1379 | 7.4 | 39 |
| 88 | Exact solution of a generalized ballistic-deposition model. <i>Physical Review E</i> , 1993 , 48, 480-488 | 2.4 | 38 |
| 87 | Molecular thermodynamics of binary mixture adsorption: A scaled particle theory approach. <i>Journal of Chemical Physics</i> , 1997 , 106, 4696-4706 | 3.9 | 33 |
| 86 | Static and dynamic correlations in fluids with internal quantum states: Computer simulations and theory. <i>Physical Review A</i> , 1988 , 38, 1381-1394 | 2.6 | 32 |
| 85 | An adsorption-desorption process on a line: kinetics of the approach to closest packing. <i>Journal of Physics A</i> , 1994 , 27, L195-L200 | | 31 |
| 84 | A molecular dynamics simulation of the uniaxial phase of N ₂ adsorbed on graphite. <i>Surface Science</i> , 1986 , 169, 71-90 | 1.8 | 31 |
| 83 | First-layer formation in ballistic deposition of spherical particles: Kinetics and structure. <i>Journal of Chemical Physics</i> , 1993 , 99, 9296-9303 | 3.9 | 30 |
| 82 | First-Passage Times in d-Dimensional Heterogeneous Media. <i>Physical Review Letters</i> , 2015 , 115, 240601 | 7.4 | 28 |
| 81 | Random sequential adsorption of squares on a lattice. <i>The Journal of Physical Chemistry</i> , 1988 , 92, 4826-4829 | | 27 |
| 80 | Effect of the Bulk Diffusion on the Jamming Limit Configurations for Irreversible Adsorption. <i>Europhysics Letters</i> , 1993 , 21, 135-140 | 1.6 | 25 |
| 79 | 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> , 1994 , 91, 3004-8 | 11.5 | 25 |
| 78 | Homogeneous cooling of hard ellipsoids. <i>Granular Matter</i> , 2012 , 14, 91-97 | 2.6 | 24 |
| 77 | Orientalional ordering in sheared inelastic dumbbells. <i>Physical Review E</i> , 2009 , 80, 031304 | 2.4 | 24 |
| 76 | Kinetics of irreversible adsorption with a particle conformational change: A density expansion approach. <i>Physical Review E</i> , 1996 , 53, 785-798 | 2.4 | 24 |
| 75 | Random sequential adsorption of polydisperse mixtures: asymptotic kinetics and structure. <i>Journal of Physics A</i> , 1991 , 24, L913-L917 | | 24 |
| 74 | Molecular rattling in two-dimensional fluids: Simulations and theory. <i>Journal of Chemical Physics</i> , 1992 , 96, 593-604 | 3.9 | 22 |
| 73 | New analytical and numerical results on virial coefficients for 2-D hard convex bodies. <i>Molecular Physics</i> , 1991 , 73, 773-787 | 1.7 | 21 |

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| 72 | Transport properties of the hard ellipsoid fluid. <i>Journal of Chemical Physics</i> , 1993 , 99, 6087-6097 | 3.9 | 20 |
| 71 | Percolation and structural properties of particle deposits. <i>Physical Review E</i> , 1995 , 51, 1353-1363 | 2.4 | 19 |
| 70 | Saturation coverage in random sequential adsorption of very elongated particles. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992 , 191, 248-252 | 3.3 | 19 |
| 69 | Accuracy of Enskog theory for rotational versus translational motion: A molecular-dynamics study. <i>Physical Review A</i> , 1989 , 39, 4330-4332 | 2.6 | 19 |
| 68 | On the orientational properties of some one-dimensional model systems. <i>Journal of Statistical Physics</i> , 1987 , 49, 1221-1234 | 1.5 | 19 |
| 67 | Reorientation of N ₂ adsorbed on graphite in various computer simulated phases. <i>Molecular Physics</i> , 1985 , 54, 183-195 | 1.7 | 19 |
| 66 | Distribution function analysis of the structure of depleted particle configurations. <i>Physical Review E</i> , 1997 , 56, R1299-R1301 | 2.4 | 18 |
| 65 | Restructuring effects in irreversible deposition of spheres on a plane. <i>Physical Review E</i> , 1994 , 49, 3239-3252 | 2.4 | 18 |
| 64 | The second virial coefficient of planar dumb-bells. <i>Molecular Physics</i> , 1985 , 54, 1065-1071 | 1.7 | 18 |
| 63 | Exactly solvable models of irreversible adsorption with particle spreading. <i>Physical Review E</i> , 1994 , 49, 5525-5534 | 2.4 | 17 |
| 62 | Thermalization of an anisotropic granular particle. <i>Physical Review E</i> , 2004 , 69, 051106 | 2.4 | 16 |
| 61 | Time dependent desorption: A memory function approach. <i>Adsorption</i> , 1996 , 2, 89-94 | 2.6 | 16 |
| 60 | Short-time correlations in liquids: Molecular-dynamics simulation of hard spheroids. <i>Physical Review Letters</i> , 1990 , 65, 2828-2831 | 7.4 | 16 |
| 59 | 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> , 2020 , 156, 112112 | 11.8 | 15 |
| 58 | Aging and response properties in the parking-lot model. <i>European Physical Journal E</i> , 2001 , 5, 445-449 | 1.5 | 15 |
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| 56 | Convection in vibrated annular granular beds. <i>Physical Review E</i> , 2005 , 71, 061301 | 2.4 | 14 |
| 55 | The Distribution of Electron Donor/Acceptor Potential on Protein Surfaces. <i>Journal of Physical Chemistry B</i> , 2001 , 105, 725-729 | 3.4 | 14 |

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| 54 | A structural comparison of random sequential adsorption and equilibrium configurations of spherocylinders. <i>Journal of Chemical Physics</i> , 1994 , 101, 9164-9180 | 3.9 | 14 |
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| 52 | 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> , 2019 , 297, 126770 | 8.5 | 13 |
| 51 | Effect of dynamic and static friction on an asymmetric granular piston. <i>Physical Review E</i> , 2012 , 85, 021310 | 4.1 | 13 |
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| 49 | Sluggish kinetics in the parking lot model. <i>Journal of Physics A</i> , 1999 , 32, 2997-3003 | 3.0 | 13 |
| 48 | Percus-Yevick-like integral equation for random sequential addition. <i>Journal of Chemical Physics</i> , 1995 , 103, 1607-1613 | 3.9 | 13 |
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| 45 | Kinetics of Heterogeneous Adsorption: Mean-Field Theory and Simulations. <i>Langmuir</i> , 2002 , 18, 1112-1118 | 4.8 | 11 |
| 44 | Stochastic model of channel blocking with an inhomogeneous flux of entering particles. <i>Europhysics Letters</i> , 2015 , 110, 20005 | 1.6 | 10 |
| 43 | Kinetics and equilibrium of multicomponent adsorption on chirally templated surfaces. <i>Journal of Computational Chemistry</i> , 2004 , 25, 1779-86 | 3.5 | 10 |
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| 41 | Chemical potentials of hard molecular solutes in hard sphere fluids. Monte Carlo stimulations and analytical approximations. <i>Journal of Chemical Physics</i> , 1995 , 102, 2109-2112 | 3.9 | 10 |
| 40 | Hard spheres in the isobaric-isoenthalpic ensemble. <i>Molecular Physics</i> , 1986 , 59, 625-635 | 1.7 | 10 |
| 39 | Stochastic model of single-file flow with reversible blockage. <i>Europhysics Letters</i> , 2013 , 104, 60005 | 1.6 | 9 |
| 38 | Angular velocity distribution of a granular planar rotator in a thermalized bath. <i>Physical Review E</i> , 2007 , 75, 051307 | 2.4 | 9 |
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| 36 | Granular silo flow of inelastic dumbbells: Clogging and its reduction. <i>Physical Review E</i> , 2018 , 98, 022904 | 2.4 | 8 |
| 35 | Analysis of a class of granular motors in the brownian limit. <i>Physical Review E</i> , 2010 , 82, 011135 | 2.4 | 8 |
| 34 | Kinetic analysis of a chiral granular motor. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011 , 2011, P03009 | 1.9 | 8 |
| 33 | SLOW DYNAMICS, AGING AND HISTORY-DEPENDENT EFFECTS IN THE PARKING-LOT MODEL. <i>Fractals</i> , 2003 , 11, 185-196 | 3.2 | 8 |
| 32 | Cascading blockages in channel bundles. <i>Physical Review E</i> , 2015 , 92, 052141 | 2.4 | 7 |
| 31 | Application of the Gillespie algorithm to a granular intruder particle. <i>Journal of Physics A</i> , 2006 , 39, 10947-10957 | | |
| 30 | Anisotropic energy distribution in three-dimensional vibrofluidized granular systems. <i>Physical Review E</i> , 2004 , 69, 061308 | 2.4 | 7 |
| 29 | A statistical model for the dynamical properties of hard particle fluids. <i>Molecular Physics</i> , 1992 , 75, 43-58 | 1.7 | 7 |
| 28 | Exact solution of a one-dimensional Boltzmann equation for a granular tracer particle. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 373, 313-323 | 3.3 | 6 |
| 27 | Nearest-neighbor functions in a one-dimensional generalized ballistic deposition model. <i>Physical Review E</i> , 1998 , 57, 1661-1667 | 2.4 | 6 |
| 26 | Reversible adsorption on a random site surface. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 376, 27-37 | 3.3 | 5 |
| 25 | Torroidal convection roll in a three-dimensional granular system. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002 , 314, 672-677 | 3.3 | 5 |
| 24 | Estimation of free energy via single particle sampling in Monte Carlo simulations. <i>Journal of Chemical Physics</i> , 1993 , 98, 1531-1533 | 3.9 | 5 |
| 23 | Special issue on transport in narrow channels. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 270201 | 1.8 | 4 |
| 22 | Cantor set dynamics of a granular piston. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010 , 2010, P05004 | 1.9 | 4 |
| 21 | Coverage and Structure of Films of Spherical Particles Deposited after Diffusing in a Gravitational Field. <i>Journal of Statistical Physics</i> , 1998 , 92, 891-908 | 1.5 | 4 |
| 20 | Optimum Monte Carlo simulations: some exact results. <i>Journal of Physics A</i> , 2003 , 36, 9009-9023 | | 4 |
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| 18 | Comment on 'Is there a glassy phase transition in two dimensions?'. <i>Journal of Physics A</i> , 1990 , 23, 837-840 | | 4 |
| 17 | Stochastic models of multi-channel particulate transport with blockage. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 304004 | 1.8 | 3 |
| 16 | Going against the flow: finding the optimal path. <i>European Journal of Physics</i> , 2010 , 31, 205-213 | 0.8 | 3 |
| 15 | Response to [Comment on [Negative velocity correlation in hard sphere fluids]] [J. Chem. Phys. 103, 9512 (1995)]. <i>Journal of Chemical Physics</i> , 1995 , 103, 9514-9514 | 3.9 | 3 |
| 14 | Effect of diffusion and convection on the flux of depositing particles near a preadsorbed particle. <i>Korean Journal of Chemical Engineering</i> , 1997 , 14, 117-124 | 2.8 | 2 |
| 13 | A Lattice Model for the Adsorption Kinetics of Proteins on Solid Surfaces. <i>The Journal of Physical Chemistry</i> , 1994 , 98, 4906-4912 | | 2 |
| 12 | Polydisperse mixture adsorption kinetics. <i>AIChE Journal</i> , 1993 , 39, 1322-1329 | 3.6 | 2 |
| 11 | Recurrence dynamics of particulate transport with reversible blockage: From a single channel to a bundle of coupled channels. <i>Physical Review E</i> , 2019 , 99, 042119 | 2.4 | 1 |
| 10 | The Iris billiard: Critical geometries for global chaos. <i>Chaos</i> , 2020 , 30, 123105 | 3.3 | 1 |
| 9 | Effect of crowding and confinement on first-passage times: A model study. <i>Physical Review E</i> , 2016 , 93, 062120 | 2.4 | 1 |
| 8 | Diminishing blocking interval in particle-conveying channel bundles. <i>European Physical Journal B</i> , 2016 , 89, 1 | 1.2 | 1 |
| 7 | Work fluctuation theorem for a granular motor. <i>European Physical Journal: Special Topics</i> , 2013 , 216, 213-218 | 2.3 | 1 |
| 6 | Equilibrium adsorption on a random site surface. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 13051-8 | 3.4 | 1 |
| 5 | Exactly solvable model of reversible adsorption on a disordered substrate. <i>Physical Review E</i> , 2007 , 76, 051106 | 2.4 | 1 |
| 4 | Algorithm to Compute the Free Area in a 2-D Configuration of Anisotropic Particles. <i>Molecular Simulation</i> , 1994 , 13, 61-75 | 2 | 1 |
| 3 | 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> , 1993 , 98, 2232-2240 | 3.9 | |
| 2 | Molecular Dynamics Simulation of the Elastic Deformation of Nanometer Diameter Metal Clusters. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 332, 99 | | |
| 1 | Weak clogging in constricted channel flow.. <i>Physical Review E</i> , 2022 , 105, 014604 | 2.4 | |

