Paul P A M Van Der Schoot

List of Publications by Year
in descending order

160 papers	6,627 citations	70961 41 h-index	71532 76 g-index
165 all docs	165 docs citations	165 times ranked	6520 citing authors

#	Article	IF	Citations
1	Probing the Solvent-Assisted Nucleation Pathway in Chemical Self-Assembly. Science, 2006, 313, 80-83.	6.0	822
2	How to Distinguish Isodesmic from Cooperative Supramolecular Polymerisation. Chemistry - A European Journal, 2010, 16, 362-367.	1.7	461
3	Continuum percolation of carbon nanotubes in polymeric and colloidal media. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 8221-8226.	3.3	229
4	Controlling electrical percolation in multicomponent carbon nanotube dispersions. Nature Nanotechnology, 2011, 6, 364-369.	15.6	181
5	Kinetics of Nanotube and Microfiber Scission under Sonication. Journal of Physical Chemistry C, 2009, 113, 20599-20605.	1.5	173
6	Classical Nucleation Theory of Virus Capsids. Biophysical Journal, 2006, 90, 1939-1948.	0.2	169
7	Tuning the Extent of Chiral Amplification by Temperature in a Dynamic Supramolecular Polymer. Journal of the American Chemical Society, 2010, 132, 611-619.	6.6	165
8	Competing Hydrophobic and Screened-Coulomb Interactions in Hepatitis B Virus Capsid Assembly. Biophysical Journal, 2004, 86, 3905-3913.	0.2	156
9	Design and self-assembly of simple coat proteins for artificial viruses. Nature Nanotechnology, 2014, 9, 698-702.	15.6	146
10	Shape and director-field transformation of tactoids. Physical Review E, 2003, 68, 021701.	0.8	145
11	Alignment of Carbon Nanotubes in Nematic Liquid Crystals. Journal of Physical Chemistry B, 2008, 112, 4512-4518.	1.2	129
12	Connectivity percolation of polydisperse anisotropic nanofillers. Journal of Chemical Physics, 2011, 134, 094902.	1.2	122
13	Electrostatics and the assembly of an RNA virus. Physical Review E, 2005, 71, 061928.	0.8	116
14	Isotropic-Nematic Interface and Wetting in Suspensions of Colloidal Platelets. Physical Review Letters, 2006, 97, 087801.	2.9	107
15	Physical Regulation of the Self-Assembly of Tobacco Mosaic Virus Coat Protein. Biophysical Journal, 2006, 91, 1501-1512.	0.2	102
16	Continuum Percolation of Polydisperse Nanofillers. Physical Review Letters, 2009, 103, 225704.	2.9	97
17	On the influence of the processing conditions on the performance of electrically conductive carbon nanotube/polymer nanocomposites. Polymer, 2008, 49, 2866-2872.	1.8	94
18	Determination of the Surface Coverage of Exfoliated Carbon Nanotubes by Surfactant Molecules in Aqueous Solution. Langmuir, 2007, 23, 3646-3653.	1.6	91

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19	Insights into Templated Supramolecular Polymerization: Binding of Naphthalene Derivatives to ssDNA Templates of Different Lengths. Journal of the American Chemical Society, 2009, 131, 1222-1231.	6.6	86
20	Effect of Solvent Quality and Electrostatic Interactions on Size and Structure of Dendrimers. Brownian Dynamics Simulation and Mean-Field Theory. Macromolecules, 2004, 37, 3049-3063.	2.2	83
21	Percolation scaling in composites of exfoliated MoS2 filled with nanotubes and graphene. Nanoscale, 2012, 4, 6260.	2.8	75
22	Lowering the percolation threshold of single-walled carbon nanotubes using polystyrene/poly(3,4-ethylenedioxythiophene): poly(styrene sulfonate) blends. Soft Matter, 2009, 5, 878.	1.2	72
23	Size Regulation of ss-RNA Viruses. Biophysical Journal, 2009, 96, 9-20.	0.2	71
24	Helical Transition and Growth of Supramolecular Assemblies of Chiral Discotic Molecules. Langmuir, 2000, 16, 10076-10083.	1.6	66
25	Continuous director-field transformation of nematic tactoids. European Physical Journal E, 2004, 13, 35-41.	0.7	65
26	Growth, Static Light Scattering, and Spontaneous Ordering of Rodlike Micelles. Langmuir, 1994, 10, 670-679.	1.6	64
27	Percolation in suspensions of hard nanoparticles: From spheres to needles. Europhysics Letters, 2015, 111, 56004.	0.7	61
28	Nematic droplets in aqueous dispersions of carbon nanotubes. Physical Review E, 2010, 82, 020702.	0.8	57
29	Kinetic theory of virus capsid assembly. Physical Biology, 2007, 4, 296-304.	0.8	56
30	Experimental realization of crossover in shape and director field of nematic tactoids. Physical Review E, 2015, 91, 042507.	0.8	56
31	Supramolecular Balance: Using Cooperativity To Amplify Weak Interactions. Journal of the American Chemical Society, 2010, 132, 16818-16824.	6.6	53
32	Quasiuniversal Connectedness Percolation of Polydisperse Rod Systems. Physical Review Letters, 2013, 110, 015701.	2.9	53
33	Statistical theory and structure factor of a semidilute solution of rodlike macromolecules interacting by van der Waals forces. Journal of Chemical Physics, 1992, 97, 515-524.	1.2	52
34	Protein-Induced Collapse of Polymer Chains. Macromolecules, 1998, 31, 4635-4638.	2.2	52
35	Remarks on the Interfacial Tension in Colloidal Systems. Journal of Physical Chemistry B, 1999, 103, 8804-8808.	1.2	50
36	Tactoids of Plate-Like Particles: Size, Shape, and Director Field. Langmuir, 2011, 27, 116-125.	1.6	50

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37	A stereoselectively deuterated supramolecular motif to probe the role of solvent during self-assembly processes. Chemical Communications, 2012, 48, 3803.	2.2	50
38	RNA topology remolds electrostatic stabilization of viruses. Physical Review E, 2014, 89, 032707.	0.8	50
39	Cellulose Nanowhiskers Templating in Conductive Polymer Nanocomposites Reduces Electrical Percolation Threshold 5-Fold. ACS Macro Letters, 2013, 2, 157-163.	2.3	49
40	Structuring of Thin-Film Polymer Mixtures upon Solvent Evaporation. Macromolecules, 2016, 49, 6858-6870.	2.2	48
41	Amplification of Chirality in Helical Supramolecular Polymers. Macromolecules, 2003, 36, 6668-6673.	2.2	44
42	Experimental and Theoretical Study of the Influence of the State of Dispersion of Graphene on the Percolation Threshold of Conductive Graphene/Polystyrene Nanocomposites. ACS Applied Materials & Interfaces, 2014, 6, 15113-15121.	4.0	41
43	Probing the Cooperative Nature of the Conductive Components in Polystyrene/Poly(3,4-ethylenedioxythiophene):Poly(styrene sulfonate)â"Single-Walled Carbon Nanotube Composites. ACS Nano, 2010, 4, 2242-2248.	7.3	40
44	Self-Diffusion of Particles in Complex Fluids: Temporary Cages and Permanent Barriers. Physical Review Letters, 2008, 101, 215901.	2.9	38
45	Percolation in suspensions of polydisperse hard rods: Quasi universality and finite-size effects. Journal of Chemical Physics, 2015, 143, 044901.	1.2	37
46	Contact Mechanics of a Small Icosahedral Virus. Physical Review Letters, 2017, 119, 038102.	2.9	37
47	Real-Time Assembly of Viruslike Nucleocapsids Elucidated at the Single-Particle Level. Nano Letters, 2019, 19, 5746-5753.	4.5	37
48	The hexagonal phase of wormlike micelles. Journal of Chemical Physics, 1996, 104, 1130-1139.	1.2	36
49	Effects of RNA branching on the electrostatic stabilization of viruses. Physical Review E, 2016, 94, 022408.	0.8	36
50	Role of Charge Regulation and Size Polydispersity in Nanoparticle Encapsulation by Viral Coat Proteins. Journal of Physical Chemistry B, 2015, 119, 1869-1880.	1.2	35
51	The Nematic-Smectic Transition in Suspensions of Slightly Flexible Hard Rods. Journal De Physique II, 1996, 6, 1557-1569.	0.9	34
52	Multishell Structures of Virus Coat Proteins. Journal of Physical Chemistry B, 2010, 114, 5522-5533.	1.2	33
53	Parity breaking in nematic tactoids. Journal of Physics Condensed Matter, 2004, 16, 8835-8850.	0.7	32
54	Impact of the topology of viral RNAs on their encapsulation by virus coat proteins. Journal of Biological Physics, 2013, 39, 289-299.	0.7	32

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55	Dynamical and structural insights into the smectic phase of rod-like particles. Journal of Physics Condensed Matter, 2008, 20, 494213.	0.7	31
56	Depletion interactions in lyotropic nematics. Journal of Chemical Physics, 2000, 112, 9132-9138.	1.2	28
57	ssPNA templated assembly of oligo(p-phenylenevinylene)s. Chemical Communications, 2010, 46, 109-111.	2.2	28
58	Energetically favoured defects in dense packings of particles on spherical surfaces. Soft Matter, 2016, 12, 5708-5717.	1.2	28
59	Hyperstretching DNA. Nature Communications, 2017, 8, 2197.	5.8	28
60	Control of mesogen configuration in colloids of liquid crystalline polymers. Soft Matter, 2010, 6, 4112.	1.2	27
61	Controlling the Cooperativity in the Supramolecular Polymerization of Ionic Discotic Amphiphiles via Electrostatic Screening. ACS Macro Letters, 2012, 1, 830-833.	2.3	27
62	Hepatitis Virus Capsid Polymorph Stability Depends on Encapsulated Cargo Size. ACS Nano, 2013, 7, 8447-8454.	7.3	27
63	Impact of a nonuniform charge distribution on virus assembly. Physical Review E, 2017, 96, 022401.	0.8	27
64	Role of End Effects in Helical Aggregation. Langmuir, 2003, 19, 1375-1383.	1.6	26
65	Connectedness Percolation of Elongated Hard Particles in an External Field. Physical Review Letters, 2012, 108, 088301.	2.9	26
66	Texture and shape of two-dimensional domains of nematic liquid crystals. Physical Review E, 2012, 86, 051703.	0.8	26
67	Helical Transition of Polymer-like Assemblies in Solution. Journal of Physical Chemistry B, 2001, 105, 10691-10699.	1.2	25
68	Self-assembly of globular particles in a nematic dispersion of colloidal rods. Journal of Chemical Physics, 2002, 117, 3537-3540.	1.2	25
69	Probing Weak Intermolecular Interactions in Self-Assembled Nanotubes. Journal of the American Chemical Society, 2012, 134, 1363-1366.	6.6	25
70	Equilibrium charge distribution on weak polyelectrolytes. Journal of Chemical Physics, 1997, 107, 8083-8088.	1.2	24
71	A Kinetic Zipper Model and the Assembly of Tobacco Mosaic Virus. Biophysical Journal, 2012, 102, 2845-2855.	0.2	23
72	Impact of charge variation on the encapsulation of nanoparticles by virus coat proteins. Physical Biology, 2012, 9, 066004.	0.8	23

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73	Self-organisation of semi-flexible rod-like particles. Journal of Chemical Physics, 2017, 147, 244901.	1.2	23
74	Directing Liquid Crystalline Self-Organization of Rodlike Particles through Tunable Attractive Single Tips. Physical Review Letters, 2019, 122, 128008.	2.9	23
75	Architecture and Conformation of Uncharged and Charged Hyperbranched Polymers:â€‰ Computer Simulation and Mean-Field Theory. Macromolecules, 2005, 38, 996-1006.	2.2	22
76	Illuminating the Reaction Pathways of Viromimetic Assembly. Journal of the American Chemical Society, 2017, 139, 4962-4968.	6.6	22
77	Nematics of linear assemblies in two dimensions. Journal of Chemical Physics, 1997, 106, 2355-2359.	1.2	21
78	Amplification of chirality in helical supramolecular polymers beyond the long-chain limit. Journal of Chemical Physics, 2004, 120, 8253-8261.	1.2	21
79	Osmotic compression of droplets of hard rods: A computer simulation study. Journal of Chemical Physics, 2009, 130, 164513.	1.2	20
80	Theory of supramolecular co-polymerization in a two-component system. Journal of Chemical Physics, 2012, 137, 064906.	1.2	19
81	Structure factor of a semidilute solution of polydisperse rodlike macromolecules. Macromolecules, 1992, 25, 2923-2927.	2.2	18
82	Shape and Director Field Deformation of Tactoids of Plate-Like Colloids in a Magnetic Field. Journal of Physical Chemistry B, 2009, 113, 3704-3708.	1.2	18
83	Magnetic field effects on tactoids of plate-like colloids. Journal of Chemical Physics, 2011, 134, 044904.	1.2	18
84	A Landau-de Gennes theory for hard colloidal rods: Defects and tactoids. Journal of Chemical Physics, 2016, 144, 194901.	1.2	18
85	Macroscopic Model for Sessile Droplet Evaporation on a Flat Surface. Langmuir, 2018, 34, 12471-12481.	1.6	18
86	Structure factor of a semidilute solution of rodlike macromolecules. Macromolecules, 1990, 23, 4181-4182.	2.2	17
87	Fractional Hoppinglike Motion in Columnar Mesophases of Semiflexible Rodlike Particles. Physical Review Letters, 2013, 111, 037801.	2.9	17
88	Hydrophobic-Interaction-Induced Stiffening of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math> -Synuclein Fibril Networks. Physical Review Letters, 2018, 120, 208102.	2.9	17
89	Phase Ordering of Marginally Flexible Linear Micelles. Journal De Physique II, 1995, 5, 243-248.	0.9	16
90	Connectedness percolation of hard deformed rods. Journal of Chemical Physics, 2017, 147, 224904.	1.2	16

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91	Continuum percolation of polydisperse rods in quadrupole fields: Theory and simulations. Journal of Chemical Physics, 2018, 148, 034903.	1.2	16
92	Orientational Order of Carbon Nanotube Guests in a Nematic Host Suspension of Colloidal Viral Rods. Physical Review Letters, 2012, 108, 247801.	2.9	15
93	Effect of bending flexibility on the phase behavior and dynamics of rods. Journal of Chemical Physics, 2014, 141, 124901.	1.2	15
94	Compression and Reswelling of Microgel Particles after an Osmotic Shock. Physical Review Letters, 2017, 119, 098001.	2.9	15
95	DNA partitions into triplets under tension in the presence of organic cations, with sequence evolutionary age predicting the stability of the triplet phase. Quarterly Reviews of Biophysics, 2017, 50, e15.	2.4	15
96	The effect of RNA stiffness on the self-assembly of virus particles. Journal of Physics Condensed Matter, 2018, 30, 044002.	0.7	14
97	Connectivity, Not Density, Dictates Percolation in Nematic Liquid Crystals of Slender Nanoparticles. Physical Review Letters, 2019, 122, 097801.	2.9	14
98	Remarks on the association of rodlike macromolecules in dilute solution. The Journal of Physical Chemistry, 1992, 96, 6083-6086.	2.9	13
99	Capillary Rise of an Isotropicâ^'Nematic Fluid Interface: Surface Tension and Anchoring versus Elasticity. Langmuir, 2009, 25, 2427-2436.	1.6	13
100	Self-Assembly Dynamics of Linear Virus-Like Particles: Theory and Experiment. Journal of Physical Chemistry B, 2016, 120, 6286-6297.	1.2	13
101	Impact of interaction range and curvature on crystal growth of particles confined to spherical surfaces. Physical Review E, 2017, 96, 012611.	0.8	13
102	Experimental and Theoretical Determination of the pH inside the Confinement of a Virusâ€Like Particle. Small, 2018, 14, e1802081.	5.2	13
103	The Dynamics of Viruslike Capsid Assembly and Disassembly. Journal of the American Chemical Society, 2022, 144, 12608-12612.	6.6	13
104	Theory of Supramolecular Polymerization. , 2005, , .		12
105	Kinetics versus Thermodynamics in Virus Capsid Polymorphism. Journal of Physical Chemistry B, 2016, 120, 6003-6009.	1.2	12
106	Direct Probing of the Free-Energy Penalty for Helix Reversals and Chiral Mismatches in Chiral Supramolecular Polymers. Langmuir, 2014, 30, 4570-4575.	1.6	11
107	Bimodal Latex Effect on Spin-Coated Thin Conductive Polymerâ€“Single-Walled Carbon Nanotube Layers. Langmuir, 2015, 31, 11982-11988.	1.6	11
108	Revisiting the Helical Cooperativity of Synthetic Polypeptides in Solution. Biomacromolecules, 2017, 18, 2324-2332.	2.6	11

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109	Equilibrium Charge Distribution on Linear Micelles. Langmuir, 1997, 13, 4926-4928.	1.6	10
110	Supramolecular copolymers predominated by alternating order: Theory and application. Journal of Chemical Physics, 2019, 151, 014902.	1.2	10
111	Virus Mechanics under Molecular Crowding. Journal of Physical Chemistry B, 2021, 125, 1790-1798.	1.2	10
112	Spinodal decomposition in a semidilute suspension of rodlike macromolecules. Physical Review E, 2000, 63, .	0.8	9
113	Theory of the isotropic-nematic transition in dispersions of compressible rods. Physical Review E, 2006, 74, 021710.	0.8	9
114	Quantification of Carbon Nanotube Liquid Crystal Morphology via Neutron Scattering. Macromolecules, 2018, 51, 6892-6900.	2.2	9
115	Stochastic lag time in nucleated linear self-assembly. Journal of Chemical Physics, 2016, 144, 235101.	1.2	8
116	Role of Genome in the Formation of Conical Retroviral Shells. Journal of Physical Chemistry B, 2016, 120, 6298-6305.	1.2	8
117	Connectedness percolation of hard convex polygonal rods and platelets. Journal of Chemical Physics, 2018, 149, 054902.	1.2	8
118	Unusual geometric percolation of hard nanorods in the uniaxial nematic liquid crystalline phase. Physical Review E, 2019, 100, 062129.	0.8	8
119	Static and dynamic light scattering from liquid crystalline solutions of rodlike macromolecules. Journal of Chemical Physics, 1990, 93, 3580-3592.	1.2	7
120	Transient electric birefringence in solutions of selfâ€assembled rods. Journal of Chemical Physics, 1994, 101, 5040-5046.	1.2	7
121	Scaling Theory of Interacting Thermally Activated Supramolecular Polymers. Macromolecules, 2007, 40, 2177-2185.	2.2	7
122	Photoluminescence Spectra of Self-Assembling Helical Supramolecular Assemblies: A Theoretical Study. Journal of Physical Chemistry B, 2008, 112, 12386-12393.	1.2	7
123	Deformable homeotropic nematic droplets in a magnetic field. Journal of Chemical Physics, 2012, 137, 154901.	1.2	7
124	Structure of nematic tactoids of hard rods. Journal of Chemical Physics, 2022, 156, 104501.	1.2	7
125	Self-crowding induced phase separation in protein dispersions. Journal of Chemical Physics, 2015, 142, 244901.	1.2	6
126	Nanoscale insight into silk-like protein self-assembly: effect of design and number of repeat units. Physical Biology, 2018, 15, 066010.	0.8	6

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127	End-evaporation dynamics revisited. Journal of Chemical Physics, 2005, 123, 144912.	1.2	5
128	Phase behavior and interfacial properties of nonadditive mixtures of Onsager rods. Journal of Chemical Physics, 2005, 122, 094912.	1.2	5
129	Nucleation and Co-Operativity in Supramolecular Polymers. Advances in Chemical Engineering, 2009, 35, 45-77.	0.5	5
130	Competing Templated and Self-Assembly in Supramolecular Polymers. Macromolecules, 2010, 43, 5833-5844.	2.2	5
131	Nearest-neighbor connectedness theory: A general approach to continuum percolation. Physical Review E, 2021, 103, 042115.	0.8	5
132	Effect of electric fields on the director field and shape of nematic tactoids. Physical Review E, 2021, 103, 062703.	0.8	5
133	On the role of connectivity in the relative stability of crystal types for model polymeric solids. Journal of Chemical Physics, 2003, 118, 6098-6101.	1.2	4
134	Density functional theory for the elastic moduli of a model polymeric solid. Journal of Chemical Physics, 2003, 118, 6594-6604.	1.2	4
135	Dynamical Landauâ€“de Gennes theory for electrically-responsive liquid crystal networks. Physical Review E, 2020, 102, 042703.	0.8	4
136	Nonmonotonic swelling and compression dynamics of hydrogels in polymer solutions. Physical Review E, 2020, 102, 062606.	0.8	4
137	Geometric percolation of hard nanorods: The interplay of spontaneous and externally induced uniaxial particle alignment. Journal of Chemical Physics, 2020, 152, 064902.	1.2	4
138	Enhanced ordering in length-polydisperse carbon nanotube solutions at high concentrations as revealed by small angle X-ray scattering. Soft Matter, 2021, 17, 5122-5130.	1.2	4
139	Impact of the prequench state of binary fluid mixtures on surface-directed spinodal decomposition. Physical Review E, 2021, 103, 042801.	0.8	4
140	Spin-coated highly aligned silver nanowire networks in conductive latex-based thin layer films. Thin Solid Films, 2021, 724, 138599.	0.8	4
141	Growth and Chirality amplification in Helical Supramolecular Polymers. , 2006, , 79-97.		3
142	The different faces of mass action in virus assembly. Journal of Biological Physics, 2018, 44, 163-179.	0.7	3
143	Combined Force-Torque Spectroscopy of Proteins by Means of Multiscale Molecular Simulation. Biophysical Journal, 2020, 119, 2240-2250.	0.2	3
144	Quench-induced nematic textures of wormlike micelles. Physical Review E, 1996, 53, 689-695.	0.8	2

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145	Collective stringlike motion of semiflexible filamentous particles in columnar liquid crystalline phases. Physical Review E, 2013, 88, 032307.	0.8	2
146	Line Tension of Twist-Free Carbon Nanotube Lyotropic Liquid Crystal Microdroplets on Solid Surfaces. Langmuir, 2017, 33, 9115-9121.	1.6	2
147	Self-organization of tip-functionalized elongated colloidal particles. Physical Review E, 2019, 100, 042702.	0.8	2
148	A kinetic model for the impact of packaging signal mimics on genome encapsulation. Biophysical Journal, 2022, , .	0.2	2
149	Impact of Steric Interactions on the Helical Transition in Assemblies of Discotic Molecules. Langmuir, 2006, 22, 446-452.	1.6	1
150	Dynamic Landau theory for supramolecular self-assembly. European Physical Journal E, 2015, 38, 105.	0.7	1
151	On the kinetics of body versus end evaporation and addition of supramolecular polymers. European Physical Journal E, 2017, 40, 65.	0.7	1
152	Compound redistribution due to droplet evaporation on a thin polymeric film: Theory. Journal of Applied Physics, 2019, 126, 065303.	1.1	1
153	Continuum percolation in colloidal dispersions of hard nanorods in external axial and planar fields. Soft Matter, 2021, 17, 10458-10468.	1.2	1
154	Controlling permeation in electrically deforming liquid crystal network films: A dynamical Landau theory. Physical Review E, 2021, 104, 054701.	0.8	1
155	Theoretical study of fluorescence of self-assembling helical supramolecular aggregates. Synthetic Metals, 2009, 159, 2384-2386.	2.1	0
156	Size and boundary effects on the diffusive behavior of elongated colloidal particles in a strongly confined dense dispersion. Journal of Chemical Physics, 2013, 139, 134909.	1.2	0
157	Directional percolating pathways in demixing blends on a wetting substrate. Journal of Applied Physics, 2021, 129, 105301.	1.1	0
158	Connectedness percolation of fractal liquids. Physical Review E, 2021, 104, 054605.	0.8	0
159	Transient response and domain formation in electrically deforming liquid crystal networks. Soft Matter, 2022, 18, 3594-3604.	1.2	0
160	Geometric percolation of hard-sphere dispersions in shear flow. Soft Matter, 2022, , .	1.2	0