Martin M Hanczyc

List of Publications by Year
in descending order

57 papers	2,711 citations	257429 24 h-index	206102 48 g-index
58 all docs	58 docs citations	58 times ranked	2320 citing authors

#	Article	IF	Citations
1	Experimental Models of Primitive Cellular Compartments: Encapsulation, Growth, and Division. Science, 2003, 302, 618-622.	12.6	741
2	Fatty Acid Chemistry at the Oilâ˘'Water Interface:â€‰ Self-Propelled Oil Droplets. Journal of the American Chemical Society, 2007, 129, 9386-9391.	13.7	271
3	Self-Propelled Oil Droplets Consuming â€œFuelâ€•Surfactant. Journal of the American Chemical Society, 2009, 131, 5012-5013.	13.7	229
4	Replicating vesicles as models of primitive cell growth and division. Current Opinion in Chemical Biology, 2004, 8, 660-664.	6.1	199
5	Dynamics of Chemotactic Droplets in Salt Concentration Gradients. Langmuir, 2014, 30, 11937-11944.	3.5	116
6	Mineral Surface Directed Membrane Assembly. Origins of Life and Evolution of Biospheres, 2007, 37, 67-82.	1.9	106
7	Coping with complexity: Machine learning optimization of cellâ€free protein synthesis. Biotechnology and Bioengineering, 2011, 108, 2218-2228.	3.3	65
8	Specific and reversible DNA-directed self-assembly of oil-in-water emulsion droplets. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20320-20325.	7.1	63
9	Programmed Vesicle Fusion Triggers Gene Expression. Langmuir, 2011, 27, 13082-13090.	3.5	62
10	Detection of Association and Fusion of Giant Vesicles Using a Fluorescence-Activated Cell Sorter. Langmuir, 2010, 26, 15098-15103.	3.5	54
11	Metabolism and motility in prebiotic structures. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 2885-2893.	4.0	53
12	Droplets As Liquid Robots. Artificial Life, 2017, 23, 528-549.	1.3	50
13	An Oil Droplet Divisionâ€"Fusion Cycle. ChemPlusChem, 2013, 78, 52-54.	2.8	47
14	Chemical Basis for Minimal Cognition. Artificial Life, 2010, 16, 233-243.	1.3	45
15	Stable Vesicles Composed of Monocarboxylic or Dicarboxylic Fatty Acids and Trimethylammonium Amphiphiles. Langmuir, 2011, 27, 14078-14090.	3.5	42
16	Defined DNA-Mediated Assemblies of Gene-Expressing Giant Unilamellar Vesicles. Langmuir, 2013, 29, 15309-15319.	3.5	42
17	Navigating the Chemical Space of HCN Polymerization and Hydrolysis: Guiding Graph Grammars by Mass Spectrometry Data. Entropy, 2013, 15, 4066-4083.	2.2	38
18	Uniform droplet splitting and detection using Lab-on-Chip flow cytometry on a microfluidic PDMS device. Sensors and Actuators B: Chemical, 2016, 229, 7-13.	7.8	37

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19	Primordial membranes: more than simple container boundaries. Current Opinion in Chemical Biology, 2017, 40, 78-86.	6.1	36
20	Droplets: Unconventional Protocell Model with Life-Like Dynamics and Room to Grow. Life, 2014, 4, 1038-1049.	2.4	32
21	Vesicle Self-Assembly of Monoalkyl Amphiphiles under the Effects of High Ionic Strength, Extreme pH, and High Temperature Environments. Langmuir, 2018, 34, 15560-15568.	3.5	30
22	Mode Switching and Collective Behavior in Chemical Oil Droplets. Entropy, 2011, 13, 709-719.	2.2	29
23	Automated Discovery of Novel Drug Formulations Using Predictive Iterated High Throughput Experimentation. PLoS ONE, 2010, 5, e8546.	2.5	28
24	Hierarchical Unilamellar Vesicles of Controlled Compositional Heterogeneity. PLoS ONE, 2012, 7, e50156.	2.5	27
25	Regenerated silk fibroin membranes as separators for transparent microbial fuel cells. Bioelectrochemistry, 2019, 126, 146-155.	4.6	25
26	Using Imaging Flow Cytometry to Quantify and Optimize Giant Vesicle Production by Water-in-oil Emulsion Transfer Methods. Langmuir, 2019, 35, 2375-2382.	3.5	24
27	A Comprehensive Study of Custom-Made Ceramic Separators for Microbial Fuel Cells: Towards â€œLivingâ€• Bricks. Energies, 2019, 12, 4071.	3.1	23
28	Engineering Life: A Review of Synthetic Biology. Artificial Life, 2020, 26, 260-273.	1.3	21
29	A hybrid camphorâ€“camphene wax material for studies on self-propelled motion. Physical Chemistry Chemical Physics, 2019, 21, 24852-24856.	2.8	18
30	Transport of Live Cells Under Sterile Conditions Using a Chemotactic Droplet. Scientific Reports, 2018, 8, 8408.	3.3	16
31	Creating and Maintaining Chemical Artificial Life by Robotic Symbiosis. Artificial Life, 2015, 21, 47-54.	1.3	12
32	Quantifying dynamic mechanisms of auto-regulation in Escherichia coli with synthetic promoter in response to varying external phosphate levels. Scientific Reports, 2019, 9, 2076.	3.3	12
33	Evaporation-Induced Pattern Formation of Decanol Droplets. Langmuir, 2016, 32, 4800-4805.	3.5	11
34	Emergence of Polygonal Shapes in Oil Droplets and Living Cells: The Potential Role of Tensegrity in the Origin of Life. , 2018, , 427-490.		11
35	Specific and Reversible DNA-Directed Self-Assembly of Modular Vesicle-Droplet Hybrid Materials. Langmuir, 2016, 32, 3561-3566.	3.5	10
36	BÃ¼tschli Dynamic Droplet System. Artificial Life, 2013, 19, 331-346.	1.3	9

#	ARTICLE	IF	CITATIONS
37	Structure and the Synthesis of Life. Architectural Design, 2011, 81, 26-33.	0.1	8
38	Multi-Armed Droplets as Shape-Changing Protocells. Artificial Life, 2018, 24, 71-79.	1.3	8
39	Protocells as smart agents for architectural design. Technoetic Arts, 2009, 7, 117-120.	0.1	6
40	The search for a first cell under the maximalism design principle. Technoetic Arts, 2009, 7, 153-164.	0.1	6
41	Evolutionary Design of a DDPD Model of Ligation. Lecture Notes in Computer Science, 2006, , 201-212.	1.3	6
42	Models of Minimal Physical Intelligence. Procedia Computer Science, 2011, 7, 275-277.	2.0	5
43	The origin of life and the potential role of soaps. Lipid Technology, 2016, 28, 88-92.	0.3	5
44	Chemotaxis and Chemokinesis of Living and Non-living Objects. Emergence, Complexity and Computation, 2017, , 245-260.	0.3	5
45	Autoselective transport of mammalian cells with a chemotactic droplet. Scientific Reports, 2020, 10, 5525.	3.3	5
46	A Perfect Plastic Material for Studies on Self-Propelled Motion on the Water Surface. Molecules, 2021, 26, 3116.	3.8	5
47	Self-maintained Movements of Droplets with Convection Flow. , 2007, , 179-188.		4
48	A camphene-camphor-polymer composite material for the production of superhydrophobic absorbent microporous foams. Scientific Reports, 2022, 12, 243.	3.3	4
49	Machine Learning Optimization of Evolvable Artificial Cells. Procedia Computer Science, 2011, 7, 187-189.	2.0	3
50	Better red than dead: On the influence of Oil Red O dye on complexity of evolution of a camphor-paraffin droplet on the water surface. , 2018, , .		2
51	A dynamic model of the phosphate response system with synthetic promoters in Escherichia coli. , 2017, , .		2
52	Machine learning for drug design, molecular machines and evolvable artificial cells. , 2011, , .		1
53	Optimal control of a laser source to generate a minimum time trajectory of a droplet in a liquid layer. , 2016, , .		1
54	Living architecture: workshop report from the European Conference on Artificial Life, Lyon, France, 4 September 2017. Adaptive Behavior, 2018, 26, 85-88.	1.9	1

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55	2P250 Detection of association and fusion of giant vesicles using fluorescence-activated cell sorter(The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2010, 50, S126-S127.	0.1	0
56	Easy and Fast Preparation of Large and Giant Vesicles from Highly Confined Thin Lipid Films Deposited at the Airâ€"Water Interface. BioNanoScience, 2018, 8, 207-217.	3.5	0
57	Stochastic Mechanisms of Information Flow in Phosphate Economy ofÂEscherichia coli. Lecture Notes in Computer Science, 2020, , 131-145.	1.3	0