

Michael J Solomon

List of Publications by Year in Descending Order

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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.

106
papers

6,601
citations

38
h-index

80
g-index

113
ext. papers

7,143
ext. citations

6
avg, IF

6.29
L-index

#	Paper	IF	Citations
106	Rheology of <i>Candida albicans</i> fungal biofilms. <i>Journal of Rheology</i> , 2022 , 66, 683-697	4.1	0
105	Effect of Particles of Irregular Size on the Microstructure and Structural Color of Self-Assembled Colloidal Crystals. <i>Langmuir</i> , 2021 , 37, 13300-13308	4	2
104	Yield stress behavior of colloidal gels with embedded active particles. <i>Journal of Rheology</i> , 2021 , 65, 225-239	4.1	2
103	Accelerated annealing of colloidal crystal monolayers by means of cyclically applied electric fields. <i>Scientific Reports</i> , 2021 , 11, 11042	4.9	1
102	Has Growth Phase Dependent Affinity for Fibrinogen and Resulting Fibrin Clot Elasticity. <i>Frontiers in Microbiology</i> , 2021 , 12, 649534	5.7	1
101	Elasticity of colloidal gels: structural heterogeneity, floppy modes, and rigidity. <i>Soft Matter</i> , 2021 , 17, 6929-6934	3.6	7
100	Differential Effects of Heated Perfusate on Morphology, Viability, and Dissemination of <i>Staphylococcus epidermidis</i> Biofilms. <i>Applied and Environmental Microbiology</i> , 2020 , 86,	4.8	2
99	Effect of Defective Microstructure and Film Thickness on the Reflective Structural Color of Self-Assembled Colloidal Crystals. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 9842-9850	9.5	9
98	Letter to the Editor: Modeling the nonmonotonic time-dependence of viscosity bifurcation in thixotropic yield-stress fluids. <i>Journal of Rheology</i> , 2019 , 63, 673-675	4.1	7
97	Rheological implications of embedded active matter in colloidal gels. <i>Soft Matter</i> , 2019 , 15, 8012-8021	3.6	7
96	Anisotropy effects on the kinetics of colloidal crystallization and melting: comparison of spheres and ellipsoids. <i>Soft Matter</i> , 2019 , 15, 7479-7489	3.6	4
95	Colloidal gel elasticity arises from the packing of locally glassy clusters. <i>Nature Communications</i> , 2019 , 10, 2237	17.4	45
94	Yield stress and rheology of a self-associating chitosan solution. <i>Rheologica Acta</i> , 2019 , 58, 729-739	2.3	2
93	Time-dependent shear rate inhomogeneities and shear bands in a thixotropic yield-stress fluid under transient shear. <i>Soft Matter</i> , 2019 , 15, 7956-7967	3.6	15
92	Tools and Functions of Reconfigurable Colloidal Assembly. <i>Langmuir</i> , 2018 , 34, 11205-11219	4	21
91	A multimode structural kinetics constitutive equation for the transient rheology of thixotropic elasto-viscoplastic fluids. <i>Journal of Rheology</i> , 2018 , 62, 321-342	4.1	35
90	Capillary-driven binding of thin triangular prisms at fluid interfaces. <i>Soft Matter</i> , 2018 , 14, 3902-3918	3.6	4

89	A nonlinear kinetic-rheology model for reversible scission and deformation of unentangled wormlike micelles. <i>Journal of Rheology</i> , 2018 , 62, 1419-1427	4.1	10
88	Self-Propulsion and Active Motion of Janus Ellipsoids. <i>Journal of Physical Chemistry B</i> , 2018 , 122, 10247-10255	4.8	8
87	Effect of Antimicrobial and Physical Treatments on Growth of Multispecies Staphylococcal Biofilms. <i>Applied and Environmental Microbiology</i> , 2017 , 83,	4.8	17
86	High-density equilibrium phases of colloidal ellipsoids by application of optically enhanced, direct current electric fields. <i>Soft Matter</i> , 2017 , 13, 3768-3776	3.6	15
85	Rheological State Diagrams for Rough Colloids in Shear Flow. <i>Physical Review Letters</i> , 2017 , 119, 158001	7.4	75
84	Dynamics of Fractal Cluster Gels with Embedded Active Colloids. <i>Physical Review Letters</i> , 2017 , 119, 058001	7.0	10
83	Concentration, salt and temperature dependence of strain hardening of step shear in CTAB/NaSal surfactant solutions. <i>Journal of Rheology</i> , 2017 , 61, 967-977	4.1	6
82	Translational and rotational dynamics in dense suspensions of smooth and rough colloids. <i>Soft Matter</i> , 2017 , 13, 9229-9236	3.6	17
81	Structure, Mechanics, and Instability of Fibrin Clot Infected with Staphylococcus epidermidis. <i>Biophysical Journal</i> , 2017 , 113, 2100-2109	2.9	8
80	Controlled Levitation of Colloids through Direct Current Electric Fields. <i>Langmuir</i> , 2017 , 33, 10861-10867	7.4	2
79	Associative and Entanglement Contributions to the Solution Rheology of a Bacterial Polysaccharide. <i>Macromolecules</i> , 2016 , 49, 8313-8321	5.5	15
78	Variable viscosity and density biofilm simulations using an immersed boundary method, part II: Experimental validation and the heterogeneous rheology-IBM. <i>Journal of Computational Physics</i> , 2016 , 317, 204-222	4.1	11
77	Kinetic modeling and design of colloidal lock and key assembly. <i>Journal of Colloid and Interface Science</i> , 2016 , 463, 242-57	9.3	9
76	Hemodialysis Catheter Heat Transfer for Biofilm Prevention and Treatment. <i>ASAIO Journal</i> , 2016 , 62, 92-9	3.6	10
75	Differential analysis of capillary breakup rheometry for Newtonian liquids. <i>Journal of Fluid Mechanics</i> , 2016 , 804, 116-129	3.7	2
74	Quantitative nonlinear thixotropic model with stretched exponential response in transient shear flows. <i>Journal of Rheology</i> , 2016 , 60, 1301-1315	4.1	26
73	Extracellular DNA facilitates the formation of functional amyloids in Staphylococcus aureus biofilms. <i>Molecular Microbiology</i> , 2016 , 99, 123-34	4.1	84
72	Transient, near-wall shear-band dynamics in channel flow of wormlike micelle solutions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016 , 232, 77-87	2.7	9

71	Effects of temperature on the morphological, polymeric, and mechanical properties of Staphylococcus epidermidis bacterial biofilms. <i>Langmuir</i> , 2015 , 31, 2036-42	4	38
70	Kinetics of colloidal deposition, assembly, and crystallization in steady electric fields. <i>Soft Matter</i> , 2015 , 11, 3599-611	3.6	13
69	Metastable orientational order of colloidal discoids. <i>Nature Communications</i> , 2015 , 6, 8507	17.4	28
68	Long-circulating Janus nanoparticles made by electrohydrodynamic co-jetting for systemic drug delivery applications. <i>Journal of Drug Targeting</i> , 2015 , 23, 750-8	5.4	26
67	Actuation of shape-memory colloidal fibres of Janus ellipsoids. <i>Nature Materials</i> , 2015 , 14, 117-24	27	120
66	Artificial biofilms establish the role of matrix interactions in staphylococcal biofilm assembly and disassembly. <i>Scientific Reports</i> , 2015 , 5, 13081	4.9	42
65	Thermal Augmentation of Vancomycin Against Staphylococcal Biofilms. <i>Shock</i> , 2015 , 44, 121-7	3.4	11
64	Binding kinetics of lock and key colloids. <i>Journal of Chemical Physics</i> , 2015 , 142, 174909	3.9	28
63	Spatially and temporally reconfigurable assembly of colloidal crystals. <i>Nature Communications</i> , 2014 , 5, 3676	17.4	50
62	A model colloidal gel for coordinated measurements of force, structure, and rheology. <i>Journal of Rheology</i> , 2014 , 58, 1485-1504	4.1	26
61	Direct current electric field assembly of colloidal crystals displaying reversible structural color. <i>ACS Nano</i> , 2014 , 8, 8095-103	16.7	46
60	Role of shear-induced dynamical heterogeneity in the nonlinear rheology of colloidal gels. <i>Soft Matter</i> , 2014 , 10, 9254-9	3.6	18
59	Effect of surface chemistry and metallic layer thickness on the clustering of metallodielectric Janus spheres. <i>Langmuir</i> , 2014 , 30, 15408-15	4	16
58	Elasticity of microscale volumes of viscoelastic soft matter by cavitation rheometry. <i>Applied Physics Letters</i> , 2014 , 105, 114105	3.4	15
57	rheology of bacterial biofilms. <i>Soft Matter</i> , 2013 , 9, 122-131	3.6	71
56	Synthesis, assembly, and image analysis of spheroidal patchy particles. <i>Langmuir</i> , 2013 , 29, 4688-96	4	62
55	Molar mass, entanglement, and associations of the biofilm polysaccharide of Staphylococcus epidermidis. <i>Biomacromolecules</i> , 2013 , 14, 1474-81	6.9	22
54	Role of environmental and antibiotic stress on Staphylococcus epidermidis biofilm microstructure. <i>Langmuir</i> , 2013 , 29, 7017-24	4	24

53	Complement c5a generation by staphylococcal biofilms. <i>Shock</i> , 2013 , 39, 336-42	3.4	7
52	Liquid crystal order in colloidal suspensions of spheroidal particles by direct current electric field assembly. <i>Small</i> , 2012 , 8, 1551-62	11	58
51	Role of isostaticity and load-bearing microstructure in the elasticity of yielded colloidal gels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 16029-34	11.5	111
50	Multicellularity and antibiotic resistance in <i>Klebsiella pneumoniae</i> grown under bloodstream-mimicking fluid dynamic conditions. <i>Journal of Infectious Diseases</i> , 2012 , 206, 588-95	7	11
49	Nematic order in suspensions of colloidal rods by application of a centrifugal field. <i>Soft Matter</i> , 2011 , 7, 540-545	3.6	33
48	Flow-induced degradation of drag-reducing polymer solutions within a high-Reynolds-number turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2011 , 670, 337-364	3.7	25
47	Directions for targeted self-assembly of anisotropic colloids from statistical thermodynamics. <i>Current Opinion in Colloid and Interface Science</i> , 2011 , 16, 158-167	7.6	74
46	Postfragmentation density function for bacterial aggregates in laminar flow. <i>Physical Review E</i> , 2011 , 83, 041911	2.4	4
45	Contribution of the <i>Klebsiella pneumoniae</i> capsule to bacterial aggregate and biofilm microstructures. <i>Applied and Environmental Microbiology</i> , 2011 , 77, 1777-82	4.8	32
44	Boundary-driven colloidal crystallization in simple shear flow. <i>Physical Review Letters</i> , 2010 , 105, 228302	7.4	19
43	Pair interaction potentials of colloids by extrapolation of confocal microscopy measurements of collective suspension structure. <i>Journal of Chemical Physics</i> , 2010 , 133, 164903	3.9	17
42	Electric-field-induced yielding of colloidal gels in microfluidic capillaries. <i>Langmuir</i> , 2010 , 26, 1207-13	4	15
41	Microstructural regimes of colloidal rod suspensions, gels, and glasses. <i>Soft Matter</i> , 2010 , 6, 1391	3.6	199
40	Selective arraying of complex particle patterns. <i>Lab on A Chip</i> , 2010 , 10, 1142-7	7.2	5
39	Toward Assembly of Non-close-packed Colloidal Structures from Anisotropic Pentamer Particles. <i>Macromolecular Rapid Communications</i> , 2010 , 31, 196-201	4.8	12
38	Aggregation in dilute solutions of high molar mass poly(ethylene) oxide and its effect on polymer turbulent drag reduction. <i>Polymer</i> , 2009 , 50, 261-270	3.9	42
37	Flexible microfluidic device for mechanical property characterization of soft viscoelastic solids such as bacterial biofilms. <i>Langmuir</i> , 2009 , 25, 7743-51	4	97
36	Colloidal system to explore structural and dynamical transitions in rod networks, gels, and glasses. <i>Langmuir</i> , 2009 , 25, 8951-9	4	37

35	Fundamentals of magnet-actuated droplet manipulation on an open hydrophobic surface. <i>Lab on a Chip</i> , 2009 , 9, 1567-75	7.2	139
34	Multiangle Depolarized Dynamic Light Scattering of Short Functionalized Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 7129-7133	3.8	52
33	Programmable fluidic production of microparticles with configurable anisotropy. <i>Journal of the American Chemical Society</i> , 2008 , 130, 1335-40	16.4	62
32	Soft glassy rheology model applied to stress relaxation of a thermoreversible colloidal gel. <i>Journal of Rheology</i> , 2008 , 52, 785-800	4.1	33
31	Fluidic assembly and packing of microspheres in confined channels. <i>Langmuir</i> , 2008 , 24, 3661-70	4	40
30	Structural origins of dynamical heterogeneity in colloidal gels. <i>Physical Review E</i> , 2008 , 77, 050401	2.4	48
29	Local stress control of spatiotemporal ordering of colloidal crystals in complex flows. <i>Physical Review Letters</i> , 2008 , 101, 038301	7.4	34
28	Viscous solvent colloidal system for direct visualization of suspension structure, dynamics and rheology. <i>Journal of Colloid and Interface Science</i> , 2008 , 318, 252-63	9.3	21
27	Near-surface structure of lithographic ink fountain solution emulsions on model substrates. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008 , 326, 138-146	5.1	3
26	Adsorption and elution characteristics of nucleic acids on silica surfaces and their use in designing a miniaturized purification unit. <i>Analytical Biochemistry</i> , 2008 , 373, 253-62	3.1	38
25	Translational and rotational dynamics of colloidal rods by direct visualization with confocal microscopy. <i>Journal of Colloid and Interface Science</i> , 2007 , 314, 98-106	9.3	78
24	Anisotropy of building blocks and their assembly into complex structures. <i>Nature Materials</i> , 2007 , 6, 557-62	22.01	
23	Gelation and internal dynamics of colloidal rod aggregates. <i>Journal of Colloid and Interface Science</i> , 2006 , 300, 155-62	9.3	19
22	Structure and dynamics of colloidal depletion gels: coincidence of transitions and heterogeneity. <i>Physical Review E</i> , 2006 , 74, 041403	2.4	134
21	Stacking fault structure in shear-induced colloidal crystallization. <i>Journal of Chemical Physics</i> , 2006 , 124, 134905	3.9	33
20	Universal scaling for polymer chain scission in turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 16660-5	11.5	77
19	Direct visualization of colloidal rod assembly by confocal microscopy. <i>Langmuir</i> , 2005 , 21, 5298-306	4	133
18	Orientation and rupture of fractal colloidal gels during start-up of steady shear flow. <i>Journal of Rheology</i> , 2005 , 49, 657-681	4.1	76

17	Scission-induced bounds on maximum polymer drag reduction in turbulent flow. <i>Physics of Fluids</i> , 2005 , 17, 095108	4.4	42
16	Effect of monomer geometry on the fractal structure of colloidal rod aggregates. <i>Physical Review Letters</i> , 2004 , 92, 155503	7.4	77
15	Inertial Effects on Polymer Chain Scission in Planar Elongational Cross-Slot Flow. <i>Macromolecules</i> , 2004 , 37, 1023-1030	5.5	34
14	Comprehensive constitutive model for immiscible blends of Newtonian polymers. <i>Journal of Rheology</i> , 2004 , 48, 319-348	4.1	28
13	The development of microfabricated devices for influenza A detection and genotyping. <i>International Congress Series</i> , 2004 , 1263, 367-371		0
12	Anisotropy and breakup of extended droplets in immiscible blends. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003 , 113, 29-48	2.7	13
11	Early Stage Quiescent and Flow-Induced Crystallization of Intercalated Polypropylene Nanocomposites by Time-Resolved Light Scattering. <i>Macromolecules</i> , 2003 , 36, 2333-2342	5.5	57
10	Direct Visualization of Long-Range Heterogeneous Structure in Dense Colloidal Gels. <i>Langmuir</i> , 2003 , 19, 509-512	4	79
9	Influence of weak elasticity of dispersed phase on droplet behavior in sheared polybutadiene/poly(dimethyl siloxane) blends. <i>Journal of Rheology</i> , 2003 , 47, 37-58	4.1	45
8	Direct visualization of flow-induced microstructure in dense colloidal gels by confocal laser scanning microscopy. <i>Journal of Rheology</i> , 2003 , 47, 943-968	4.1	54
7	Self-diffusion in dilute colloidal suspensions with attractive potential interactions. <i>Physical Review E</i> , 2003 , 67, 050402	2.4	11
6	Probe size effects on the microrheology of associating polymer solutions. <i>Physical Review E</i> , 2002 , 66, 061504	2.4	79
5	Rheology and dynamics of particles in viscoelastic media. <i>Current Opinion in Colloid and Interface Science</i> , 2001 , 6, 430-437	7.6	65
4	Dynamic structure of thermoreversible colloidal gels of adhesive spheres. <i>Physical Review E</i> , 2001 , 63, 051402	2.4	49
3	Shear-Induced Microstructural Evolution of a Thermoreversible Colloidal Gel. <i>Langmuir</i> , 2001 , 17, 2918-2929	4.2	95
2	Rheology of Polypropylene/Clay Hybrid Materials. <i>Macromolecules</i> , 2001 , 34, 1864-1872	5.5	580
1	A constitutive model for the prediction of ellipsoidal droplet shapes and stresses in immiscible blends. <i>Journal of Rheology</i> , 2000 , 44, 1055-1083	4.1	96