Wilhelm T S Huck

List of Publications by Citations

218 papers	24,330 citations	82 h-index	153 g-index
236 ext. papers	26,573 ext. citations	10.7 avg, IF	7.09 L-index

#	Paper	IF	Citations
218	Emerging applications of stimuli-responsive polymer materials. *Nature Materials*, **2010**, 9, 101-13	27	4474
217	Polymer brushes via surface-initiated polymerizations. *Chemical Society Reviews*, **2004**, 33, 14-22	58.5	1172
216	Extracellular-matrix tethering regulates stem-cell fate. *Nature Materials*, **2012**, 11, 642-9	27	1156
215	Microdroplets in microfluidics: an evolving platform for discoveries in chemistry and biology. *Angewandte Chemie - International Edition*, **2010**, 49, 5846-68	16.4	782
214	Role of the extracellular matrix in regulating stem cell fate. *Nature Reviews Molecular Cell Biology*, **2013**, 14, 467-73	48.7	590
213	The controlled formation of ordered, sinusoidal structures by plasma oxidation of an elastomeric polymer. *Applied Physics Letters*, **1999**, 75, 2557-2559	3.4	557
212	Surface-Initiated Polymerizations in Aqueous Media: Effect of Initiator Density. *Langmuir*, **2002**, 18, 1265-1269	4	416
211	Ordering of Spontaneously Formed Buckles on Planar Surfaces. *Langmuir*, **2000**, 16, 3497-3501	4	367
210	Actin and serum response factor transduce physical cues from the microenvironment to regulate epidermal stem cell fate decisions. *Nature Cell Biology*, **2010**, 12, 711-8	23.4	351
209	25th anniversary article: Designer hydrogels for cell cultures: a materials selection guide. *Advanced Materials*, **2014**, 26, 125-47	24	302
208	Patterning electro-osmotic flow with patterned surface charge. *Physical Review Letters*, **2000**, 84, 3314-7	7.4	271
207	The nanotechnology of life-inspired systems. *Nature Nanotechnology*, **2016**, 11, 585-92	28.7	268
206	Surface grafted polymer brushes as ideal building blocks for "smart" surfaces. *Physical Chemistry Chemical Physics*, **2006**, 8, 3815-23	3.6	256
205	Formation of nanopatterned polymer blends in photovoltaic devices. *Nano Letters*, **2010**, 10, 1302-7	11.5	236
204	Enhanced transcription rates in membrane-free protocells formed by coacervation of cell lysate. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 11692-7	11.5	220
203	Antibacterial and antifouling polymer brushes incorporating antimicrobial peptide. *Bioconjugate Chemistry*, **2009**, 20, 71-7	6.3	218
202	UCST wetting transitions of polyzwitterionic brushes driven by self-association. *Angewandte Chemie - International Edition*, **2006**, 45, 1770-4	16.4	192

201	Nanocontact Printing: A Route to Sub-50-nm-Scale Chemical and Biological Patterning. *Langmuir*, **2003**, 19, 1963-1965	4	182
200	Development of quantitative cell-based enzyme assays in microdroplets. *Analytical Chemistry*, **2008**, 80, 3890-6	7.8	177
199	Rational design of functional and tunable oscillating enzymatic networks. *Nature Chemistry*, **2015**, 7, 160-5	17.6	174
198	Conjugated zwitterionic polyelectrolyte as the charge injection layer for high-performance polymer light-emitting diodes. *Journal of the American Chemical Society*, **2011**, 133, 683-5	16.4	174
197	Hydrophilic PDMS microchannels for high-throughput formation of oil-in-water microdroplets and water-in-oil-in-water double emulsions. *Lab on A Chip*, **2010**, 10, 1814-9	7.2	174
196	Switching the Properties of Polyelectrolyte Brushes via Hydrophobic Collapse *Macromolecules*, **2005**, 38, 10192-10199	5.5	170
195	Thermo-Responsive Polymer Brushes with Tunable Collapse Temperatures in the Physiological Range. *Macromolecules*, **2007**, 40, 4403-4405	5.5	168
194	Polyelectrolyte-bridged metal/cotton hierarchical structures for highly durable conductive yarns. *ACS Applied Materials & Interfaces*, **2010**, 2, 529-35	9.5	167
193	Uniaxial alignment of liquid-crystalline conjugated polymers by nanoconfinement. *Nano Letters*, **2007**, 7, 987-92	11.5	167
192	Surface-induced droplet fusion in microfluidic devices. *Lab on A Chip*, **2007**, 7, 984-6	7.2	165
191	Multicomponent polymer brushes. *Journal of the American Chemical Society*, **2006**, 128, 16253-8	16.4	165
190	Microfluidic Assembly of Monodisperse Vesosomes as Artificial Cell Models. *Journal of the American Chemical Society*, **2017**, 139, 587-590	16.4	164
189	Polymer brushes showing non-fouling in blood plasma challenge the currently accepted design of protein resistant surfaces. *Macromolecular Rapid Communications*, **2011**, 32, 952-7	4.8	164
188	On the role of single regiodefects and polydispersity in regioregular poly(3-hexylthiophene): defect distribution, synthesis of defect-free chains, and a simple model for the determination of crystallinity. *Journal of the American Chemical Society*, **2012**, 134, 4790-805	16.4	163
187	Controlling the retention of small molecules in emulsion microdroplets for use in cell-based assays. *Analytical Chemistry*, **2009**, 81, 3008-16	7.8	161
186	An integrated device for monitoring time-dependent in vitro expression from single genes in picolitre droplets. *ChemBioChem*, **2008**, 9, 439-46	3.8	158
185	Probing cellular heterogeneity in cytokine-secreting immune cells using droplet-based microfluidics. *Lab on A Chip*, **2013**, 13, 4740-4	7.2	157
184	Highly reversible and multi-stage cantilever actuation driven by polyelectrolyte brushes. *Journal of the American Chemical Society*, **2006**, 128, 5326-7	16.4	157

183	Monodisperse Uni- and Multicompartment Liposomes. *Journal of the American Chemical Society*, **2016**, 138, 7584-91	16.4	148
182	Electrochemically mediated atom transfer radical polymerization on nonconducting substrates: controlled brush growth through catalyst diffusion. *Journal of the American Chemical Society*, **2013**, 135, 1708-10	16.4	148
181	Coupling microdroplet microreactors with mass spectrometry: reading the contents of single droplets online. *Angewandte Chemie - International Edition*, **2009**, 48, 3665-8	16.4	146
180	Synthesis and characterization of poly(3-sulfopropylmethacrylate) brushes for potential antibacterial applications. *Langmuir*, **2007**, 23, 3314-21	4	142
179	Locking and unlocking of polyelectrolyte brushes: toward the fabrication of chemically controlled nanoactuators. *Angewandte Chemie - International Edition*, **2005**, 44, 4578-81	16.4	142
178	Ultrarapid generation of femtoliter microfluidic droplets for single-molecule-counting immunoassays. *ACS Nano*, **2013**, 7, 5955-64	16.7	141
177	Reactions on Monolayers: Organic Synthesis in Two Dimensions. *European Journal of Organic Chemistry*, **2003**, 2003, 17-29	3.2	141
176	Self-organization of nanocrystals in polymer brushes. Application in heterojunction photovoltaic diodes. *Nano Letters*, **2005**, 5, 1653-7	11.5	139
175	Simultaneous determination of gene expression and enzymatic activity in individual bacterial cells in microdroplet compartments. *Journal of the American Chemical Society*, **2009**, 131, 15251-6	16.4	138
174	From microdroplets to microfluidics: selective emulsion separation in microfluidic devices. *Angewandte Chemie - International Edition*, **2008**, 47, 2042-5	16.4	134
173	Microfluidic Formation of Monodisperse Coacervate Organelles in Liposomes. *Angewandte Chemie - International Edition*, **2017**, 56, 9736-9740	16.4	130
172	Temperature-Responsive Glycopolymer Brushes Synthesized via RAFT Polymerization Using the Z-group Approach. *Macromolecular Rapid Communications*, **2006**, 27, 1121-1126	4.8	130
171	Responsive polymers for nanoscale actuation. *Materials Today*, **2008**, 11, 24-32	21.8	128
170	Electrochemically induced surface-initiated atom-transfer radical polymerization. *Angewandte Chemie - International Edition*, **2012**, 51, 5092-5	16.4	127
169	Ordered Block-Copolymer Assembly Using Nanoimprint Lithography. *Nano Letters*, **2004**, 4, 1633-1636	11.5	124
168	Noncovalent Synthesis of Nanostructures: Combining Coordination Chemistry and Hydrogen Bonding. *Angewandte Chemie International Edition in English*, **1997**, 36, 1006-1008		123
167	Shape-memory nanoparticles from inherently non-spherical polymer colloids. *Nature Materials*, **2005**, 4, 486-90	27	122
166	Effect of polymer brush architecture on antibiofouling properties. *Biomacromolecules*, **2011**, 12, 4169-72	6.9	121

165	Chain-growth polymerization of unusual anion-radical monomers based on naphthalene diimide: a new route to well-defined n-type conjugated copolymers. *Journal of the American Chemical Society*, **2011**, 133, 19966-70	16.4	121
164	A Compartmentalized Out-of-Equilibrium Enzymatic Reaction Network for Sustained Autonomous Movement. *ACS Central Science*, **2016**, 2, 843-849	16.8	117
163	Controlled growth and subsequent chemical modification of poly(glycidyl methacrylate) brushes on silicon wafers. *Journal of Materials Chemistry*, **2004**, 14, 730		117
162	Efficient Conjugated-Polymer Optoelectronic Devices Fabricated by Thin-Film Transfer-Printing Technique. *Advanced Functional Materials*, **2008**, 18, 1012-1019	15.6	115
161	A double droplet trap system for studying mass transport across a droplet-droplet interface. *Lab on A Chip*, **2010**, 10, 1281-5	7.2	114
160	Controlled Assembly of Nanosized Metallodendrimers. *Angewandte Chemie International Edition in English*, **1996**, 35, 1213-1215		113
159	Synthesis of oligo(ethylene glycol) methacrylate polymer brushes. *European Polymer Journal*, **2005**, 41, 1757-1765	5.2	112
158	Patterning Thin Films of Poly(ethylene imine) on a Reactive SAM Using Microcontact Printing. *Langmuir*, **1999**, 15, 1208-1214	4	111
157	Bioadhesion at micro-patterned stimuli-responsive polymer brushes. *Journal of Materials Chemistry*, **2005**, 15, 2089		107
156	Stick and slide: Ferrofluidic droplets on superhydrophobic surfaces. *Applied Physics Letters*, **2006**, 89, 081911	3.4	106
155	Large Self-Assembled Organopalladium Spheres. *Journal of the American Chemical Society*, **1995**, 117, 8293-8294	16.4	106
154	Chain-Growth Suzuki Polymerization of n-Type Fluorene Copolymers. *Macromolecules*, **2011**, 44, 9057-9061	5.5	105
153	Dissipative adaptation in driven self-assembly leading to self-dividing fibrils. *Nature Nanotechnology*, **2018**, 13, 849-855	28.7	104
152	Polyelectrolyte brush amplified electroactuation of microcantilevers. *Nano Letters*, **2008**, 8, 725-30	11.5	103
151	Thickness-Dependent Properties of Polyzwitterionic Brushes. *Macromolecules*, **2008**, 41, 6317-6321	5.5	102
150	Macromolecular crowding creates heterogeneous environments of gene expression in picolitre droplets. *Nature Nanotechnology*, **2016**, 11, 191-7	28.7	100
149	Convergent and Divergent Noncovalent Synthesis of Metallodendrimers. *Journal of the American Chemical Society*, **1998**, 120, 6240-6246	16.4	100
148	Fabrication of microgel particles with complex shape via selective polymerization of aqueous two-phase systems. *Small*, **2012**, 8, 2356-60	11	98

147	Programmable chemical reaction networks: emulating regulatory functions in living cells using a bottom-up approach. *Chemical Society Reviews*, **2015**, 44, 7465-83	58.5	97
146	Convenient Route To Initiate Kumada Catalyst-Transfer Polycondensation Using Ni(dppe)Cl2 or Ni(dppp)Cl2 and Sterically Hindered Grignard Compounds. *Macromolecules*, **2010**, 43, 10157-10161	5.5	97
145	3D microniches reveal the importance of cell size and shape. *Nature Communications*, **2017**, 8, 1962	17.4	95
144	Creating Nanoscale Patterns of Dendrimers on Silicon Surfaces with Dip-Pen Nanolithography. *Nano Letters*, **2002**, 2, 713-716	11.5	95
143	Controlling nanoscale morphology in polymer photovoltaic devices. *Nano Today*, **2010**, 5, 231-242	17.9	93
142	Biofunctionalized protein resistant oligo(ethylene glycol)-derived polymer brushes as selective immobilization and sensing platforms. *Biomacromolecules*, **2009**, 10, 2885-94	6.9	91
141	Hyperbranched Polyglycidol on Si/SiO2 Surfaces via Surface-Initiated Polymerization. *Macromolecules*, **2003**, 36, 5088-5093	5.5	90
140	Enhancement of charge-transport characteristics in polymeric films using polymer brushes. *Nano Letters*, **2006**, 6, 573-8	11.5	87
139	Formation of Spherical and Non-Spherical Eutectic Gallium-Indium Liquid-Metal Microdroplets in Microfluidic Channels at Room Temperature. *Advanced Functional Materials*, **2012**, 22, 2624-2631	15.6	86
138	Exploiting the superior protein resistance of polymer brushes to control single cell adhesion and polarisation at the micron scale. *Biomaterials*, **2010**, 31, 5030-41	15.6	85
137	Three-Dimensional Mesoscale Self-Assembly. *Journal of the American Chemical Society*, **1998**, 120, 8267-8268	12.1	83
136	Synthesis, Purification, and Characterization of Well-Defined All-Conjugated Diblock Copolymers PF8TBT-b-P3HT. *Macromolecules*, **2012**, 45, 4142-4151	5.5	82
135	Probing the responsive behavior of polyelectrolyte brushes using electrochemical impedance spectroscopy. *Analytical Chemistry*, **2007**, 79, 176-82	7.8	82
134	Effect of nanoconfinement on the collapse transition of responsive polymer brushes. *Nano Letters*, **2008**, 8, 3819-24	11.5	80
133	Microfluidic platform for combinatorial synthesis in picolitre droplets. *Lab on A Chip*, **2012**, 12, 1320-6	7.2	77
132	Formation of Well-Ordered Heterojunctions in Polymer:PCBM Photovoltaic Devices. *Advanced Functional Materials*, **2011**, 21, 139-146	15.6	76
131	One drop at a time: toward droplet microfluidics as a versatile tool for single-cell analysis. *NPG Asia Materials*, **2014**, 6, e133-e133	10.3	74
130	Quantitative tracking of the growth of individual algal cells in microdroplet compartments. *Integrative Biology (United Kingdom)*, **2011**, 3, 1043-51	3.7	74

129	Collagen Gels with Different Fibrillar Microarchitectures Elicit Different Cellular Responses. *ACS Applied Materials & Interfaces*, **2017**, 9, 19630-19637	9.5	73
128	A Method for Detecting Circulating Tumor Cells Based on the Measurement of Single-Cell Metabolism in Droplet-Based Microfluidics. *Angewandte Chemie - International Edition*, **2016**, 55, 8581-4	16.4	73
127	Controlled Folding of 2D Au-Polymer Brush Composites into 3D Microstructures. *Advanced Functional Materials*, **2011**, 21, 652-657	15.6	71
126	AFM study of cationically charged polymer brushes: switching between soft and hard matter. *Soft Matter*, **2005**, 1, 66-68	3.6	71
125	Polymer brushes: routes toward mechanosensitive surfaces. *Accounts of Chemical Research*, **2010**, 43, 466-74	24.3	70
124	Single-Cell Analysis Using Droplet Microfluidics. *Advanced Biology*, **2020**, 4, e1900188	3.5	69
123	Single-cell analysis reveals that stochasticity and paracrine signaling control interferon-alpha production by plasmacytoid dendritic cells. *Nature Communications*, **2018**, 9, 3317	17.4	68
122	On the flow topology inside droplets moving in rectangular microchannels. *Lab on A Chip*, **2014**, 14, 3611-20	7.2	68
121	Patterned Polymer Multilayers as Etch Resists. *Langmuir*, **1999**, 15, 6862-6867	4	68
120	Direct measurement of normal and shear forces between surface-grown polyelectrolyte layers. *Journal of Physical Chemistry B*, **2009**, 113, 3947-56	3.4	65
119	Monodisperse collagen-gelatin beads as potential platforms for 3D cell culturing. *Journal of Materials Chemistry B*, **2013**, 1, 5128-5136	7.3	64
118	The electrochemical detection of droplets in microfluidic devices. *Lab on A Chip*, **2008**, 8, 1937-42	7.2	64
117	Following Polymer Brush Growth Using the Quartz Crystal Microbalance Technique. *Macromolecular Rapid Communications*, **2005**, 26, 1117-1121	4.8	62
116	High-Resolution Contact Printing with Dendrimers. *Nano Letters*, **2002**, 2, 347-349	11.5	60
115	Suzuki-Miyaura coupling reactions in aqueous microdroplets with catalytically active fluorous interfaces. *Chemical Communications*, **2009**, 6225-7	5.8	59
114	Simultaneous measurement of reactions in microdroplets filled by concentration gradients. *Lab on A Chip*, **2009**, 9, 1707-13	7.2	58
113	Biocompatible fluorinated polyglycerols for droplet microfluidics as an alternative to PEG-based copolymer surfactants. *Lab on A Chip*, **2016**, 16, 65-9	7.2	55
112	Investigation of "on water" conditions using a biphasic fluidic platform. *Angewandte Chemie - International Edition*, **2012**, 51, 7981-4	16.4	55

111	Mechanically induced generation of counterions inside surface-grafted charged macromolecular films: towards enhanced mechanotransduction in artificial systems. *Angewandte Chemie - International Edition*, **2006**, 45, 7440-3	16.4	54
110	Recent Advances in Engineering the Stem Cell Microniche in 3D. *Advanced Science*, **2018**, 5, 1800448	13.6	53
109	Controlled polymer-brush growth from microliter volumes using sacrificial-anode atom-transfer radical polymerization. *Angewandte Chemie - International Edition*, **2013**, 52, 9125-9	16.4	53
108	Macromolecularly Crowded Protocells from Reversibly Shrinking Monodisperse Liposomes. *Journal of the American Chemical Society*, **2018**, 140, 7399-7402	16.4	52
107	Sensitive, high throughput detection of proteins in individual, surfactant-stabilized picoliter droplets using nanoelectrospray ionization mass spectrometry. *Analytical Chemistry*, **2013**, 85, 3812-6	7.8	50
106	Polymer brush resist for responsive wettability. *Soft Matter*, **2009**, 5, 2738	3.6	50
105	Fluorinated Silane Self-Assembled Monolayers as Resists for Patterning Indium Tin Oxide. *Langmuir* , **2003**, 19, 5273-5278	4	50
104	The Effect of [CuI]/[CuII] Ratio on the Kinetics and Conformation of Polyelectrolyte Brushes by Atom Transfer Radical Polymerization. *Macromolecular Rapid Communications*, **2006**, 27, 1632-1636	4.8	47
103	Donor□cceptor interface modification by zwitterionic conjugated polyelectrolytes in polymer photovoltaics. *Energy and Environmental Science*, **2013**, 6, 1589	35.4	46
102	UCST Wetting Transitions of Polyzwitterionic Brushes Driven by Self-Association. *Angewandte Chemie*, **2006**, 118, 1802-1806	3.6	45
101	Monitoring a reaction at submillisecond resolution in picoliter volumes. *Analytical Chemistry*, **2011**, 83, 1462-8	7.8	43
100	Effects of nanoconfinement on the morphology and reactivity of organic materials. *Chemical Communications*, **2005**, 4143-8	5.8	43
99	Electrochemically Induced Surface-Initiated Atom-Transfer Radical Polymerization. *Angewandte Chemie*, **2012**, 124, 5182-5185	3.6	42
98	Self-assembly meets nanofabrication: recent developments in microcontact printing and dip-pen nanolithography. *Angewandte Chemie - International Edition*, **2007**, 46, 2754-7	16.4	41
97	Preprogramming Complex Hydrogel Responses using Enzymatic Reaction Networks. *Angewandte Chemie - International Edition*, **2017**, 56, 1794-1798	16.4	40
96	Exploring Actuation and Mechanotransduction Properties of Polymer Brushes. *Macromolecular Rapid Communications*, **2008**, 29, 539-546	4.8	40
95	Cellular Volume and Matrix Stiffness Direct Stem Cell Behavior in a 3D Microniche. *ACS Applied Materials & Interfaces*, **2019**, 11, 1754-1759	9.5	40
94	Decoupling geometrical and chemical cues directing epidermal stem cell fate on polymer brush-based cell micro-patterns. *Integrative Biology (United Kingdom)*, **2013**, 5, 899-910	3.7	38

93	Combined quantification of intracellular (phospho-)proteins and transcriptomics from fixed single cells. *Scientific Reports*, **2019**, 9, 1469	4.9	37
92	Associative Interactions in Crowded Solutions of Biopolymers Counteract Depletion Effects. *Journal of the American Chemical Society*, **2015**, 137, 13041-8	16.4	37
91	Threshold sensing through a synthetic enzymatic reaction-diffusion network. *Angewandte Chemie - International Edition*, **2014**, 53, 8066-9	16.4	36
90	Mimicking normal tissue architecture and perturbation in cancer with engineered micro-epidermis. *Biomaterials*, **2012**, 33, 5221-9	15.6	36
89	Alterations in red blood cell deformability during storage: a microfluidic approach. *BioMed Research International*, **2014**, 2014, 764268	3	36
88	Cell-free microcompartmentalised transcription-translation for the prototyping of synthetic communication networks. *Current Opinion in Biotechnology*, **2019**, 58, 72-80	11.4	36
87	Biocompatible macro-initiators controlling radical retention in microfluidic on-chip photo-polymerization of water-in-oil emulsions. *Chemical Communications*, **2014**, 50, 112-4	5.8	35
86	Microdroplet fabrication of silver□agarose nanocomposite beads for SERS optical accumulation. *Soft Matter*, **2011**, 7, 1321-1325	3.6	35
85	Formation of Hierarchically Structured Thin Films. *Advanced Functional Materials*, **2009**, 19, 2236-2243	15.6	35
84	Microfluidic-Assisted Fabrication of Clay Microgels for Cell-Free Protein Synthesis. *ACS Applied Materials & Interfaces*, **2018**, 10, 29308-29313	9.5	33
83	Microfluidic Formation of Monodisperse Coacervate Organelles in Liposomes. *Angewandte Chemie*, **2017**, 129, 9868-9872	3.6	33
82	Interface limited charge extraction and recombination in organic photovoltaics. *Energy and Environmental Science*, **2014**, 7, 2227	35.4	32
81	Assembly of Polyelectrolytes on CNTs by Van der Waals Interactions and Fabrication of LBL Polyelectrolyte/CNT Composites. *Macromolecular Chemistry and Physics*, **2007**, 208, 603-608	2.6	32
80	Wavelength tuning the photonic band gap in chiral nematic liquid crystals using electrically commanded surfaces. *Applied Physics Letters*, **2007**, 91, 231110	3.4	32
79	Surface modification of PDMS via self-organization of vinyl-terminated small molecules. *Soft Matter* , **2009**, 5, 2286	3.6	31
78	Self-organization of the bacterial cell-division protein FtsZ in confined environments. *Soft Matter*, **2013**, 9, 10493	3.6	30
77	Monodisperse Water-in-Oil-in-Water (W/O/W) Double Emulsion Droplets as Uniform Compartments for High-Throughput Analysis via Flow Cytometry. *Micromachines*, **2013**, 4, 402-413	3.3	30
76	Controlling the contents of microdroplets by exploiting the permeability of PDMS. *Lab on A Chip*, **2011**, 11, 1132-7	7.2	30

75	The switching properties of chiral nematic liquid crystals using electrically commanded surfaces. *Soft Matter*, **2009**, 5, 354-362	3.6	30
74	Synthesis of raspberry-like particles using polyelectrolyte multilayer-coated particles. *Journal of Materials Chemistry*, **2007**, 17, 4943		29
73	Synthesis and characterization of low bandgap conjugated donor–acceptor polymers for polymer:PCBM solar cells. *Journal of Materials Chemistry*, **2010**, 20, 9231		27
72	Intelligent Microfluidics: The Convergence of Machine Learning and Microfluidics in Materials Science and Biomedicine. *Matter*, **2020**, 3, 1893-1922	12.7	26
71	Synthesis and Characterization of Surface-Initiated Helical Polyisocyanopeptide Brushes. *Macromolecules*, **2008**, 41, 1945-1951	5.5	25
70	Formation of hybrid 2D polymer-metal microobjects. *Langmuir*, **2007**, 23, 1569-76	4	25
69	Photochemical Control over Oscillations in Chemical Reaction Networks. *Journal of the American Chemical Society*, **2017**, 139, 15296-15299	16.4	24
68	Influence of molecular structure on the properties of out-of-equilibrium oscillating enzymatic reaction networks. *Journal of the American Chemical Society*, **2015**, 137, 12415-20	16.4	24
67	An electro-coalescence chip for effective emulsion breaking in droplet microfluidics. *Lab on A Chip*, **2014**, 14, 2398-402	7.2	24
66	Rational design and dynamics of self-propelled colloidal bead chains: from rotators to flagella. *Scientific Reports*, **2017**, 7, 16758	4.9	24
65	Vesicle budding from polymersomes templated by microfluidically prepared double emulsions. *Materials Horizons*, **2014**, 1, 96-101	14.4	24
64	Controlled Bending of Microscale Au–Polyelectrolyte Brush Bilayers. *Macromolecules*, **2010**, 43, 5382-5386	5.5	24
63	Robustness, Entrainment, and Hybridization in Dissipative Molecular Networks, and the Origin of Life. *Journal of the American Chemical Society*, **2019**, 141, 8289-8295	16.4	23
62	Microfluidic production of monodisperse functional o/w droplets and study of their reversible pH dependent aggregation behavior. *Soft Matter*, **2011**, 7, 4214	3.6	23
61	Direct correlation between local pressure and fluorescence output in mechanoresponsive polyelectrolyte brushes. *Angewandte Chemie - International Edition*, **2011**, 50, 9629-32	16.4	22
60	Fabrication of 3D Tubular Hydrogel Materials through On-Site Surface Free Radical Polymerization. *Chemistry of Materials*, **2018**, 30, 6756-6768	9.6	22
59	Ultrasensitivity by molecular titration in spatially propagating enzymatic reactions. *Biophysical Journal*, **2013**, 105, 1057-66	2.9	21
58	Fabrication of Sub-10 nm Metallic Lines of Low Line-Width Roughness by Hydrogen Reduction of Patterned Metal–Organic Materials. *Advanced Functional Materials*, **2010**, 20, 2317-2323	15.6	21

57	Quantitative Single-Cell mRNA Analysis in Hydrogel Beads. *Angewandte Chemie - International Edition*, **2016**, 55, 6698-701	16.4	20
56	Polymer phase separation on lattice patterned surfaces. *Soft Matter*, **2007**, 3, 230-237	3.6	19
55	Intra-species bacterial quorum sensing studied at single cell level in a double droplet trapping system. *International Journal of Molecular Sciences*, **2013**, 14, 10570-81	6.3	18
54	Bottom-Up Construction of an Adaptive Enzymatic Reaction Network. *Angewandte Chemie - International Edition*, **2018**, 57, 14065-14069	16.4	18
53	The microenvironment of double emulsions in rectangular microchannels. *Lab on A Chip*, **2015**, 15, 2327-34	7.2	17
52	Branched DNA Architectures Produced by PCR-Based Assembly as Gene Compartments for Cell-Free Gene-Expression Reactions. *ChemBioChem*, **2019**, 20, 2597-2603	3.8	16
51	Deformation of double emulsions under conditions of flow cytometry hydrodynamic focusing. *Lab on A Chip*, **2015**, 15, 4291-301	7.2	16
50	Dynamic self-organization of side-propelling colloidal rods: experiments and simulations. *Soft Matter*, **2016**, 12, 9657-9665	3.6	16
49	Complexity of molecular crowding in cell-free enzymatic reaction networks. *Nature Nanotechnology* , **2014**, 9, 406-7	28.7	16
48	Investigation of "On Water" Conditions Using a Biphasic Fluidic Platform. *Angewandte Chemie*, **2012** , 124, 8105-8108	3.6	16
47	Forced Peptide Synthesis in Nanoscale Confinement under Elastomeric Stamps. *Angewandte Chemie*, **2004**, 116, 4286-4289	3.6	15
46	A short peptide synthon for liquid-liquid phase separation. *Nature Chemistry*, **2021**, 13, 1046-1054	17.6	15
45	Transcription and Translation in Cytomimetic Protocells Perform Most Efficiently at Distinct Macromolecular Crowding Conditions. *ACS Synthetic Biology*, **2020**, 9, 2797-2807	5.7	15
44	Sigma Factor-Mediated Tuning of Bacterial Cell-Free Synthetic Genetic Oscillators. *ACS Synthetic Biology*, **2018**, 7, 2879-2887	5.7	15
43	Molecular Engineering of Robustness and Resilience in Enzymatic Reaction Networks. *Journal of the American Chemical Society*, **2017**, 139, 8146-8151	16.4	14
42	A Method for Detecting Circulating Tumor Cells Based on the Measurement of Single-Cell Metabolism in Droplet-Based Microfluidics. *Angewandte Chemie*, **2016**, 128, 8723-8726	3.6	14
41	Energy expenditure during cell spreading influences the cellular response to matrix stiffness. *Biomaterials*, **2021**, 267, 120494	15.6	14
40	Panchromatic "Dye-Doped" Polymer Solar Cells: From Femtosecond Energy Relays to Enhanced Photo-Response. *Journal of Physical Chemistry Letters*, **2013**, 4, 442-7	6.4	13

39	A trypsin-based bistable switch. *Tetrahedron*, **2017**, 73, 4896-4900	2.4	13
38	Evidence of Ion-Pairing in Cationic Brushes from Evaluation of Brush Charging and Structure by Electrokinetic and Surface Conductivity Analysis. *Journal of Physical Chemistry C*, **2017**, 121, 2915-2922	3.8	12
37	Catalytic transport of molecular cargo using diffusive binding along a polymer track. *Nature Chemistry*, **2019**, 11, 359-366	17.6	12
36	Grip on complexity in chemical reaction networks. *Beilstein Journal of Organic Chemistry*, **2017**, 13, 1486-1497	2.5	12
35	Cell-Like Nanostructured Environments Alter Diffusion and Reaction Kinetics in Cell-Free Gene Expression. *ChemBioChem*, **2016**, 17, 228-32	3.8	12
34	Island brushes to control adhesion of water in oil droplets on planar surfaces. *Soft Matter*, **2011**, 7, 7013	3.6	12
33	Mechanically Induced Generation of Counterions Inside Surface-Grafted Charged Macromolecular Films: Towards Enhanced Mechanotransduction in Artificial Systems. *Angewandte Chemie*, **2006**, 118, 7600-7603	3.6	12
32	Locking and Unlocking of Polyelectrolyte Brushes: Toward the Fabrication of Chemically Controlled Nanoactuators. *Angewandte Chemie*, **2005**, 117, 4654-4657	3.6	11
31	Preprogramming Complex Hydrogel Responses using Enzymatic Reaction Networks. *Angewandte Chemie*, **2017**, 129, 1820-1824	3.6	10
30	Threshold Sensing through a Synthetic Enzymatic Reaction‐Diffusion Network. *Angewandte Chemie* , **2014**, 126, 8204-8207	3.6	10
29	Quantitative Single-Cell mRNA Analysis in Hydrogel Beads. *Angewandte Chemie*, **2016**, 128, 6810-6813	3.6	10
28	Modular Design of Small Enzymatic Reaction Networks Based on Reversible and Cleavable Inhibitors. *Angewandte Chemie - International Edition*, **2019**, 58, 14539-14543	16.4	8
27	Autonomous mesoscale positioning emerging from myelin filament self-organization and Marangoni flows. *Nature Communications*, **2020**, 11, 4800	17.4	8
26	All-polymer field-effect transistors using a brush gate dielectric. *Journal of Materials Chemistry C*, **2013**, 1, 7736	7.1	7
25	Photoswitchable Molecular Communication between Programmable DNA-based Artificial Membraneless Organelles.. *Angewandte Chemie - International Edition*, **2022**,	16.4	7
24	Microfabricated Gaps Reveal the Effect of Geometrical Control in Wound Healing. *Advanced Healthcare Materials*, **2021**, 10, e2000630	10.1	7
23	Adaptation trajectories during adhesion and spreading affect future cell states. *Scientific Reports*, **2017**, 7, 12308	4.9	6
22	On the importance of reaction networks for synthetic living systems. *Emerging Topics in Life Sciences*, **2019**, 3, 517-527	3.5	6

21	Single-cell intracellular epitope and transcript detection revealing signal transduction dynamics		6
20	Probing single-cell metabolism reveals prognostic value of highly metabolically active circulating stromal cells in prostate cancer. *Science Advances*, **2020**, 6,	14.3	6
19	Bottom-Up Construction of an Adaptive Enzymatic Reaction Network. *Angewandte Chemie*, **2018**, 130, 14261-14265	3.6	6
18	Controlled Polymer-Brush Growth from Microliter Volumes using Sacrificial-Anode Atom-Transfer Radical Polymerization. *Angewandte Chemie*, **2013**, 125, 9295-9299	3.6	5
17	A Multilayer Microfluidic Platform for the Conduction of Prolonged Cell-Free Gene Expression. *Journal of Visualized Experiments*, **2019**,	1.6	4
16	Cell-Free Characterization of Coherent Feed-Forward Loop-Based Synthetic Genetic Circuits. *ACS Synthetic Biology*, **2021**, 10, 1406-1416	5.7	4
15	Single-cell intracellular epitope and transcript detection reveals signal transduction dynamics.. *Cell Reports Methods*, **2021**, 1, 100070		4
14	Dysmetabolic Circulating Tumor Cells Are Prognostic in Metastatic Breast Cancer. *Cancers*, **2020**, 12,	6.6	3
13	Fluorescent hydrogels for studying Ca(2+)-dependent reaction-diffusion processes. *Chemical Communications*, **2014**, 50, 3089-92	5.8	3
12	Polymer Brushes: Towards Applications **2005**, 371-380		3
11	Dynamic Environments as a Tool to Preserve Desired Output in a Chemical Reaction Network. *Chemistry - A European Journal*, **2020**, 26, 1676-1682	4.8	3
10	One-Step Generation of Multisomes from Lipid-Stabilized Double Emulsions. *ACS Applied Materials & Interfaces*, **2021**, 13, 6739-6747	9.5	3
9	Direct Correlation between Local Pressure and Fluorescence Output in Mechanoresponsive Polyelectrolyte Brushes. *Angewandte Chemie*, **2011**, 123, 9803-9806	3.6	2
8	A physicochemical orthophosphate cycle via a kinetically stable thermodynamically activated intermediate enables mild prebiotic phosphorylations. *Nature Communications*, **2021**, 12, 5517	17.4	2
7	Early warning signals in chemical reaction networks. *Chemical Communications*, **2020**, 56, 3725-3728	5.8	1
6	Dysmetabolic circulating tumor cells are prognostic in metastatic breast cancer		1
5	Reversible Photoswitchable Inhibitors Generate Ultrasensitivity in Out-of-Equilibrium Enzymatic Reactions. *Journal of the American Chemical Society*, **2021**, 143, 5709-5716	16.4	1
4	Modular Design of Small Enzymatic Reaction Networks Based on Reversible and Cleavable Inhibitors. *Angewandte Chemie*, **2019**, 131, 14681-14685	3.6	0

3	The Dynamics of an Oscillating Enzymatic Reaction Network is Crucially Determined by Side Reactions. *ChemSystemsChem*, **2021**, 3, e2000033	3.1	0
2	Innenrücktitelbild: Controlled Polymer-Brush Growth from Microliter Volumes using Sacrificial-Anode Atom-Transfer Radical Polymerization (Angew. Chem. 35/2013). *Angewandte Chemie*, **2013**, 125, 9501-9501	3.6	
1	The Effect of Geometry and TGF-β Signaling on Tumor Cell Migration from Free-standing Microtissues.. *Advanced Healthcare Materials*, **2022**, e2102696	10.1	