Joris Sprakel

List of Publications by Year
in descending order

119	4,008	126708	143772
papers	citations	33 h-index	57 g-index

122	122	122	4615
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Physical chemistry of supramolecular polymer networks. Chemical Society Reviews, 2012, 41, 909-930.	18.7	455
2	Relaxation Dynamics at Different Time Scales in Electrostatic Complexes: Time-Salt Superposition. Physical Review Letters, 2010, 105, 208301.	2.9	171
3	Interfacial tension between a complex coacervate phase and its coexisting aqueous phase. Soft Matter, 2010, 6, 172-178.	1.2	160
4	Stress Enhancement in the Delayed Yielding of Colloidal Gels. Physical Review Letters, 2011, 106, 248303.	2.9	130
5	Fracture and Self-Healing in a Well-Defined Self-Assembled Polymer Network. Macromolecules, 2010, 43, 3542-3548.	2.2	121
6	Capillarity-induced ordering of spherical colloids on an interface with anisotropic curvature. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9220-9224.	3.3	109
7	Does size matter? Elasticity of compressed suspensions of colloidal- and granular-scale microgels. Soft Matter, 2012, 8, 156-164.	1.2	108
8	Coalescence stability of Pickering emulsions produced with lipid particles: A microfluidic study. Journal of Food Engineering, 2018, 234, 63-72.	2.7	92
9	Structures, stresses, and fluctuations in the delayed failure of colloidal gels. Soft Matter, 2012, 8, 3657.	1.2	89
10	Monodisperse conjugated polymer particles by Suzukiâ€“Miyaura dispersion polymerization. Nature Communications, 2012, 3, 1088.	5.8	84
11	A physical cross-linking process of cellulose nanofibril gels with shear-controlled fibril orientation. Soft Matter, 2013, 9, 1852-1863.	1.2	81
12	Precision Gels from Collagen-Inspired Triblock Copolymers. Biomacromolecules, 2009, 10, 1106-1113.	2.6	66
13	Deswelling and deformation of microgels in concentrated packings. Scientific Reports, 2017, 7, 10223.	1.6	66
14	Fragility and Strength in Nanoparticle Glasses. ACS Nano, 2017, 11, 6755-6763.	7.3	64
15	Shear banding and rheochaos in associative polymer networks. Soft Matter, 2008, 4, 1696.	1.2	62
16	Imaging the Molecular Motions of Autonomous Repair in a Selfâ€Healing Polymer. Advanced Materials, 2017, 29, 1701017.	11.1	55
17	Ultrastrong Anchoring Yet Barrierâ€Free Adsorption of Composite Microgels at Liquid Interfaces. Advanced Materials Interfaces, 2014, 1, 1300121.	1.9	54
18	Watching paint dry; more exciting than it seems. Soft Matter, 2015, 11, 6353-6359.	1.2	53

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19	Brownian particles in transient polymer networks. Physical Review E, 2008, 77, 061502.	0.8	50
20	Failure-mode transition in transient polymer networks with particle-based simulations. Soft Matter, 2009, 5, 4748.	1.2	49
21	Reversible assembly of oppositely charged hairy colloids in water. Soft Matter, 2011, 7, 8281.	1.2	46
22	Tailored microstructure of colloidal lipid particles for Pickering emulsions with tunable properties. Soft Matter, 2017, 13, 3190-3198.	1.2	46
23	Complete microviscosity maps of living plant cells and tissues with a toolbox of targeting mechanoprobes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18110-18118.	3.3	46
24	Quantitative imaging of heterogeneous dynamics in drying and aging paints. Scientific Reports, 2016, 6, 34383.	1.6	44
25	Rouse Dynamics of Colloids Bound to Polymer Networks. Physical Review Letters, 2007, 99, 208301.	2.9	43
26	Can we prevent lipid oxidation in emulsions by using fat-based Pickering particles?. Food Research International, 2019, 120, 352-363.	2.9	42
27	Crystallization and intermittent dynamics in constricted microfluidic flows of dense suspensions. Soft Matter, 2011, 7, 3889.	1.2	41
28	Precise colloids with tunable interactions for confocal microscopy. Scientific Reports, 2015, 5, 14635.	1.6	41
29	Programmable co-assembly of oppositely charged microgels. Soft Matter, 2014, 10, 8060-8065.	1.2	40
30	A mechanistic view of drying suspension droplets. Soft Matter, 2016, 12, 2858-2867.	1.2	40
31	Laser Speckle Strain Imaging reveals the origin of delayed fracture in a soft solid. Science Advances, 2018, 4, eaar1926.	4.7	38
32	Colloidal gelation of oppositely charged particles. Soft Matter, 2012, 8, 8697.	1.2	36
33	Well-defined temperature-sensitive surfactants for controlled emulsion coalescence. Polymer Chemistry, 2013, 4, 1842.	1.9	35
34	Monitoring Protein Capsid Assembly with a Conjugated Polymer Strain Sensor. Journal of the American Chemical Society, 2015, 137, 9800-9803.	6.6	35
35	Transition-state theory predicts clogging at the microscale. Scientific Reports, 2016, 6, 28450.	1.6	34
36	From cooperative to uncorrelated clogging in cross-flow microfluidic membranes. Scientific Reports, 2018, 8, 5687.	1.6	34

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37	Mechanics at the glass-to-gel transition of thermoresponsive microgel suspensions. Soft Matter, 2016, 12, 2515-2522.	1.2	33
38	Pickering particles as interfacial reservoirs of antioxidants. Journal of Colloid and Interface Science, 2020, 575, 489-498.	5.0	33
39	Effect of Interfacial Permeability on Droplet Relaxation in Biopolymer-Based Water-in-Water Emulsions. Biomacromolecules, 2006, 7, 339-346.	2.6	32
40	Equilibrium Capillary Forces with Atomic Force Microscopy. Physical Review Letters, 2007, 99, 104504.	2.9	31
41	Cephalopodâ€Inspired High Dynamic Range Mechanoâ€Imaging in Polymeric Materials. Advanced Functional Materials, 2020, 30, 2002716.	7.8	31
42	Strand Plasticity Governs Fatigue in Colloidal Gels. Physical Review Letters, 2018, 120, 208005.	2.9	30
43	Recombinant Protein Polymers for Colloidal Stabilization and Improvement of Cellular Uptake of Diamond Nanosensors. Analytical Chemistry, 2017, 89, 12812-12820.	3.2	29
44	Light from Within: Sensing Weak Strains and FemtoNewton Forces in Single Molecules. CheM, 2018, 4, 269-284.	5.8	29
45	A slicing mechanism facilitates host entry by plant-pathogenic Phytophthora. Nature Microbiology, 2021, 6, 1000-1006.	5.9	28
46	Charge-driven co-assembly of polyelectrolytes across oilâ€“water interfaces. Soft Matter, 2013, 9, 11270.	1.2	27
47	Direct Observation of Entropic Stabilization of bcc Crystals Near Melting. Physical Review Letters, 2017, 118, 088003.	2.9	27
48	Dissipative disassembly of colloidal microgel crystals driven by a coupled cyclic reaction network. Soft Matter, 2018, 14, 910-915.	1.2	27
49	Linking Particle Dynamics to Local Connectivity in Colloidal Gels. Physical Review Letters, 2017, 118, 188001.	2.9	26
50	Highly cooperative stress relaxation in two-dimensional soft colloidal crystals. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15356-15361.	3.3	25
51	Two modes of phase inversion in a drying emulsion. Soft Matter, 2013, 9, 2810.	1.2	24
52	Coalescence, Cracking, and Crack Healing in Drying Dispersion Droplets. Langmuir, 2015, 31, 4419-4428.	1.6	24
53	Phase behavior of flowerlike micelles in a SCF cell model. European Physical Journal E, 2008, 25, 163-173.	0.7	23
54	Substitutional impurity-induced vitrification in microgel crystals. Soft Matter, 2013, 9, 5372.	1.2	23

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55	Capillary Adhesion in the Limit of Saturation:â€‰Thermodynamics, Self-Consistent Field Modeling and Experiment. Langmuir, 2008, 24, 1308-1317.	1.6	22
56	Facile Oneâ€Step Synthesis of Monodisperse Micronâ€Sized Latex Particles with Highly Carboxylated Surfaces. Macromolecular Rapid Communications, 2013, 34, 1284-1288.	2.0	22
57	Thermosensitive Molecular, Colloidal, and Bulk Interactions Using a Simple Surfactant. Advanced Functional Materials, 2013, 23, 475-482.	7.8	22
58	Supramolecular Assembly of Selfâ€Healing Nanocomposite Hydrogels. Macromolecular Rapid Communications, 2014, 35, 2065-2070.	2.0	22
59	Temperature Controlled Sequential Gelation in Composite Microgel Suspensions. Particle and Particle Systems Characterization, 2015, 32, 764-770.	1.2	22
60	Illuminating the Reaction Pathways of Viromimetic Assembly. Journal of the American Chemical Society, 2017, 139, 4962-4968.	6.6	22
61	Transient forces and non-equilibrium states in sheared polymer networks. Europhysics Letters, 2011, 93, 58003.	0.7	21
62	Manipulating and quantifying temperature-triggered coalescence with microcentrifugation. Lab on A Chip, 2015, 15, 188-194.	3.1	21
63	Enhanced adhesion of bioinspired nanopatterned elastomers via colloidal surface assembly. Journal of the Royal Society Interface, 2015, 12, 20141061.	1.5	21
64	FRET-Based Determination of the Exchange Dynamics of Complex Coacervate Core Micelles. Macromolecules, 2021, 54, 398-411.	2.2	21
65	Plant cell polarity as the nexus of tissue mechanics and morphogenesis. Nature Plants, 2021, 7, 1548-1559.	4.7	21
66	Programmable Phase Transitions in a Photonic Microgel System: Linking Soft Interactions to a Temporal pH Gradient. Langmuir, 2017, 33, 2011-2016.	1.6	20
67	The contribution of colloidal aggregates to the clogging dynamics at the pore scale. Journal of Membrane Science, 2021, 635, 119509.	4.1	20
68	Morphing of liquid crystal surfaces by emergent collectivity. Nature Communications, 2019, 10, 3501.	5.8	19
69	Discontinuous nature of the repulsive-to-attractive colloidal glass transition. Scientific Reports, 2016, 6, 22725.	1.6	18
70	Probing Nanoscale Coassembly with Dual Mechanochromic Sensors. Advanced Functional Materials, 2016, 26, 1420-1427.	7.8	17
71	Dynamical heterogeneities and defects in two-dimensional soft colloidal crystals. Soft Matter, 2015, 11, 9385-9392.	1.2	16
72	Photonic Paints: Structural Pigments Combined with Waterâ€Based Polymeric Filmâ€Formers for Structurally Colored Coatings. Advanced Optical Materials, 2019, 7, 1900218.	3.6	16

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73	Quantifying solvent action in oil paint using portable laser speckle imaging. Scientific Reports, 2020, 10, 10574.	1.6	16
74	Intermittent dynamics in transient polymer networks under shear: Signs of self-organized criticality. Physical Review E, 2009, 79, 056306.	0.8	15
75	Electroplasticization of Liquid Crystal Polymer Networks. ACS Applied Materials & Interfaces, 2020, 12, 19927-19937.	4.0	15
76	Anomalous dynamics of interstitial dopants in soft crystals. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13660-13665.	3.3	13
77	Multiple relaxation modes in associative polymer networks with varying connectivity. Physical Review E, 2016, 94, 032507.	0.8	13
78	Langevin Dynamics Simulations of the Exchange of Complex Coacervate Core Micelles: The Role of Nonelectrostatic Attraction and Polyelectrolyte Length. Macromolecules, 2019, 52, 8923-8931.	2.2	13
79	Stochastic buckling of self-assembled colloidal structures. Physical Review Research, 2019, 1, .	1.3	13
80	Conjugated Polymer Shells on Colloidal Templates by Seeded Suzukiâ€“Miyaura Dispersion Polymerization. Small, 2014, 10, 957-963.	5.2	12
81	Hydrodynamic model for drying emulsions. Physical Review E, 2015, 92, 023011.	0.8	12
82	Criticality and mechanical enhancement in composite fiber networks. Physical Review E, 2017, 95, 042503.	0.8	12
83	Plasticity in colloidal gel strands. Soft Matter, 2019, 15, 6447-6454.	1.2	12
84	Dynamics of polymer bridge formation and disruption. Physical Review E, 2008, 78, 040802.	0.8	10
85	Linking slow dynamics and microscopic connectivity in dense suspensions of charged colloids. Soft Matter, 2018, 14, 780-788.	1.2	10
86	Direct visualization of pH-dependent evolution of structure and dynamics in microgel suspensions. Journal of Physics Condensed Matter, 2011, 23, 505101.	0.7	9
87	Cooperativity and segregation in confined flows of soft binary glasses. Physical Review E, 2015, 92, 022308.	0.8	9
88	Equivalent Pathways in Melting and Gelation of Well-Defined Biopolymer Networks. Biomacromolecules, 2015, 16, 304-310.	2.6	9
89	Fourier transforms for fast and quantitative Laser Speckle Imaging. Scientific Reports, 2019, 9, 13279.	1.6	9
90	Two-dimensional crystals of star polymers: a tale of tails. Soft Matter, 2019, 15, 615-622.	1.2	9

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91	Chemical Stability of Î±â€Tocopherol in Colloidal Lipid Particles with Various Morphologies. European Journal of Lipid Science and Technology, 2020, 122, 2000012.	1.0	9
92	Doping colloidal bcc crystals â€" interstitial solids and meta-stable clusters. Scientific Reports, 2017, 7, 12634.	1.6	8
93	Micellization of Telechelic Associative Polymers:Â Self-Consistent Field Modeling and Comparison with Scaling Concepts. Journal of Physical Chemistry B, 2007, 111, 2903-2909.	1.2	7
94	Comprehensive theory for star-like polymer micelles; combining classical nucleation and polymer brush theory. Physical Chemistry Chemical Physics, 2008, 10, 5308.	1.3	7
95	Diffusion Decoupling in Binary Colloidal Systems Observed with Contrast Variation Multispeckle Diffusing Wave Spectroscopy. Langmuir, 2019, 35, 5793-5801.	1.6	7
96	Molecular sensors reveal the mechano-chemical response of Phytophthora infestans walls and membranes to mechanical and chemical stress. Cell Surface, 2022, 8, 100071.	1.5	7
97	An actin mechanostat ensures hyphal tip sharpness in Phytophthora infestans to achieve host penetration. Science Advances, 2022, 8, .	4.7	7
98	Apparent strength versus universality in glasses of soft compressible colloids. Scientific Reports, 2018, 8, 16817.	1.6	6
99	Gel Trapping Enables Optical Spectroscopy of Single Solvated Conjugated Polymers in Equilibrium. ACS Nano, 2019, 13, 13185-13195.	7.3	6
100	Complex coacervation and metalâ€"ligand bonding as synergistic design elements for aqueous viscoelastic materials. Soft Matter, 2021, 17, 3294-3305.	1.2	6
101	Understanding and optimizing EvolonÂ® CR for varnish removal from oil paintings. Heritage Science, 2021, 9, .	1.0	6
102	Single-Molecule Force Spectroscopy of a Tetraaryl Succinonitrile Mechanophore. Journal of Physical Chemistry C, 2022, 126, 1215-1221.	1.5	6
103	On the curvature dependence of the interfacial tension in a symmetric three-component interface. Physical Chemistry Chemical Physics, 2007, 9, 167-179.	1.3	5
104	Spatial blurring in laser speckle imaging in inhomogeneous turbid media. Scientific Reports, 2017, 7, 16879.	1.6	5
105	Complex coacervates formed across liquid interfaces: A self-consistent field analysis. Advances in Colloid and Interface Science, 2017, 239, 17-30.	7.0	5
106	Temperature-Triggered Colloidal Gelation through Well-Defined Grafted Polymeric Surfaces. Gels, 2017, 3, 21.	2.1	5
107	Chemical Feedback in Templated Reaction-Assembly Networks. Macromolecules, 2020, 53, 10675-10685.	2.2	5
108	TheArabidopsisembryo as a quantifiable model for studying pattern formation. Quantitative Plant Biology, 2021, 2, .	0.8	5

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109	DNA dynamics in complex coacervate droplets and micelles. Soft Matter, 2022, 18, 2012-2027.	1.2	5
110	Allosteric pathway selection in templated assembly. Science Advances, 2019, 5, eaaw3353.	4.7	4
111	Reentrant Stabilization of Grafted Nanoparticles in Polymer Solutions. Journal of Physical Chemistry B, 2015, 119, 12938-12946.	1.2	3
112	Chain length-dependent luminescence in acceptor-doped conjugated polymers. Scientific Reports, 2019, 9, 11217.	1.6	3
113	Propagation and attenuation of mechanical signals in ultrasoft 2D solids. Science Advances, 2020, 6, .	4.7	3
114	High-speed laser speckle imaging to unravel picoliter drop-on-demand to substrate interaction. Review of Scientific Instruments, 2021, 92, 083906.	0.6	3
115	Hierarchical Adsorption of Network-Forming Associative Polymers. Langmuir, 2009, 25, 6923-6928.	1.6	2
116	Allâ€Aqueous Synthesis of Silicaâ€Encapsulated Quantum Dots with Functional Shells. European Journal of Inorganic Chemistry, 2017, 2017, 5152-5157.	1.0	2
117	Controlling the Hierarchical Assembly of Ï€â€Conjugated Oligoelectrolytes. Macromolecular Rapid Communications, 2018, 39, e1800284.	2.0	2
118	Rigidochromic conjugated polymers carrying main-chain molecular rotors. Chemical Communications, 2019, 55, 11559-11562.	2.2	2
119	De Novo Designed Proteins for Colloidal Stabilization and Improvement of Cellular Uptake. Biophysical Journal, 2018, 114, 362a.	0.2	1