

Gregory M Grason

List of Publications by Year in descending order

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64
papers

2,306
citations

218677

26
h-index

223800

46
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65
all docs

65
docs citations

65
times ranked

2388
citing authors

#	ARTICLE	IF	CITATIONS
1	Medial packing and elastic asymmetry stabilize the double-gyroid in block copolymers. <i>Nature Communications</i> , 2022, 13, 2629.	12.8	12
2	Thermodynamic Size Control in Curvature-Frustrated Tubules: Self-Limitation with Open Boundaries. <i>ACS Nano</i> , 2022, 16, 9077-9085.	14.6	11
3	Stress accumulation versus shape flattening in frustrated, warped-jigsaw particle assemblies. <i>New Journal of Physics</i> , 2022, 24, 063023.	2.9	4
4	Breaking Mirror Symmetry of Double Gyroids via Self-Assembly of Chiral Block Copolymers. <i>ACS Macro Letters</i> , 2022, 11, 930-934.	4.8	5
5	Focusing frustration for self-limiting assembly of flexible, curved particles. <i>Physical Review Research</i> , 2022, 4, .	3.6	5
6	Switchable positioning of plate-like inclusions in lipid membranes: Elastically mediated interactions of planar colloids in 2D fluids. <i>Science Advances</i> , 2021, 7, .	10.3	4
7	Equilibrium mechanisms of self-limiting assembly. <i>Reviews of Modern Physics</i> , 2021, 93, .	45.6	46
8	Block Copolymers beneath the Surface: Measuring and Modeling Complex Morphology at the Subdomain Scale. <i>Macromolecules</i> , 2021, 54, 9223-9257.	4.8	27
9	Defects in conformal crystals: Discrete versus continuous disclination models. <i>Physical Review E</i> , 2021, 104, 034614.	2.1	3
10	End-exclusion zones in strongly stretched, molten polymer brushes of arbitrary shape. <i>Journal of Chemical Physics</i> , 2021, 155, 224901.	3.0	5
11	Mechanics of Metric Frustration in Contorted Filament Bundles: From Local Symmetry to Columnar Elasticity. <i>Physical Review Letters</i> , 2021, 127, 218002.	7.8	2
12	Chiral and achiral mechanisms of self-limiting assembly of twisted bundles. <i>Soft Matter</i> , 2020, 16, 1102-1116.	2.7	22
13	All twist and no bend makes raft edges splay: Spontaneous curvature of domain edges in colloidal membranes. <i>Science Advances</i> , 2020, 6, eaba2331.	10.3	6
14	Chiral twisting in a bacterial cytoskeletal polymer affects filament size and orientation. <i>Nature Communications</i> , 2020, 11, 1408.	12.8	24
15	Constant spacing in filament bundles. <i>New Journal of Physics</i> , 2019, 21, 062001.	2.9	7
16	Conformational switching of chiral colloidal rafts regulates raft-raft attractions and repulsions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15792-15801.	7.1	7
17	Seeing mesoatomic distortions in soft-matter crystals of a double-gyroid block copolymer. <i>Nature</i> , 2019, 575, 175-179.	27.8	78
18	Ground States of Crystalline Caps: Generalized Jellium on Curved Space. <i>Physical Review Letters</i> , 2019, 123, 145501.	7.8	28

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19	A cornerstone of complex crystals. <i>Nature Chemistry</i> , 2019, 11, 865-867.	13.6	13
20	New frontiers for the materials genome initiative. <i>Npj Computational Materials</i> , 2019, 5, .	8.7	312
21	Generalizing the effects of chirality on block copolymer assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 4080-4089.	7.1	37
22	Geometrically incompatible confinement of solids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 1483-1488.	7.1	45
23	Anatomy of triply-periodic network assemblies: characterizing skeletal and inter-domain surface geometry of block copolymer gyroids. <i>Soft Matter</i> , 2018, 14, 3612-3623.	2.7	29
24	Stable Frank-Kasper phases of self-assembled, soft matter spheres. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 10233-10238.	7.1	111
25	Intradomain phase transitions in flexible block copolymers with self-aligning segments. <i>Journal of Chemical Physics</i> , 2018, 148, 174905.	3.0	4
26	Persistence of Perfect Packing in Twisted Bundles of Elastic Filaments. <i>Physical Review Letters</i> , 2018, 120, 248002.	7.8	15
27	How geometric frustration shapes twisted fibres, inside and out: competing morphologies of chiral filament assembly. <i>Interface Focus</i> , 2017, 7, 20160140.	3.0	23
28	Measuring geometric frustration in twisted inextensible filament bundles. <i>Physical Review E</i> , 2017, 95, 052503.	2.1	10
29	Subjamming transition in binary sphere mixtures. <i>Physical Review E</i> , 2017, 96, 052905.	2.1	19
30	Intradomain Textures in Block Copolymers: Multizone Alignment and Biaxiality. <i>Physical Review Letters</i> , 2017, 118, 247801.	7.8	19
31	Perspective: Geometrically frustrated assemblies. <i>Journal of Chemical Physics</i> , 2016, 145, .	3.0	96
32	Shape Selection of Surface-Bound Helical Filaments: Biopolymers on Curved Membranes. <i>Biophysical Journal</i> , 2016, 111, 1575-1585.	0.5	15
33	Neutral versus charged defect patterns in curved crystals. <i>Physical Review E</i> , 2016, 94, 013003.	2.1	28
34	Morphology selection via geometric frustration in chiral filament bundles. <i>Nature Materials</i> , 2016, 15, 727-732.	27.5	59
35	Chirality Transfer in Block Copolymer Melts: Emerging Concepts. <i>ACS Macro Letters</i> , 2015, 4, 526-532.	4.8	38
36	Measuring Cohesion between Macromolecular Filaments One Pair at a Time: Depletion-Induced Microtubule Bundling. <i>Physical Review Letters</i> , 2015, 114, 138102.	7.8	58

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37	<i>Colloquium</i>: Geometry and optimal packing of twisted columns and filaments. Reviews of Modern Physics, 2015, 87, 401-419.	45.6	47
38	Geometry of flexible filament cohesion: Better contact through twist?. Journal of Chemical Physics, 2014, 141, 174904.	3.0	4
39	Emergent Structure of Multidislocation Ground States in Curved Crystals. Physical Review Letters, 2014, 112, 225502.	7.8	35
40	Tensorial conservation law for nematic polymers. Physical Review E, 2013, 88, 052603.	2.1	10
41	Formation of H* Phase in Chiral Block Copolymers: Morphology Evolution As Revealed by Time-Resolved X-ray Scattering. Macromolecules, 2013, 46, 474-483.	4.8	14
42	Topological defects, surface geometry and cohesive energy of twisted filament bundles. Soft Matter, 2013, 9, 8327.	2.7	25
43	Frustration and packing in curved-filament assemblies: from isometric to isomorphic bundles. Soft Matter, 2013, 9, 6761.	2.7	8
44	Universal collapse of stress and wrinkle-to-scar transition in spherically confined crystalline sheets. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12893-12898.	7.1	54
45	Chirality in Block Copolymer Melts: Mesoscopic Helicity from Intersegment Twist. Physical Review Letters, 2013, 110, 058301.	7.8	37
46	Non-Euclidean geometry of twisted filament bundle packing. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10781-10786.	7.1	43
47	Conformational collapse of surface-bound helical filaments. Soft Matter, 2012, 8, 9460.	2.7	11
48	Orientational interactions in block copolymer melts: Self-consistent field theory. Journal of Chemical Physics, 2012, 137, 104911.	3.0	23
49	Defects in crystalline packings of twisted filament bundles. II. Dislocations and grain boundaries. Physical Review E, 2012, 85, 031604.	2.1	16
50	Defects in crystalline packings of twisted filament bundles. I. Continuum theory of disclinations. Physical Review E, 2012, 85, 031603.	2.1	34
51	Theory of crosslinked bundles of helical filaments: Intrinsic torques in self-limiting biopolymer assemblies. Journal of Chemical Physics, 2011, 135, 035104.	3.0	18
52	Structural reorganization of parallel actin bundles by crosslinking proteins: Incommensurate states of twist. Physical Review E, 2010, 82, 051919.	2.1	13
53	Topological Defects in Twisted Bundles of Two-Dimensionally Ordered Filaments. Physical Review Letters, 2010, 105, 045502.	7.8	32
54	Braided bundles and compact coils: The structure and thermodynamics of hexagonally packed chiral filament assemblies. Physical Review E, 2009, 79, 041919.	2.1	48

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55	Mesophases of soft-sphere aggregates. <i>Soft Matter</i> , 2009, 5, 3629.	2.7	42
56	Cooperativity and Frustration in Protein-Mediated Parallel Actin Bundles. <i>Physical Review Letters</i> , 2009, 103, 238102.	7.8	48
57	Continuous Crystallization in Hexagonally Ordered Materials. <i>Physical Review Letters</i> , 2008, 101, 105702.	7.8	4
58	Ordered phases of diblock copolymers in selective solvent. <i>Journal of Chemical Physics</i> , 2007, 126, 114904.	3.0	29
59	Chirality and Equilibrium Biopolymer Bundles. <i>Physical Review Letters</i> , 2007, 99, 098101.	7.8	112
60	Phase diagram of chiral biopolymer Wigner crystals. <i>Physical Review E</i> , 2007, 76, 021924.	2.1	7
61	Frustrated Polyelectrolyte Bundles and $T=0$ Josephson-Junction Arrays. <i>Physical Review Letters</i> , 2006, 97, 027802.	7.8	17
62	Self-consistent field theory of multiply branched block copolymer melts. <i>Physical Review E</i> , 2005, 71, 051801.	2.1	44
63	Interfaces in Diblocks: A Study of Miktoarm Star Copolymers. <i>Macromolecules</i> , 2004, 37, 7371-7380.	4.8	129
64	Geometric Theory of Diblock Copolymer Phases. <i>Physical Review Letters</i> , 2003, 91, 058304.	7.8	174