Salvatore Torquato

List of Publications by Year
in descending order

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436 papers	36,275 citations	2091 103 h-index	5244 171 g-index
442 all docs	442 docs citations	442 times ranked	17385 citing authors

#	Article	IF	Citations
1	Subdiffusive wave transport and weak localization transition in three-dimensional stealthy hyperuniform disordered systems. Physical Review B, 2022, 105, .	1.1	13
2	Characterization of void space, large-scale structure, and transport properties of maximally random jammed packings of superballs. Physical Review Materials, 2022, 6, .	0.9	9
3	Dynamic Measure of Hyperuniformity and Nonhyperuniformity in Heterogeneous Media via the Diffusion Spreadability. Physical Review Applied, 2022, 17, .	1.5	8
4	Local order metrics for two-phase media across length scales*. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 274003.	0.7	7
5	Engineered disorder in photonics. Nature Reviews Materials, 2021, 6, 226-243.	23.3	129
6	Kinetic Frustration Effects on Dense Two-Dimensional Packings of Convex Particles and Their Structural Characteristics. Journal of Physical Chemistry B, 2021, 125, 2450-2464.	1.2	3
7	Nonlocal Effective Electromagnetic Wave Characteristics of Composite Media: Beyond the Quasistatic Regime. Physical Review X, 2021, 11, .	2.8	25
8	Structural characterization of many-particle systems on approach to hyperuniform states. Physical Review E, 2021, 103, 052126.	0.8	21
9	Local Number Fluctuations in Hyperuniform and Nonhyperuniform Systems: Higher-Order Moments and Distribution Functions. Physical Review X, 2021, 11, .	2.8	15
10	Swimming in circles can lead to exotic hyperuniform states of active living matter. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	4
11	Manifestations of metastable criticality in the long-range structure of model water glasses. Nature Communications, 2021, 12, 3398.	5.8	14
12	Critical pore radius and transport properties of disordered hard- and overlapping-sphere models. Physical Review E, 2021, 104, 014127.	0.8	9
13	Gap Sensitivity Reveals Universal Behaviors in Optimized Photonic Crystal and Disordered Networks. Physical Review Letters, 2021, 127, 037401.	2.9	12
14	Quantum phase transitions in long-range interacting hyperuniform spin chains in a transverse field. Physical Review B, 2021, 103, .	1.1	0
15	Characterizing the hyperuniformity of ordered and disordered two-phase media. Physical Review E, 2021, 103, 012123.	0.8	9
16	Understanding degeneracy of two-point correlation functions via Debye random media. Physical Review E, 2021, 104, 045306.	0.8	9
17	Diffusion spreadability as a probe of the microstructure of complex media across length scales. Physical Review E, 2021, 104, 054102.	0.8	14
18	Generation and structural characterization of Debye random media. Physical Review E, 2020, 102, 043310.	0.8	7

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19	Predicting permeability via statistical learning on higher-order microstructural information. Scientific Reports, 2020, 10, 15239.	1.6	28
20	Minimal statistical-mechanical model for multihyperuniform patterns in avian retina. Physical Review E, 2020, 102, 012134.	0.8	6
21	Optimized Large Hyperuniform Binary Colloidal Suspensions in Two Dimensions. Physical Review Letters, 2020, 125, 068002.	2.9	9
22	Sensitivity of pair statistics on pair potentials in many-body systems. Journal of Chemical Physics, 2020, 153, 124106.	1.2	19
23	Realizable hyperuniform and nonhyperuniform particle configurations with targeted spectral functions via effective pair interactions. Physical Review E, 2020, 101, 032124.	0.8	14
24	Cloaking the underlying long-range order of randomly perturbed lattices. Physical Review E, 2020, 101, 032118.	0.8	29
25	Predicting transport characteristics of hyperuniform porous media via rigorous microstructure-property relations. Advances in Water Resources, 2020, 140, 103565.	1.7	19
26	Multifunctional composites for elastic and electromagnetic wave propagation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8764-8774.	3.3	34
27	Effective elastic wave characteristics of composite media. New Journal of Physics, 2020, 22, 123050.	1.2	11
28	Nearest-neighbor functions for disordered stealthy hyperuniform many-particle systems. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 103302.	0.9	1
29	Hyperuniformity on spherical surfaces. Physical Review E, 2019, 100, 022107.	0.8	6
30	Self-Similar Dynamics of Nuclear Packing in the Early Drosophila Embryo. Biophysical Journal, 2019, 117, 743-750.	0.2	19
31	Phoamtonic designs yield sizeable 3D photonic band gaps. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23480-23486.	3.3	21
32	Structural degeneracy in pair distance distributions. Journal of Chemical Physics, 2019, 150, 204125.	1.2	10
33	Methodology to construct large realizations of perfectly hyperuniform disordered packings. Physical Review E, 2019, 99, 052141.	0.8	16
34	New tessellation-based procedure to design perfectly hyperuniform disordered dispersions for materials discovery. Acta Materialia, 2019, 168, 143-151.	3.8	20
35	Hidden multiscale order in the primes. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 135002.	0.7	22
36	Universal hidden order in amorphous cellular geometries. Nature Communications, 2019, 10, 811.	5.8	64

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37	Hyperuniformity order metric of Barlow packings. Physical Review E, 2019, 99, 022111.	0.8	6
38	Hyperuniformity of generalized random organization models. Physical Review E, 2019, 99, 022115.	0.8	11
39	Jammed hard-sphere hcp crystals permeated with trivacancy tunnels. Journal of Applied Physics, 2019, 126, 194901.	1.1	1
40	Hard convex lens-shaped particles: Characterization of dense disordered packings. Physical Review E, 2019, 100, 062902.	0.8	11
41	Hyperuniform disordered waveguides and devices for near infrared silicon photonics. Scientific Reports, 2019, 9, 20338.	1.6	22
42	Hyperuniformity and anti-hyperuniformity in one-dimensional substitution tilings. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, 3-13.	0.0	24
43	The structure factor of primes. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 115001.	0.7	10
44	Rational design of stealthy hyperuniform two-phase media with tunable order. Physical Review E, 2018, 97, 023311.	0.8	17
45	Effect of imperfections on the hyperuniformity of many-body systems. Physical Review B, 2018, 97, .	1.1	46
46	Disordered multihyperuniformity derived from binary plasmas. Physical Review E, 2018, 97, 010102.	0.8	13
47	Characterization of maximally random jammed sphere packings. III. Transport and electromagnetic properties via correlation functions. Physical Review E, 2018, 97, 012118.	0.8	21
48	Hyperuniform states of matter. Physics Reports, 2018, 745, 1-95.	10.3	259
49	Evolutionaryâ€Optimized Photonic Network Structure in White Beetle Wing Scales. Advanced Materials, 2018, 30, e1702057.	11.1	95
50	Designing disordered hyperuniform two-phase materials with novel physical properties. Acta Materialia, 2018, 142, 152-161.	3.8	72
51	Multifunctional hyperuniform cellular networks: optimality, anisotropy and disorder. Multifunctional Materials, 2018, 1, 015001.	2.4	26
52	Hard convex lens-shaped particles: metastable, glassy and jammed states. Soft Matter, 2018, 14, 8205-8218.	1.2	8
53	Inversion problems for Fourier transforms of particle distributions. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 113302.	0.9	1
54	Uncovering multiscale order in the prime numbers via scattering. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 093401.	0.9	17

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55	Precise algorithms to compute surface correlation functions of two-phase heterogeneous media and their applications. Physical Review E, 2018, 98, 013307.	0.8	25
56	Perspective: Basic understanding of condensed phases of matter via packing models. Journal of Chemical Physics, 2018, 149, 020901.	1.2	99
57	Inverse Design of Colloidal Crystals via Optimized Patchy Interactions. Journal of Physical Chemistry B, 2018, 122, 8462-8468.	1.2	31
58	Binary mixtures of charged colloids: a potential route to synthesize disordered hyperuniform materials. Physical Chemistry Chemical Physics, 2018, 20, 17557-17562.	1.3	14
59	Light Localization in Local Isomorphism Classes of Quasicrystals. Physical Review Letters, 2018, 120, 247401.	2.9	14
60	Searching for crystal-ice domains in amorphous ices. Physical Review Materials, 2018, 2, .	0.9	37
61	Multifunctionality of particulate composites via cross-property maps. Physical Review Materials, 2018, 2, .	0.9	6
62	Percolation of disordered jammed sphere packings. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 085001.	0.7	43
63	Hyperuniformity of quasicrystals. Physical Review B, 2017, 95, .	1.1	50
64	The Weylâ€“Heisenberg ensemble: hyperuniformity and higher Landau levels. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 043103.	0.9	21
65	Hyperuniformity variation with quasicrystal local isomorphism class. Journal of Physics Condensed Matter, 2017, 29, 204003.	0.7	11
66	Large-Scale Structure and Hyperuniformity of Amorphous Ices. Physical Review Letters, 2017, 119, 136002.	2.9	50
67	Classical many-particle systems with unique disordered ground states. Physical Review E, 2017, 96, 042146.	0.8	14
68	Can exotic disordered â€œstealthyâ€•particle configurations tolerate arbitrarily large holes?. Soft Matter, 2017, 13, 6197-6207.	1.2	23
69	Effect of window shape on the detection of hyperuniformity via the local number variance. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 013402.	0.9	14
70	Random scalar fields and hyperuniformity. Journal of Applied Physics, 2017, 121, .	1.1	48
71	Disordered hyperuniformity in two-component nonadditive hard-disk plasmas. Physical Review E, 2017, 96, 062126.	0.8	22
72	The Weyl-Heisenberg ensemble: Statistical mechanics meets time-frequency analysis. , 2017, , .		0

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73	Disordered hyperuniform heterogeneous materials. Journal of Physics Condensed Matter, 2016, 28, 414012.	0.7	46
74	Structural Characterization and Statistical-Mechanical Model of Epidermal Patterns. Biophysical Journal, 2016, 111, 2534-2545.	0.2	14
75	Extreme lattices: symmetries and decorrelation. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 113301.	0.9	6
76	Transport, geometrical, and topological properties of stealthy disordered hyperuniform two-phase systems. Journal of Chemical Physics, 2016, 145, 244109.	1.2	54
77	Characterization of maximally random jammed sphere packings. II. Correlation functions and density fluctuations. Physical Review E, 2016, 94, 022152.	0.8	18
78	Critical slowing down and hyperuniformity on approach to jamming. Physical Review E, 2016, 94, 012902.	0.8	54
79	Static structural signatures of nearly jammed disordered and ordered hard-sphere packings: Direct correlation function. Physical Review E, 2016, 94, 032902.	0.8	14
80	Hyperuniformity and its generalizations. Physical Review E, 2016, 94, 022122.	0.8	115
81	The Perfect Glass Paradigm: Disordered Hyperuniform Glasses Down to Absolute Zero. Scientific Reports, 2016, 6, 36963.	1.6	48
82	Inverse design of disordered stealthy hyperuniform spin chains. Physical Review B, 2016, 93, .	1.1	14
83	A Geometric-Structure Theory for Maximally Random Jammed Packings. Scientific Reports, 2015, 5, 16722.	1.6	17
84	Ground states of stealthy hyperuniform potentials. II. Stacked-slider phases. Physical Review E, 2015, 92, 022120.	0.8	26
85	Confined disordered strictly jammed binary sphere packings. Physical Review E, 2015, 92, 062207.	0.8	19
86	Ensemble Theory for Stealthy Hyperuniform Disordered Ground States. Physical Review X, 2015, 5, .	2.8	102
87	Ground states of stealthy hyperuniform potentials: I. Entropically favored configurations. Physical Review E, 2015, 92, 022119.	0.8	51
88	Effective diffusion coefficients in random packings of polydisperse hard spheres from two-point and three-point correlation functions. Journal of Applied Physics, 2015, 118, .	1.1	34
89	Hard convex lens-shaped particles: Densest-known packings and phase behavior. Journal of Chemical Physics, 2015, 143, 224506.	1.2	19
90	Diagnosing hyperuniformity in two-dimensional, disordered, jammed packings of soft spheres. Physical Review E, 2015, 91, 012302.	0.8	81

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91	The phase diagram of high-pressure superionic ice. Nature Communications, 2015, 6, 8156.	5.8	56
92	Existence of isostatic, maximally random jammed monodisperse hard-disk packings. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 18436-18441.	3.3	68
93	Hyperuniform disordered photonic band gap devices for silicon photonics. , 2014, , .		1
94	Viscosity of bimodal suspensions with hard spherical particles. Journal of Applied Physics, 2014, 116, 184902.	1.1	17
95	Characterization of maximally random jammed sphere packings: Voronoi correlation functions. Physical Review E, 2014, 90, 052120.	0.8	28
96	Impact of microstructure on the effective diffusivity in random packings of hard spheres. Journal of Applied Physics, 2014, 116, .	1.1	63
97	Dense periodic packings of tori. Physical Review E, 2014, 89, 022133.	0.8	11
98	Avian photoreceptor patterns represent a disordered hyperuniform solution to a multiscale packing problem. Physical Review E, 2014, 89, 022721.	0.8	154
99	Accurate modeling and reconstruction of three-dimensional percolating filamentary microstructures from two-dimensional micrographs via dilation-erosion method. Materials Characterization, 2014, 89, 33-42.	1.9	63
100	Hyperuniform disordered photonic band gap silicon devices for optical interconnects. , 2014, , .		0
101	Marginal stability in jammed packings: Quasicontacts and weak contacts. Physical Review E, 2014, 90, 022114.	0.8	6
102	Equilibrium Phase Behavior and Maximally Random Jammed State of Truncated Tetrahedra. Journal of Physical Chemistry B, 2014, 118, 7981-7992.	1.2	48
103	A Cellular Automaton Model for Tumor Dormancy: Emergence of a Proliferative Switch. PLoS ONE, 2014, 9, e109934.	1.1	17
104	Disordered strictly jammed binary sphere packings attain an anomalously large range of densities. Physical Review E, 2013, 88, 022205.	0.8	65
105	Jammed lattice sphere packings. Physical Review E, 2013, 88, 062151.	0.8	22
106	Nonequilibrium static growing length scales in supercooled liquids on approaching the glass transition. Journal of Chemical Physics, 2013, 138, 12A508.	1.2	31
107	Exotic Ground States of Directional Pair Potentials via Collective-Density Variables. Journal of Statistical Physics, 2013, 150, 414-431.	0.5	8
108	Precise algorithm to generate random sequential addition of hard hyperspheres at saturation. Physical Review E, 2013, 88, 053312.	0.8	96

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109	Photonic band gap in isotropic hyperuniform disordered solids with low dielectric contrast. Optics Express, 2013, 21, 19972.	1.7	110
110	Communication: Designed diamond ground state via optimized isotropic monotonic pair potentials. Journal of Chemical Physics, 2013, 138, 061101.	1.2	48
111	Isotropic band gaps and freeform waveguides observed in hyperuniform disordered photonic solids. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15886-15891.	3.3	174
112	Hyperuniformity in amorphous silicon based on the measurement of the infinite-wavelength limit of the structure factor. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13250-13254.	3.3	65
113	Nearly hyperuniform network models of amorphous silicon. Physical Review B, 2013, 87, .	1.1	53
114	Detailed characterization of rattlers in exactly isostatic, strictly jammed sphere packings. Physical Review E, 2013, 88, 062208.	0.8	42
115	Efficient linear programming algorithm to generate the densest lattice sphere packings. Physical Review E, 2013, 87, 063303.	0.8	14
116	Evolution and morphology of microenvironment-enhanced malignancy of three-dimensional invasive solid tumors. Physical Review E, 2013, 87, 052707.	0.8	17
117	Effect of dimensionality on the percolation threshold of overlapping nonspherical hyperparticles. Physical Review E, 2013, 87, 022111.	0.8	30
118	Designer spin systems via inverse statistical mechanics. II. Ground-state enumeration and classification. Physical Review B, 2013, 88, .	1.1	7
119	Designer spin systems via inverse statistical mechanics. Physical Review B, 2013, 88, .	1.1	14
120	Probing the limitations of isotropic pair potentials to produce ground-state structural extremes via inverse statistical mechanics. Physical Review E, 2013, 88, 042309.	0.8	42
121	Optical cavities and waveguides in hyperuniform disordered photonic solids. Physical Review B, 2013, 87, .	1.1	66
122	Effect of dimensionality on the percolation thresholds of various<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-dimensional lattices. Physical Review E, 2013, 87, .	0.8	17
123	Microstructural degeneracy associated with a two-point correlation function and its information content. Physical Review E, 2012, 85, 051140.	0.8	63
124	Nonequilibrium static diverging length scales on approaching a prototypical model glassy state. Physical Review E, 2012, 86, 021505.	0.8	28
125	Maximally dense packings of two-dimensional convex and concave noncircular particles. Physical Review E, 2012, 86, 031302.	0.8	39
126	Effect of dimensionality on the continuum percolation of overlapping hyperspheres and hypercubes. Journal of Chemical Physics, 2012, 136, 054106.	1.2	36

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127	Density of States for a Specified Correlation Function and the Energy Landscape. Physical Review Letters, 2012, 108, 080601.	2.9	55
128	Families of tessellations of space by elementary polyhedra via retessellations of face-centered-cubic and related tilings. Physical Review E, 2012, 86, 041141.	0.8	9
129	Quantitative characterization of the microstructure and transport properties of biopolymer networks. Physical Biology, 2012, 9, 036009.	0.8	40
130	Effect of dimensionality on the continuum percolation of overlapping hyperspheres and hypercubes. II. Simulation results and analyses. Journal of Chemical Physics, 2012, 137, 074106.	1.2	50
131	Densest binary sphere packings. Physical Review E, 2012, 85, 021130.	0.8	65
132	Organizing principles for dense packings of nonspherical hard particles: Not all shapes are created equal. Physical Review E, 2012, 86, 011102.	0.8	45
133	Hydration and percolation at the setting point. Cement and Concrete Research, 2012, 42, 665-672.	4.6	40
134	Diversity of dynamics and morphologies of invasive solid tumors. AIP Advances, 2012, 2, 11003.	0.6	20
135	Optimized monotonic convex pair potentials stabilize low-coordinated crystals. Soft Matter, 2011, 7, 2332.	1.2	40
136	Duality relations for the classical ground states of soft-matter systems. Soft Matter, 2011, 7, 3780.	1.2	7
137	Novel ground-state crystals with controlled vacancy concentrations: From kagomÃ© to honeycomb to stripes. Soft Matter, 2011, 7, 6194.	1.2	15
138	Hyperuniformity, quasi-long-range correlations, and void-space constraints in maximally random jammed particle packings. II. Anisotropy in particle shape. Physical Review E, 2011, 83, 051309.	0.8	33
139	Hyperuniformity, quasi-long-range correlations, and void-space constraints in maximally random jammed particle packings. I. Polydisperse spheres. Physical Review E, 2011, 83, 051308.	0.8	51
140	Toward an Ising model of cancer and beyond. Physical Biology, 2011, 8, 015017.	0.8	50
141	Nonuniversality of density and disorder in jammed sphere packings. Journal of Applied Physics, 2011, 109, .	1.1	46
142	Hyperuniform Long-Range Correlations are a Signature of Disordered Jammed Hard-Particle Packings. Physical Review Letters, 2011, 106, 178001.	2.9	121
143	New family of tilings of three-dimensional Euclidean space by tetrahedra and octahedra. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11009-11012.	3.3	20
144	Densest local sphere-packing diversity. II. Application to three dimensions. Physical Review E, 2011, 83, 011304.	0.8	17

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145	Phase Diagram and Structural Diversity of the Densest Binary Sphere Packings. Physical Review Letters, 2011, 107, 125501.	2.9	53
146	Spatial Organization and Correlations of Cell Nuclei in Brain Tumors. PLoS ONE, 2011, 6, e27323.	1.1	29
147	Rigidity of spherical codes. Geometry and Topology, 2011, 15, 2235-2273.	0.5	16
148	Communication: A packing of truncated tetrahedra that nearly fills all of space and its melting properties. Journal of Chemical Physics, 2011, 135, 151101.	1.2	28
149	High-dimensional generalizations of the kagomÃ© and diamond crystals and the decorrelation principle for periodic sphere packings. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10017.	0.9	12
150	Unusual ground states via monotonic convex pair potentials. Journal of Chemical Physics, 2011, 134, 164105.	1.2	33
151	Maximally random jammed packings of Platonic solids: Hyperuniform long-range correlations and isostaticity. Physical Review E, 2011, 84, 041309.	0.8	136
152	Improved reconstructions of random media using dilation and erosion processes. Physical Review E, 2011, 84, 056102.	0.8	55
153	Anomalous local coordination, density fluctuations, and void statistics in disordered hyperuniform many-particle ground states. Physical Review E, 2011, 83, 051133.	0.8	45
154	New bounds on the sedimentation velocity for hard, charged and adhesive hard-sphere colloids. Journal of Fluid Mechanics, 2011, 667, 403-425.	1.4	12
155	Inherent structures for soft long-range interactions in two-dimensional many-particle systems. Journal of Chemical Physics, 2011, 135, 054104.	1.2	10
156	Emergent Behaviors from a Cellular Automaton Model for Invasive Tumor Growth in Heterogeneous Microenvironments. PLoS Computational Biology, 2011, 7, e1002314.	1.5	94
157	Spherical codes, maximal local packing density, and the golden ratio. Journal of Mathematical Physics, 2010, 51, .	0.5	11
158	Effects of random link removal on the photonic band gaps of honeycomb networks. Applied Physics Letters, 2010, 97, .	1.5	23
159	Distinctive features arising in maximally random jammed packings of superballs. Physical Review E, 2010, 81, 041304.	0.8	94
160	Optimal Design of Heterogeneous Materials. Annual Review of Materials Research, 2010, 40, 101-129.	4.3	109
161	Robust algorithm to generate a diverse class of dense disordered and ordered sphere packings via linear programming. Physical Review E, 2010, 82, 061302.	0.8	84
162	Reformulation of the covering and quantizer problems as ground states of interacting particles. Physical Review E, 2010, 82, 056109.	0.8	40

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163	Jammed hard-particle packings: From Kepler to Bernal and beyond. Reviews of Modern Physics, 2010, 82, 2633-2672.	16.4	606
164	Exact constructions of a family of dense periodic packings of tetrahedra. Physical Review E, 2010, 81, 041310.	0.8	46
165	Phase behavior of colloidal superballs: Shape interpolation from spheres to cubes. Physical Review E, 2010, 81, 061105.	0.8	107
166	Geometrical ambiguity of pair statistics. II. Heterogeneous media. Physical Review E, 2010, 82, 011106.	0.8	39
167	Geometrical ambiguity of pair statistics: Point configurations. Physical Review E, 2010, 81, 011105.	0.8	39
168	Densest local sphere-packing diversity: General concepts and application to two dimensions. Physical Review E, 2010, 81, 041305.	0.8	14
169	Publisher's Note: Jammed hard-particle packings: From Kepler to Bernal and beyond [Rev. Mod. Phys. 82, 2633 (2010)]. Reviews of Modern Physics, 2010, 82, 3197-3197.	16.4	8
170	Growing heterogeneous tumors in silico. Physical Review E, 2009, 80, 051910.	0.8	18
171	Statistical properties of determinantal point processes in high-dimensional Euclidean spaces. Physical Review E, 2009, 79, 041108.	0.8	52
172	Interactions leading to disordered ground states and unusual low-temperature behavior. Physical Review E, 2009, 80, 031105.	0.8	14
173	Novel Low-Temperature Behavior in Classical Many-Particle Systems. Physical Review Letters, 2009, 103, 050602.	2.9	23
174	New classes of non-crystalline photonic band gap materials. , 2009, , .		0
175	A superior descriptor of random textures and its predictive capacity. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17634-17639.	3.3	251
176	Designer disordered materials with large, complete photonic band gaps. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20658-20663.	3.3	363
177	Hyperuniformity in point patterns and two-phase random heterogeneous media. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P12015.	0.9	147
178	Dense packings of the Platonic and Archimedean solids. Nature, 2009, 460, 876-879.	13.7	364
179	Complete band gaps in two-dimensional photonic quasicrystals. Physical Review B, 2009, 80, .	1.1	109
180	Dense packings of polyhedra: Platonic and Archimedean solids. Physical Review E, 2009, 80, 041104.	0.8	144

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181	Inverse optimization techniques for targeted self-assembly. Soft Matter, 2009, 5, 1157.	1.2	166
182	Method for obtaining upper bounds on photonic band gaps. Physical Review B, 2009, 80, .	1.1	7
183	Optimal packings of superballs. Physical Review E, 2009, 79, 041309.	0.8	129
184	Effective dielectric tensor for electromagnetic wave propagation in random media. Journal of Applied Physics, 2008, 103, .	1.1	39
185	Negative Poissonâ€™s Ratio Materials via Isotropic Interactions. Physical Review Letters, 2008, 101, 085501.	2.9	37
186	Estimates of the optimal density of sphere packings in high dimensions. Journal of Mathematical Physics, 2008, 49, .	0.5	31
187	Classical disordered ground states: Super-ideal gases and stealth and equi-luminous materials. Journal of Applied Physics, 2008, 104, .	1.1	131
188	Simulating tumor growth in confined heterogeneous environments. Physical Biology, 2008, 5, 036010.	0.8	50
189	Gaussian core model phase diagram and pair correlations in high Euclidean dimensions. Journal of Chemical Physics, 2008, 128, 224505.	1.2	34
190	A Novel Three-Phase Model of Brain Tissue Microstructure. PLoS Computational Biology, 2008, 4, e1000152.	1.5	47
191	Point processes in arbitrary dimension from fermionic gases, random matrix theory, and number theory. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P11019.	0.9	97
192	Optimized Structures for Photonic Quasicrystals. Physical Review Letters, 2008, 101, 073902.	2.9	96
193	Optimal Packings of Superdisks and the Role of Symmetry. Physical Review Letters, 2008, 100, 245504.	2.9	77
194	Modeling heterogeneous materials via two-point correlation functions. II. Algorithmic details and applications. Physical Review E, 2008, 77, 031135.	0.8	222
195	Tilings of space and superhomogeneous point processes. Physical Review E, 2008, 77, 031125.	0.8	20
196	New Duality Relations for Classical Ground States. Physical Review Letters, 2008, 100, 020602.	2.9	31
197	Toward the jamming threshold of sphere packings: Tunneled crystals. Journal of Applied Physics, 2007, 102, .	1.1	63
198	Synthetic diamond and wurtzite structures self-assemble with isotropic pair interactions. Physical Review E, 2007, 75, 031403.	0.8	58

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199	Modeling heterogeneous materials via two-point correlation functions: Basic principles. Physical Review E, 2007, 76, 031110.	0.8	289
200	Configurational entropy of binary hard-disk glasses: Nonexistence of an ideal glass transition. Journal of Chemical Physics, 2007, 127, 124509.	1.2	56
201	Negative Thermal Expansion in Single-Component Systems with Isotropic Interactions. Journal of Physical Chemistry A, 2007, 111, 12816-12821.	1.1	24
202	Underconstrained jammed packings of nonspherical hard particles: Ellipses and ellipsoids. Physical Review E, 2007, 75, 051304.	0.8	219
203	A variational level set approach for surface area minimization of triply-periodic surfaces. Journal of Computational Physics, 2007, 223, 711-730.	1.9	66
204	Calculating the free energy of nearly jammed hard-particle packings using molecular dynamics. Journal of Computational Physics, 2007, 225, 509-527.	1.9	17
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