

Charles M Schroeder

List of Publications by Year in Descending Order

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Version: 2024-04-23

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91
papers

3,029
citations

30
h-index

52
g-index

106
ext. papers

3,556
ext. citations

7.2
avg, IF

5.72
L-index

#	Paper	IF	Citations
91	Using automated synthesis to understand the role of side chains on molecular charge transport.. <i>Nature Communications</i> , 2022 , 13, 2102	17.4	1
90	Vesicle dynamics in large amplitude oscillatory extensional flow. <i>Journal of Fluid Mechanics</i> , 2021 , 929,	3.7	2
89	Nonlinear Transient and Steady State Stretching of Deflated Vesicles in Flow. <i>Langmuir</i> , 2021 , 37, 13976-13984	4.1	2
88	Reversible Switching of Molecular Conductance in Viologens is Controlled by the Electrochemical Environment. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 21862-21872	3.8	0
87	Dynamics and rheology of ring-linear blend semidilute solutions in extensional flow: Single molecule experiments. <i>Journal of Rheology</i> , 2021 , 65, 729-744	4.1	8
86	Dynamics and rheology of ring-linear blend semidilute solutions in extensional flow. Part I: Modeling and molecular simulations. <i>Journal of Rheology</i> , 2021 , 65, 757-777	4.1	4
85	TALEN outperforms Cas9 in editing heterochromatin target sites. <i>Nature Communications</i> , 2021 , 12, 6061-6074	17.4	23
84	Transition between Nonresonant and Resonant Charge Transport in Molecular Junctions. <i>Nano Letters</i> , 2021 , 21, 8340-8347	11.5	2
83	Covalent Ag-C Bonding Contacts from Unprotected Terminal Acetylenes for Molecular Junctions. <i>Nano Letters</i> , 2020 , 20, 5490-5495	11.5	11
82	Double-mode relaxation of highly deformed anisotropic vesicles. <i>Physical Review E</i> , 2020 , 102, 010605	2.4	4
81	Charge Transport in Sequence-Defined Conjugated Oligomers. <i>Journal of the American Chemical Society</i> , 2020 , 142, 4852-4861	16.4	15
80	Characterizing intermolecular interactions in redox-active pyridinium-based molecular junctions. <i>Journal of Electroanalytical Chemistry</i> , 2020 , 875, 114070	4.1	2
79	Effect of Core Oligomer Length on the Phase Behavior and Assembly of Conjugated Peptides. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 20722-20732	9.5	2
78	Viscoelastic properties of ring-linear DNA blends exhibit nonmonotonic dependence on blend composition. <i>Physical Review Research</i> , 2020 , 2,	3.9	10
77	Nonmonotonic dependence of comb polymer relaxation on branch density in semidilute solutions of linear polymers. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	3
76	Unexpected entanglement dynamics in semidilute blends of supercoiled and ring DNA. <i>Soft Matter</i> , 2020 , 16, 152-161	3.6	16
75	Conformational dynamics and phase behavior of lipid vesicles in a precisely controlled extensional flow. <i>Soft Matter</i> , 2020 , 16, 337-347	3.6	11

74	Divalent cations promote TALE DNA-binding specificity. <i>Nucleic Acids Research</i> , 2020 , 48, 1406-1422	20.1	3
73	Direct Observation of Ring Polymer Dynamics in the Flow-Gradient Plane of Shear Flow. <i>Macromolecules</i> , 2020 , 53, 9406-9419	5.5	12
72	100th Anniversary of Macromolecular Science Viewpoint: Single-Molecule Studies of Synthetic Polymers. <i>ACS Macro Letters</i> , 2020 , 9, 1332-1341	6.6	9
71	Automation and flow control for particle manipulation. <i>Current Opinion in Chemical Engineering</i> , 2020 , 29, 1-8	5.4	9
70	Charge Transport and Quantum Interference Effects in Oxazole-Terminated Conjugated Oligomers. <i>Journal of the American Chemical Society</i> , 2019 , 141, 16079-16084	16.4	17
69	Effect of molecular architecture on ring polymer dynamics in semidilute linear polymer solutions. <i>Nature Communications</i> , 2019 , 10, 1753	17.4	35
68	Solubility and activity of a phosphinosulfonate palladium catalyst in water with different surfactants. <i>Polymer Chemistry</i> , 2019 , 10, 1988-1992	4.9	2
67	In Situ Photophysical Characterization of π -Conjugated Oligopeptides Assembled via Continuous Flow Processing. <i>Langmuir</i> , 2019 , 35, 10947-10957	4	1
66	Flow Topology During Multiplexed Particle Manipulation Using a Stokes Trap. <i>Physical Review Applied</i> , 2019 , 12,	4.3	13
65	Orientation control and nonlinear trajectory tracking of colloidal particles using microfluidics. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	14
64	Intrachain Charge Transport through Conjugated Donor-Acceptor Oligomers. <i>ACS Applied Electronic Materials</i> , 2019 , 1, 7-12	4	17
63	Synthesis and Direct Observation of Thermoresponsive DNA Copolymers. <i>ACS Macro Letters</i> , 2018 , 7, 281-286	6.6	7
62	Stretching Dynamics of Single Comb Polymers in Extensional Flow. <i>Macromolecules</i> , 2018 , 51, 1507-1517	5.5	18
61	Single polymer dynamics for molecular rheology. <i>Journal of Rheology</i> , 2018 , 62, 371-403	4.1	71
60	Dynamically Heterogeneous Relaxation of Entangled Polymer Chains. <i>Physical Review Letters</i> , 2018 , 120, 267801	7.4	19
59	Nonequilibrium Self-Assembly of π -Conjugated Oligopeptides in Solution. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 3977-3984	9.5	21
58	Parameter-free prediction of DNA dynamics in planar extensional flow of semidilute solutions. <i>Journal of Rheology</i> , 2017 , 61, 169-186	4.1	26
57	Direct observation of DNA dynamics in semidilute solutions in extensional flow. <i>Journal of Rheology</i> , 2017 , 61, 151-167	4.1	41

56	A Single-Molecule View of Genome Editing Proteins: Biophysical Mechanisms for TALEs and CRISPR/Cas9. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2017 , 8, 577-597	8.9	9
55	Passive non-linear microrheology for determining extensional viscosity. <i>Physics of Fluids</i> , 2017 , 29, 121603-4	3.4	31
54	Scale-Dependent Stiffness and Internal Tension of a Model Brush Polymer. <i>Physical Review Letters</i> , 2017 , 119, 127801	7.4	8
53	Concentration-Driven Assembly and Sol-Gel Transition of β -Conjugated Oligopeptides. <i>ACS Central Science</i> , 2017 , 3, 986-994	16.8	22
52	Macroscopic Alignment and Assembly of β -Conjugated Oligopeptides Using Colloidal Microchannels. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 41586-41593	9.5	8
51	Heterogeneous drying and nonmonotonic contact angle dynamics in concentrated film-forming latex drops. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	3
50	TALE proteins search DNA using a rotationally decoupled mechanism. <i>Nature Chemical Biology</i> , 2016 , 12, 831-7	11.7	37
49	Single polymer dynamics of topologically complex DNA. <i>Current Opinion in Colloid and Interface Science</i> , 2016 , 26, 28-40	7.6	14
48	Stokes trap for multiplexed particle manipulation and assembly using fluidics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 3976-81	11.5	72
47	Ring Polymer Dynamics Are Governed by a Coupling between Architecture and Hydrodynamic Interactions. <i>Macromolecules</i> , 2016 , 49, 1961-1971	5.5	38
46	Single polymer dynamics under large amplitude oscillatory extension. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	22
45	Microfluidic Methods in Single Cell Biology 2016 , 19-54		
44	Transient and Average Unsteady Dynamics of Single Polymers in Large-Amplitude Oscillatory Extension. <i>Macromolecules</i> , 2016 , 49, 8018-8030	5.5	16
43	Template-Directed Synthesis of Structurally Defined Branched Polymers. <i>Macromolecules</i> , 2015 , 48, 1296-1303-14	9.3	14
42	Direct observation of TALE protein dynamics reveals a two-state search mechanism. <i>Nature Communications</i> , 2015 , 6, 7277	17.4	56
41	When Ends Meet: Circular DNA Stretches Differently in Elongational Flows. <i>Macromolecules</i> , 2015 , 48, 5997-6001	5.5	58
40	Modeling the stretching of wormlike chains in the presence of excluded volume. <i>Soft Matter</i> , 2015 , 11, 5947-54	3.6	15
39	Topology-Controlled Relaxation Dynamics of Single Branched Polymers. <i>ACS Macro Letters</i> , 2015 , 4, 446-452	4.52	32

38	Fluorescent Nanoconjugate Derivatives with Enhanced Photostability for Single Molecule Imaging. <i>Analytical Chemistry</i> , 2015 , 87, 11048-57	7.8	12
37	Flavin-based fluorescent proteins: emerging paradigms in biological imaging. <i>Current Opinion in Biotechnology</i> , 2015 , 31, 16-23	11.4	53
36	A microfluidic approach to study the effect of bacterial interactions on antimicrobial susceptibility in polymicrobial cultures. <i>RSC Advances</i> , 2015 , 5, 35211-35223	3.7	35
35	Characterizing the performance of the hydrodynamic trap using a control-based approach. <i>Microfluidics and Nanofluidics</i> , 2015 , 18, 1055-1066	2.8	19
34	Engineering and characterization of new LOV-based fluorescent proteins from <i>Chlamydomonas reinhardtii</i> and <i>Vaucheria frigida</i> . <i>ACS Synthetic Biology</i> , 2015 , 4, 371-7	5.7	35
33	Determining elasticity from single polymer dynamics. <i>Soft Matter</i> , 2014 , 10, 2178-87	3.6	19
32	Automated single cell microreactor for monitoring intracellular dynamics and cell growth in free solution. <i>Lab on A Chip</i> , 2014 , 14, 2688-97	7.2	26
31	Nonequilibrium thermodynamics of dilute polymer solutions in flow. <i>Journal of Chemical Physics</i> , 2014 , 141, 174903	3.9	14
30	Ultrafast redistribution of E. coli SSB along long single-stranded DNA via intersegment transfer. <i>Journal of Molecular Biology</i> , 2014 , 426, 2413-21	6.5	40
29	Nonequilibrium Work Relations for Polymer Dynamics in Dilute Solutions. <i>Macromolecules</i> , 2013 , 46, 8345-8355	5.5	11
28	A multiplexed microfluidic platform for rapid antibiotic susceptibility testing. <i>Biosensors and Bioelectronics</i> , 2013 , 49, 118-25	11.8	101
27	Dendrimer probes for enhanced photostability and localization in fluorescence imaging. <i>Biophysical Journal</i> , 2013 , 104, 1566-75	2.9	29
26	New directions in single polymer dynamics. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013 , 51, 556-566	2.6	13
25	Manipulation and confinement of single particles using fluid flow. <i>Nano Letters</i> , 2013 , 13, 2357-64	11.5	84
24	Zooming in on biological processes with fluorescence nanoscopy. <i>Current Opinion in Biotechnology</i> , 2013 , 24, 646-53	11.4	17
23	Fluidic-directed assembly of aligned oligopeptides with E-conjugated cores. <i>Advanced Materials</i> , 2013 , 25, 6398-404	24	28
22	Characterization of flavin-based fluorescent proteins: an emerging class of fluorescent reporters. <i>PLoS ONE</i> , 2013 , 8, e64753	3.7	75
21	Specific labeling of zinc finger proteins using noncanonical amino acids and copper-free click chemistry. <i>Bioconjugate Chemistry</i> , 2012 , 23, 1891-901	6.3	13

20	Directed evolution of bright mutants of an oxygen-independent flavin-binding fluorescent protein from <i>Pseudomonas putida</i> . <i>Journal of Biological Engineering</i> , 2012 , 6, 20	6.3	32
19	Ellipsoidal Polyaspartamide Polymersomes with Enhanced Cell-Targeting Ability. <i>Advanced Functional Materials</i> , 2012 , 22, 3239-3246	15.6	30
18	Microfluidic systems for single DNA dynamics. <i>Soft Matter</i> , 2012 , 8, 10560-10572	3.6	52
17	Direct observation of single flexible polymers using single stranded DNA(). <i>Soft Matter</i> , 2011 , 7, 8005-8013	3.3	26
16	Microfluidic Wheatstone bridge for rapid sample analysis. <i>Lab on A Chip</i> , 2011 , 11, 4181-6	7.2	15
15	A microfluidic-based hydrodynamic trap: design and implementation. <i>Lab on A Chip</i> , 2011 , 11, 1786-94	7.2	118
14	Multiplexed detection of nucleic acids in a combinatorial screening chip. <i>Lab on A Chip</i> , 2011 , 11, 1916-23	7.2	25
13	A microfluidic-based hydrodynamic trap for single particles. <i>Journal of Visualized Experiments</i> , 2011 ,	1.6	6
12	Model systems for single molecule polymer dynamics. <i>Soft Matter</i> , 2011 , 7, 7907-7913	3.6	36
11	Comparative analyses of two thermophilic enzymes exhibiting both beta-1,4 mannosidic and beta-1,4 glucosidic cleavage activities from <i>Caldanaerobius polysaccharolyticus</i> . <i>Journal of Bacteriology</i> , 2010 , 192, 4111-21	3.5	36
10	Thermostable enzymes as biocatalysts in the biofuel industry. <i>Advances in Applied Microbiology</i> , 2010 , 70, 1-55	4.9	202
9	Hydrodynamic trap for single particles and cells. <i>Applied Physics Letters</i> , 2010 , 96, 224101	3.4	85
8	Single-molecule study of DNA polymerization activity of HIV-1 reverse transcriptase on DNA templates. <i>Journal of Molecular Biology</i> , 2010 , 395, 995-1006	6.5	32
7	Multiplexed single-molecule assay for enzymatic activity on flow-stretched DNA. <i>Nature Methods</i> , 2007 , 4, 397-9	21.6	65
6	Characteristic periodic motion of polymers in shear flow. <i>Physical Review Letters</i> , 2005 , 95, 018301	7.4	162
5	Dynamics of DNA in the Flow-Gradient Plane of Steady Shear Flow: Observations and Simulations. <i>Macromolecules</i> , 2005 , 38, 1967-1978	5.5	113
4	Effect of Hydrodynamic Interactions on DNA Dynamics in Extensional Flow: Simulation and Single Molecule Experiment. <i>Macromolecules</i> , 2004 , 37, 9242-9256	5.5	129
3	Observation of polymer conformation hysteresis in extensional flow. <i>Science</i> , 2003 , 301, 1515-9	33.3	295

2	Simulation of ultrathin lubricant films spreading over various carbon surfaces. <i>Journal of Applied Physics</i> , 2000 , 87, 6164-6166	2.5	24
1	Rheology of Entangled Solutions of Ring-Linear DNA Blends. <i>Macromolecules</i> ,	5.5	5