Patrick S Doyle

List of Publications by Year
in descending order

248 papers	17,918 citations	13099 68 h-index	16183 124 g-index
254 all docs	254 docs citations	254 times ranked	16478 citing authors

#	Article	IF	Citations
1	Nanoemulsions: formation, properties and applications. Soft Matter, 2016, 12, 2826-2841.	2.7	963
2	Continuous-flow lithography for high-throughput microparticle synthesis. Nature Materials, 2006, 5, 365-369.	27.5	918
3	Multifunctional Encoded Particles for High-Throughput Biomolecule Analysis. Science, 2007, 315, 1393-1396.	12.6	680
4	The Synthesis and Assembly of Polymeric Microparticles Using Microfluidics. Advanced Materials, 2009, 21, 4071-4086.	21.0	582
5	A review of fatty acid profiles and antioxidant content in grass-fed and grain-fed beef. Nutrition Journal, 2010, 9, 10.	3.4	556
6	Static and Dynamic Errors in Particle Tracking Microrheology. Biophysical Journal, 2005, 88, 623-638.	0.5	463
7	Controlled Synthesis of Nonspherical Microparticles Using Microfluidics. Langmuir, 2005, 21, 2113-2116.	3.5	447
8	Self-Assembled Magnetic Matrices for DNA Separation Chips. Science, 2002, 295, 2237-2237.	12.6	445
9	Stop-flow lithography in a microfluidic device. Lab on A Chip, 2007, 7, 818.	6.0	362
10	Universal process-inert encoding architecture for polymer microparticles. Nature Materials, 2014, 13, 524-529.	27.5	347
11	Small but Perfectly Formed? Successes, Challenges, and Opportunities for Microfluidics in the Chemical and Biological Sciences. CheM, 2017, 2, 201-223.	11.7	278
12	Stop-flow lithography to generate cell-laden microgel particles. Lab on A Chip, 2008, 8, 1056.	6.0	268
13	Modeling of Oxygen-Inhibited Free Radical Photopolymerization in a PDMS Microfluidic Device. Macromolecules, 2008, 41, 8547-8556.	4.8	250
14	Multifunctional Superparamagnetic Janus Particles. Langmuir, 2010, 26, 4281-4287.	3.5	237
15	Permeation-driven flow in poly(dimethylsiloxane) microfluidic devices. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10813-10818.	7.1	203
16	Microfluidic-based synthesis of non-spherical magnetic hydrogel microparticles. Lab on A Chip, 2008, 8, 1640.	6.0	203
17	Dynamics of a Tethered Polymer in Shear Flow. Physical Review Letters, 2000, 84, 4769-4772.	7.8	192
18	Dynamic simulation of freely draining flexible polymers in steady linear flows. Journal of Fluid Mechanics, 1997, 334, 251-291.	3.4	187

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19	Inertio-elastic focusing of bioparticles in microchannels at high throughput. Nature Communications, 2014, 5, 4120.	12.8	173
20	Double-Stranded DNA Diffusion in Slitlike Nanochannels. Macromolecules, 2006, 39, 6273-6281.	4.8	170
21	Hydrogel microparticles for biosensing. European Polymer Journal, 2015, 72, 386-412.	5.4	162
22	Synthesis and Self-Assembly of Amphiphilic Polymeric Microparticles. Langmuir, 2007, 23, 4669-4674.	3.5	161
23	Material properties of biofilmsâ€”a review of methods for understanding permeability and mechanics. Reports on Progress in Physics, 2015, 78, 036601.	20.1	153
24	Dynamic Remodeling of Microbial Biofilms by Functionally Distinct Exopolysaccharides. MBio, 2014, 5, e01536-14.	4.1	142
25	Rapid microRNA Profiling on Encoded Gel Microparticles. Angewandte Chemie - International Edition, 2011, 50, 2289-2293.	13.8	139
26	Mesoporous organohydrogels from thermogelling photocrosslinkable nanoemulsions. Nature Materials, 2012, 11, 344-352.	27.5	138
27	Bar-coded hydrogel microparticles for protein detection: synthesis, assay and scanning. Nature Protocols, 2011, 6, 1761-1774.	12.0	135
28	Hydrogel microparticles from lithographic processes: Novel materials for fundamental and applied colloid science. Current Opinion in Colloid and Interface Science, 2011, 16, 106-117.	7.4	134
29	Multiplexed Protein Quantification with Barcoded Hydrogel Microparticles. Analytical Chemistry, 2011, 83, 193-199.	6.5	133
30	Relaxation of dilute polymer solutions following extensional flow1Dedicated to the memory of Professor Gianni Astarita.1. Journal of Non-Newtonian Fluid Mechanics, 1998, 76, 79-110.	2.4	132
31	Gel-Induced Selective Crystallization of Polymorphs. Journal of the American Chemical Society, 2012, 134, 673-684.	13.7	129
32	Stop-Flow Lithography for the Production of Shape-Evolving Degradable Microgel Particles. Journal of the American Chemical Society, 2009, 131, 4499-4504.	13.7	128
33	On the coarse-graining of polymers into bead-spring chains. Journal of Non-Newtonian Fluid Mechanics, 2004, 122, 3-31.	2.4	127
34	Compression and self-entanglement of single DNA molecules under uniform electric field. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16153-16158.	7.1	125
35	Revealing the competition between peeled ssDNA, melting bubbles, and S-DNA during DNA overstretching by single-molecule calorimetry. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3865-3870.	7.1	124
36	Two distinct overstretched DNA structures revealed by single-molecule thermodynamics measurements. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8103-8108.	7.1	117

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37	Synthesis of Nonspherical Superparamagnetic Particles: In Situ Coprecipitation of Magnetic Nanoparticles in Microgels Prepared by Stop-Flow Lithography. Journal of the American Chemical Society, 2012, 134, 7337-7343.	13.7	115
38	Multiplexed Detection of mRNA Using Porosity-Tuned Hydrogel Microparticles. Analytical Chemistry, 2012, 84, 9370-9378.	6.5	113
39	Ultrasensitive Multiplexed MicroRNA Quantification on Encoded Gel Microparticles Using Rolling Circle Amplification. Analytical Chemistry, 2011, 83, 7179-7185.	6.5	112
40	Revisiting the Conformation and Dynamics of DNA in Slitlike Confinement. Macromolecules, 2010, 43, 7368-7377.	4.8	111
41	Ionic Effects on the Equilibrium Dynamics of DNA Confined in Nanoslits. Nano Letters, 2008, 8, 1683-1688.	9.1	109
42	Extended de Gennes Regime of DNA Confined in a Nanochannel. Macromolecules, 2014, 47, 2445-2450.	4.8	108
43	Is DNA a Good Model Polymer?. Macromolecules, 2013, 46, 8369-8382.	4.8	105
44	Optimization of Encoded Hydrogel Particles for Nucleic Acid Quantification. Analytical Chemistry, 2009, 81, 4873-4881.	6.5	103
45	Stretching tethered DNA chains in shear flow. Europhysics Letters, 2000, 52, 511-517.	2.0	98
46	A Route to Threeâ€Dimensional Structures in a Microfluidic Device: Stopâ€Flow Interference Lithography. Angewandte Chemie - International Edition, 2007, 46, 9027-9031.	13.8	96
47	Controlling and predicting droplet size of nanoemulsions: scaling relations with experimental validation. Soft Matter, 2016, 12, 1452-1458.	2.7	94
48	The polymer physics of single DNA confined in nanochannels. Advances in Colloid and Interface Science, 2016, 232, 80-100.	14.7	91
49	Squishy Nonâ€Spherical Hydrogel Microparticles. Macromolecular Rapid Communications, 2010, 31, 128-134.	3.9	90
50	A conformal nano-adhesive via initiated chemical vapor deposition for microfluidic devices. Lab on A Chip, 2009, 9, 411-416.	6.0	88
51	Effect of YOYO-1 on the mechanical properties of DNA. Soft Matter, 2014, 10, 9721-9728.	2.7	88
52	Patterning Nanodomains with Orthogonal Functionalities: Solventless Synthesis of Self-Sorting Surfaces. Journal of the American Chemical Society, 2008, 130, 14424-14425.	13.7	87
53	Controlled Nucleation from Solution Using Polymer Microgels. Journal of the American Chemical Society, 2011, 133, 3756-3759.	13.7	87
54	Sequence-dependent sliding kinetics of p53. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16552-16557.	7.1	87

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55	Stopâ€Flow Lithography of Colloidal, Glass, and Silicon Microcomponents. Advanced Materials, 2008, 20, 4734-4739.	21.0	85
56	Complex DNA knots detected with a nanopore sensor. Nature Communications, 2019, 10, 4473.	12.8	85
57	Rheology of Polymer Brushes:Â A Brownian Dynamics Study. Macromolecules, 1998, 31, 5474-5486.	4.8	83
58	Methods to electrophoretically stretch DNA: microcontractions, gels, and hybrid gel-microcontraction devices. Lab on A Chip, 2006, 6, 516.	6.0	83
59	A systematic study of DNA conformation in slitlike confinement. Soft Matter, 2012, 8, 2972.	2.7	82
60	Fast kinetics of chromatin assembly revealed by single-molecule videomicroscopy and scanning force microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 14251-14256.	7.1	81
61	An Experimental Study of DNA Rotational Relaxation Time in Nanoslits. Macromolecules, 2007, 40, 5196-5205.	4.8	80
62	Magnetic Barcoded Hydrogel Microparticles for Multiplexed Detection. Langmuir, 2010, 26, 8008-8014.	3.5	80
63	Thermoresponsive nanoemulsion-based gel synthesized through a low-energy process. Nature Communications, 2019, 10, 2749.	12.8	78
64	Lock release lithography for 3D and composite microparticles. Lab on A Chip, 2009, 9, 863.	6.0	77
65	Aptamer-Functionalized Microgel Particles for Protein Detection. Analytical Chemistry, 2011, 83, 9138-9145.	6.5	77
66	Hydrodynamic Focusing Lithography. Angewandte Chemie - International Edition, 2010, 49, 87-90.	13.8	73
67	Engineering particle trajectories in microfluidic flows using particle shape. Nature Communications, 2013, 4, 2666.	12.8	73
68	Compressed-air flow control system. Lab on A Chip, 2011, 11, 743-747.	6.0	70
69	Homogeneous percolation versus arrested phase separation in attractively-driven nanoemulsion colloidal gels. Soft Matter, 2014, 10, 3122.	2.7	70
70	Noninvasive monitoring of single-cell mechanics by acoustic scattering. Nature Methods, 2019, 16, 263-269.	19.0	70
71	Size dependence of microprobe dynamics during gelation of a discotic colloidal clay. Journal of Rheology, 2011, 55, 273-299.	2.6	69
72	Monodisperse Polymeric Ionic Liquid Microgel Beads with Multiple Chemically Switchable Functionalities. Langmuir, 2013, 29, 9535-9543.	3.5	68

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73	Dynamic simulation of freely-draining, flexible bead-rod chains: Start-up of extensional and shear flow1Dedicated to the memory of Professor Gianni Astarita1. Journal of Non-Newtonian Fluid Mechanics, 1998, 76, 43-78.	2.4	67
74	Biocompatible Alginate Microgel Particles as Heteronucleants and Encapsulating Vehicles for Hydrophilic and Hydrophobic Drugs. Crystal Growth and Design, 2014, 14, 2073-2082.	3.0	67
75	Electrophoretic Collision of a DNA Molecule with an Insulating Post. Physical Review Letters, 2004, 93, 058102.	7.8	64
76	Relaxation of Stretched DNA in Slitlike Confinement. Physical Review Letters, 2007, 99, 238102.	7.8	63
77	Cervical Mucus Properties Stratify Risk for Preterm Birth. PLoS ONE, 2013, 8, e69528.	2.5	63
78	Rheology of â€œWetâ€•Polymer Brushes via Brownian Dynamics Simulation: Steady vs Oscillatory Shear. Physical Review Letters, 1997, 78, 1182-1185.	7.8	62
79	Microfluidic Fabrication of Hydrogel Microparticles Containing Functionalized Viral Nanotemplates. Langmuir, 2010, 26, 13436-13441.	3.5	62
80	Effect of Nanochannel Geometry on DNA Structure in the Presence of Macromolecular Crowding Agent. Nano Letters, 2011, 11, 5047-5053.	9.1	61
81	A General Route for Nanoemulsion Synthesis Using Low-Energy Methods at Constant Temperature. Langmuir, 2017, 33, 7118-7123.	3.5	59
82	DNA Deformation in Electric Fields:â€‰ DNA Driven Past a Cylindrical Obstruction. Macromolecules, 2005, 38, 2410-2418.	4.8	57
83	Effect of Nanoslit Confinement on the Knotting Probability of Circular DNA. ACS Macro Letters, 2012, 1, 732-736.	4.8	57
84	Mechanical properties of the superficial biofilm layer determine the architecture of biofilms. Soft Matter, 2016, 12, 5718-5726.	2.7	57
85	Motion of Knots in DNA Stretched by Elongational Fields. Physical Review Letters, 2018, 120, 188003.	7.8	57
86	Statistical and sampling issues when using multiple particle tracking. Physical Review E, 2007, 76, 021501.	2.1	56
87	Encoded Hydrogel Microparticles for Sensitive and Multiplex microRNA Detection Directly from Raw Cell Lysates. Analytical Chemistry, 2016, 88, 3075-3081.	6.5	56
88	Porous microwells for geometry-selective, large-scale microparticle arrays. Nature Materials, 2017, 16, 139-146.	27.5	56
89	Nonlinear microrheology of an aging, yield stress fluid using magnetic tweezers. Soft Matter, 2011, 7, 9933.	2.7	55
90	Magnetically and Biologically Active Bead-Patterned Hydrogels. Langmuir, 2006, 22, 5122-5128.	3.5	54

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91	Hydrogel-Based Colorimetric Assay for Multiplexed MicroRNA Detection in a Microfluidic Device. Analytical Chemistry, 2020, 92, 5750-5755.	6.5	54
92	Oil-Isolated Hydrogel Microstructures for Sensitive Bioassays On-Chip. Analytical Chemistry, 2013, 85, 12099-12107.	6.5	53
93	Stretching self-entangled DNA molecules in elongational fields. Soft Matter, 2015, 11, 3105-3114.	2.7	52
94	Swimming bacteria promote dispersal of non-motile staphylococcal species. ISME Journal, 2017, 11, 1933-1937.	9.8	52
95	Embedded droplet printing in yield-stress fluids. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 5671-5679.	7.1	52
96	Nucleation under Soft Confinement: Role of Polymerâ€“Solute Interactions. Crystal Growth and Design, 2012, 12, 508-517.	3.0	51
97	Metastable Tight Knots in Semiflexible Chains. Macromolecules, 2014, 47, 6135-6140.	4.8	51
98	Structure and dynamics of repulsive magnetorheological colloids in two-dimensional channels. Physical Review E, 2005, 72, 011405.	2.1	50
99	Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release. Advanced Materials, 2012, 24, 3838-3844.	21.0	50
100	Highâ€Throughput Contact Flow Lithography. Advanced Science, 2015, 2, 1500149.	11.2	50
101	Non-polydimethylsiloxane devices for oxygen-free flow lithography. Nature Communications, 2012, 3, 805.	12.8	49
102	Photopatterned oil-reservoir micromodels with tailored wetting properties. Lab on A Chip, 2015, 15, 3047-3055.	6.0	49
103	Conformation Model of Back-Folding and Looping of a Single DNA Molecule Confined Inside a Nanochannel. ACS Macro Letters, 2012, 1, 1046-1050.	4.8	48
104	Comparisons of a Polymer in Confinement versus Applied Force. Macromolecules, 2013, 46, 6336-6344.	4.8	48
105	Single particle tracking reveals spatial and dynamic organization of theEscherichiacolibiofilm matrix. New Journal of Physics, 2014, 16, 085014.	2.9	48
106	Role of a finite exposure time on measuring an elastic modulus using microrheology. Physical Review E, 2005, 71, 041106.	2.1	47
107	High-throughput flow alignment of barcoded hydrogel microparticles. Lab on A Chip, 2009, 9, 3100.	6.0	46
108	Equilibrium structure and deformation response of 2D kinetoplast sheets. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 121-127.	7.1	46

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109	Coreâ€“Shell Composite Hydrogels for Controlled Nanocrystal Formation and Release of Hydrophobic Active Pharmaceutical Ingredients. Advanced Healthcare Materials, 2016, 5, 1960-1968.	7.6	45
110	Structural analysis of a dipole system in two-dimensional channels. Physical Review E, 2004, 70, 061408.	2.1	44
111	Collision of a DNA Polymer with a Small Obstacle. Macromolecules, 2006, 39, 7734-7745.	4.8	44
112	Revisiting Blob Theory for DNA Diffusivity in Slitlike Confinement. Physical Review Letters, 2013, 110, 168105.	7.8	44
113	Soft microflow sensors. Lab on A Chip, 2009, 9, 1213.	6.0	43
114	Origin of Metastable Knots in Single Flexible Chains. Physical Review Letters, 2015, 114, 037801.	7.8	43
115	Hierarchical Assembly of Viral Nanotemplates with Encoded Microparticles via Nucleic Acid Hybridization. Langmuir, 2008, 24, 12483-12488.	3.5	41
116	Composite Hydrogels Laden with Crystalline Active Pharmaceutical Ingredients of Controlled Size and Loading. Chemistry of Materials, 2014, 26, 6213-6220.	6.7	41
117	Siteâ€Selective In Situ Grown Calcium Carbonate Micromodels with Tunable Geometry, Porosity, and Wettability. Advanced Functional Materials, 2016, 26, 4896-4905.	14.9	40
118	3D printing of self-assembling thermoresponsive nanoemulsions into hierarchical mesostructured hydrogels. Soft Matter, 2017, 13, 921-929.	2.7	40
119	Mechanistic action of weak acid drugs on biofilms. Scientific Reports, 2017, 7, 4783.	3.3	40
120	Dynamics of DNA Knots during Chain Relaxation. Macromolecules, 2017, 50, 4074-4082.	4.8	39
121	Transition from two-dimensional to three-dimensional behavior in the self-assembly of magnetorheological fluids confined in thin slits. Physical Review E, 2007, 75, 061406.	2.1	38
122	Coilâ^'Stretch Transition of DNA Molecules in Slitlike Confinement. Macromolecules, 2010, 43, 3081-3089.	4.8	38
123	Magnetorheology in an aging, yield stress matrix fluid. Rheologica Acta, 2012, 51, 579-593.	2.4	38
124	Design of Mucoadhesive PLGA Microparticles for Ocular Drug Delivery. ACS Applied Bio Materials, 2018, 1, 561-571.	4.6	38
125	Sensitive and Multiplexed Onâ€chip microRNA Profiling in Oilâ€Isolated Hydrogel Chambers. Angewandte Chemie - International Edition, 2015, 54, 2477-2481.	13.8	36
126	Electrostatically tuned rate of peptide self-assembly resolved by multiple particle tracking. Soft Matter, 2007, 3, 1194.	2.7	35

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127	Interconversion between Three Overstretched DNA Structures. Journal of the American Chemical Society, 2014, 136, 16073-16080.	13.7	35
128	Metastable Knots in Confined Semiflexible Chains. Macromolecules, 2015, 48, 2812-2818.	4.8	35
129	Untying Knotted DNA with Elongational Flows. ACS Macro Letters, 2014, 3, 963-967.	4.8	34
130	Weak acids as an alternative anti-microbial therapy. Biofilm, 2020, 2, 100019.	3.8	34
131	Design and numerical simulation of a DNA electrophoretic stretching device. Lab on A Chip, 2007, 7, 213-225.	6.0	33
132	Effect of H-NS on the elongation and compaction of single DNA molecules in a nanospace. Soft Matter, 2013, 9, 9593.	2.7	33
133	Alternative spring force law for bead-spring chain models of the worm-like chain. Journal of Rheology, 2006, 50, 513-529.	2.6	32
134	Experimental Study of Structure and Dynamics in a Monolayer of Paramagnetic Colloids Confined by Parallel Hard Walls. Langmuir, 2006, 22, 3601-3605.	3.5	32
135	Electrophoretic Stretching of DNA Molecules in Cross-Slot Nanoslit Channels. Macromolecules, 2008, 41, 9914-9918.	4.8	32
136	Flexible Octopusâ€Shaped Hydrogel Particles for Specific Cell Capture. Small, 2016, 12, 2001-2008.	10.0	32
137	A Brownian dynamics-finite element method for simulating DNA electrophoresis in nonhomogeneous electric fields. Journal of Chemical Physics, 2006, 125, 074906.	3.0	31
138	A nanofluidic device for single molecule studies with in situ control of environmental solution conditions. Lab on A Chip, 2013, 13, 2821.	6.0	31
139	Synthesis of Cell-Adhesive Anisotropic Multifunctional Particles by Stop Flow Lithography and Streptavidinâ€“Biotin Interactions. Langmuir, 2015, 31, 13165-13171.	3.5	29
140	Synthesis of biomimetic oxygen-carrying compartmentalized microparticles using flow lithography. Lab on A Chip, 2013, 13, 4765.	6.0	28
141	Universal Knot Spectra for Confined Polymers. Macromolecules, 2018, 51, 6327-6333.	4.8	28
142	Long-Lived Self-Entanglements in Ring Polymers. Physical Review Letters, 2019, 123, 048002.	7.8	28
143	Revisiting the Anomalous Bending Elasticity of Sharply Bent DNA. Biophysical Journal, 2015, 109, 2338-2351.	0.5	27
144	Stochastic Modeling and Simulation of DNA Electrophoretic Separation in a Microfluidic Obstacle Array. Macromolecules, 2007, 40, 8794-8806.	4.8	26

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145	Stop flow lithography in perfluoropolyether (PFPE) microfluidic channels. Lab on A Chip, 2014, 14, 4680-4687.	6.0	26
146	Development of bead-spring polymer models using the constant extension ensemble. Journal of Rheology, 2005, 49, 963-987.	2.6	25
147	Nanouidic Compaction of DNA by Like-Charged Protein. Journal of Physical Chemistry B, 2012, 116, 3031-3036.	2.6	25
148	Amplified stretch of bottlebrush-coated DNA in nanofluidic channels. Nucleic Acids Research, 2013, 41, e189-e189.	14.5	25
149	Self-organizing microfluidic crystals. Soft Matter, 2014, 10, 5177-5191.	2.7	25
150	Translocation dynamics of knotted polymers under a constant or periodic external field. Soft Matter, 2016, 12, 5041-5049.	2.7	25
151	Kinetics of the Change in Droplet Size during Nanoemulsion Formation. Langmuir, 2016, 32, 11551-11559.	3.5	25
152	Knots modify the coilâ€“stretch transition in linear DNA polymers. Soft Matter, 2018, 14, 1689-1698.	2.7	25
153	Synthesis of magnetic hydrogel microparticles for bioassays and tweezer manipulation in microwells. Microfluidics and Nanofluidics, 2012, 13, 665-674.	2.2	24
154	Electrophoretic stretching of DNA molecules using microscale T junctions. Applied Physics Letters, 2007, 90, 224103.	3.3	23
155	Using Stop-Flow Lithography To Produce Opaque Microparticles: Synthesis and Modeling. Langmuir, 2011, 27, 13813-13819.	3.5	23
156	Jamming of Knots along a Tensioned Chain. ACS Macro Letters, 2016, 5, 123-127.	4.8	23
157	A platform for multiplexed colorimetric microRNA detection using shape-encoded hydrogel particles. Analyst, The, 2020, 145, 5134-5140.	3.5	23
158	Effect of disorder on DNA electrophoresis in a microfluidic array of obstacles. Physical Review E, 2007, 76, 040903.	2.1	22
159	Effect of internal architecture on microgel deformation in microfluidic constrictions. Soft Matter, 2017, 13, 1920-1928.	2.7	22
160	Low Energy Nanoemulsions as Templates for the Formulation of Hydrophobic Drugs. Advanced Therapeutics, 2018, 1, 1700020.	3.2	22
161	Tuning Curvature in Flow Lithography: A New Class of Concave/Convex Particles. Langmuir, 2009, 25, 5986-5992.	3.5	21
162	Time-dependent bending rigidity and helical twist of DNA by rearrangement of bound HU protein. Nucleic Acids Research, 2013, 41, 8280-8288.	14.5	21

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163	Nanoemulsionâ€Loaded Capsules for Controlled Delivery of Lipophilic Active Ingredients. Advanced Science, 2020, 7, 2001677.	11.2	21
164	Spatially resolved and multiplexed MicroRNA quantification from tissue using nanoliter well arrays. Microsystems and Nanoengineering, 2020, 6, 51.	7.0	21
165	Brownian Dynamics Simulations of a DNA Molecule Colliding with a Small Cylindrical Post. Macromolecules, 2007, 40, 9151-9163.	4.8	20
166	Designable 3D Microshapes Fabricated at the Intersection of Structured Flow and Optical Fields. Small, 2018, 14, e1803585.	10.0	20
167	Photopolymerized Micelleâ€Laden Hydrogels Can Simultaneously Form and Encapsulate Nanocrystals to Improve Drug Substance Solubility and Expedite Drug Product Design. Small, 2019, 15, e1803372.	10.0	20
168	Quantitative and Multiplex Detection of Extracellular Vesicleâ€Derived MicroRNA via Rolling Circle Amplification within Encoded Hydrogel Microparticles. Advanced Healthcare Materials, 2022, 11, e2102332.	7.6	20
169	Simulation of electrophoretic stretching of DNA in a microcontraction using an obstacle array for conformational preconditioning. Biomicrofluidics, 2009, 3, 12803.	2.4	19
170	Gelation of the genome by topoisomerase II targeting anticancer agents. Soft Matter, 2013, 9, 1656-1663.	2.7	19
171	Intrachain Dynamics of Large dsDNA Confined to Slitlike Channels. Physical Review Letters, 2013, 110, 068101.	7.8	19
172	Using Magnetically Responsive Tea Waste to Remove Lead in Waters under Environmentally Relevant Conditions. PLoS ONE, 2013, 8, e66648.	2.5	19
173	Synthesis of colloidal microgels using oxygen-controlled flow lithography. Soft Matter, 2014, 10, 7595-7605.	2.7	19
174	Steady-State and Transient Behavior of Knotted Chains in Extensional Fields. ACS Macro Letters, 2017, 6, 1285-1289.	4.8	19
175	Nonfouling, Encoded Hydrogel Microparticles for Multiplex MicroRNA Profiling Directly from Formalin-Fixed, Paraffin-Embedded Tissue. Analytical Chemistry, 2018, 90, 10279-10285.	6.5	19
176	Deformation Response of Catenated DNA Networks in a Planar Elongational Field. ACS Macro Letters, 2020, 9, 944-949.	4.8	19
177	Celebrating Soft Matter's 10th Anniversary: Sequential phase transitions in thermoresponsive nanoemulsions. Soft Matter, 2015, 11, 8426-8431.	2.7	18
178	High Loading Capacity Nanoencapsulation and Release of Hydrophobic Drug Nanocrystals from Microgel Particles. Chemistry of Materials, 2020, 32, 498-509.	6.7	18
179	Effects of Intrachain Interactions on the Knot Size of a Polymer. Macromolecules, 2016, 49, 7581-7587.	4.8	17
180	Calcium-mediated Protein Folding and Stabilization of Salmonella Biofilm-associated Protein A. Journal of Molecular Biology, 2019, 431, 433-443.	4.2	17

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181	Synthesis of Nonspherical Microcapsules through Controlled Polyelectrolyte Coating of Hydrogel Templates. Langmuir, 2015, 31, 9228-9235.	3.5	16
182	Microparticle parking and isolation for highly sensitive microRNA detection. Lab on A Chip, 2017, 17, 3120-3128.	6.0	16
183	Untying of Complex Knots on Stretched Polymers in Elongational Fields. Macromolecules, 2018, 51, 9562-9571.	4.8	16
184	Colloidal Gelation through Thermally Triggered Surfactant Displacement. Langmuir, 2019, 35, 9464-9473.	3.5	16
185	Thermally and pH-responsive gelation of nanoemulsions stabilized by weak acid surfactants. Journal of Colloid and Interface Science, 2020, 563, 229-240.	9.4	16
186	Arrested Chain Growth During Magnetic Directed Particle Assembly in Yield Stress Matrix Fluids. Langmuir, 2012, 28, 3683-3689.	3.5	15
187	Coil-globule transition of a single semiflexible chain in slitlike confinement. Scientific Reports, 2016, 5, 18438.	3.3	15
188	Multiple particle tracking study of thermally-gelling nanoemulsions. Soft Matter, 2017, 13, 6606-6619.	2.7	15
189	Design of Hydrogel Particle Morphology for Rapid Bioassays. Analytical Chemistry, 2018, 90, 13572-13579.	6.5	15
190	Collective dynamics of small clusters of particles flowing in a quasi-two-dimensional microchannel. Soft Matter, 2012, 8, 10676.	2.7	14
191	Self-assembly of droplets in three-dimensional microchannels. Soft Matter, 2019, 15, 4244-4254.	2.7	14
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