

John S Mccaskill

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.

85
papers

3,331
citations

22
h-index

56
g-index

91
ext. papers

3,609
ext. citations

3.9
avg, IF

5.21
L-index

#	Paper	IF	Citations
85	Analysing Emergent Dynamics of Evolving Computation in 2D Cellular Automata. <i>Lecture Notes in Computer Science</i> , 2019 , 3-40	0.9	0
84	From quasispecies to quasispaces: coding and cooperation in chemical and electronic systems. <i>European Biophysics Journal</i> , 2018 , 47, 459-478	1.9	1
83	Optomagnetic detection of DNA triplex nanoswitches. <i>Analyst, The</i> , 2017 , 142, 582-585	5	7
82	A \$200~\mu\text{m}^2\$ by \$100~\mu\text{m}^2\$ Smart Submersible System With an Average Current Consumption of 1.3nA and a Compatible Voltage Converter. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2017 , 64, 3013-3024	3.9	2
81	Ultra low-power, -area and -frequency CMOS thyristor based oscillator for autonomous microsystems. <i>Analog Integrated Circuits and Signal Processing</i> , 2016 , 89, 347-356	1.2	6
80	A CMOS 16k microelectrode array as docking platform for autonomous microsystems 2016 ,		3
79	Editorial. <i>Artificial Life</i> , 2015 , 21, 193-4	1.4	1
78	Emergence of coding and its specificity as a physico-informatic problem. <i>Origins of Life and Evolution of Biospheres</i> , 2015 , 45, 249-55	1.5	13
77	Addressing, amplifying and switching DNAzyme functions by electrochemically-triggered release of metal ions. <i>Chemical Science</i> , 2015 , 6, 3544-3549	9.4	21
76	DNA-library assembly programmed by on-demand nano-liter droplets from a custom microfluidic chip. <i>Biomicrofluidics</i> , 2015 , 9, 044103	3.2	12
75	Ultra low-power, -area and -frequency CMOS thyristor based oscillator for autonomous microsystems 2015 ,		3
74	Sequence-specific nucleic acid mobility using a reversible block copolymer gel matrix and DNA amphiphiles (lipid-DNA) in capillary and microfluidic electrophoretic separations. <i>Electrophoresis</i> , 2015 , 36, 2451-64	3.6	4
73	Electronic pH switching of DNA triplex reactions. <i>RSC Advances</i> , 2015 , 5, 27313-27325	3.7	10
72	On demand nanoliter-scale microfluidic droplet generation, injection, and mixing using a passive microfluidic device. <i>Biomicrofluidics</i> , 2015 , 9, 014119	3.2	26
71	General-Purpose, Parallel and Reversible Microfluidic Interconnects. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2015 , 5, 291-300	1.7	5
70	DNA with 3U5Udisulfide links--rapid chemical ligation through isosteric replacement. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 4222-6	16.4	19
69	DNA mit 3?-5?-Disulfid-Verknüpfung ßchnelle chemische Ligation durch isosteren Ersatz. <i>Angewandte Chemie</i> , 2014 , 126, 4306-4310	3.6	7

68	Introduction to recent developments in living technology. <i>Artificial Life</i> , 2013 , 19, 291-8	1.4	10
67	Field programmable chemistry: integrated chemical and electronic processing of informational molecules towards electronic chemical cells. <i>BioSystems</i> , 2012 , 109, 2-17	1.9	8
66	Biological and Chemical Information Technologies. <i>Procedia Computer Science</i> , 2011 , 7, 56-60	1.6	14
65	Living technology: exploiting life's principles in technology. <i>Artificial Life</i> , 2010 , 16, 89-97	1.4	61
64	Spatially resolved simulations of membrane reactions and dynamics: multipolar reaction DPD. <i>European Physical Journal E</i> , 2009 , 29, 431-48	1.5	9
63	Electronically programmable membranes for improved biomolecule handling in micro-compartments on-chip. <i>Chemical Engineering Journal</i> , 2008 , 135, S276-S279	14.7	8
62	Evolutionary Microfluidic Complementation Toward Artificial Cells 2008 , 253-294		2
61	The Molecular Quasi-Species. <i>Advances in Chemical Physics</i> , 2007 , 149-263		277
60	Evolutionary self-organization in complex fluids. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2007 , 362, 1763-79	5.8	8
59	EVOLVING INDUCTIVE GENERALIZATION VIA GENETIC SELF-ASSEMBLY. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2006 , 09, 1-29	0.8	10
58	An Electronically Controlled Microfluidic Approach towards Artificial Cells. <i>Complexus</i> , 2006 , 3, 48-57		12
57	Evolutionary Design of a DDPD Model of Ligation. <i>Lecture Notes in Computer Science</i> , 2006 , 201-212	0.9	5
56	Optimization and design of oligonucleotide setup for strand displacement amplification. <i>Journal of Proteomics</i> , 2005 , 63, 170-86		13
55	Folding stabilizes the evolution of catalysts. <i>Artificial Life</i> , 2004 , 10, 23-38	1.4	6
54	Evolutionary stabilization of generous replicases by complex formation. <i>European Physical Journal B</i> , 2004 , 38, 103-110	1.2	7
53	Flows in micro fluidic networks: From theory to experiment. <i>Natural Computing</i> , 2004 , 3, 395-410	1.3	4
52	Molecular systems on-chip (MSoC) steps forward for programmable biosystems 2004 ,		4
51	Microfabrication of a BioModule composed of microfluidics and digitally controlled microelectrodes for processing biomolecules. <i>Smart Materials and Structures</i> , 2003 , 12, 757-762	3.4	16

50	DNA Computing in Microreactors. <i>Lecture Notes in Computer Science</i> , 2002 , 33-45	0.9	14
49	Hybrid poly(dimethylsiloxane)-silicon microreactors used for molecular computing. <i>Smart Materials and Structures</i> , 2002 , 11, 756-760	3.4	12
48	Biochemical Amplification Waves in a One-Dimensional Microflow System. <i>Journal of Physical Chemistry B</i> , 2002 , 106, 4525-4532	3.4	3
47	Cascadable Hybridisation Transfer of Specific DNA between Microreactor Selection Modules. <i>Lecture Notes in Computer Science</i> , 2002 , 46-56	0.9	6
46	DNA computing in microreactors 2001 ,		1
45	Parallel random number generator for inexpensive configurable hardware cells. <i>Computer Physics Communications</i> , 2001 , 140, 293-302	4.2	15
44	Error threshold for spatially resolved evolution in the quasispecies model. <i>Physical Review Letters</i> , 2001 , 86, 5819-22	7.4	57
43	Optically programming DNA computing in microflow reactors. <i>BioSystems</i> , 2001 , 59, 125-38	1.9	47
42	The stochastic evolution of catalysts in spatially resolved molecular systems. <i>Biological Chemistry</i> , 2001 , 382, 1343-63	4.5	18
41	Evolutionary self-organization of cell-free genetic coding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 9185-90	11.5	34
40	Steady flow micro-reactor module for pipelined DNA computations. <i>Lecture Notes in Computer Science</i> , 2001 , 263-270	0.9	4
39	Graph replacement chemistry for DNA processing. <i>Lecture Notes in Computer Science</i> , 2001 , 103-116	0.9	7
38	Complex patterns in a trans-cooperatively coupled DNA amplification system. <i>Chemical Engineering Science</i> , 2000 , 55, 245-256	4.4	4
37	Open problems in artificial life. <i>Artificial Life</i> , 2000 , 6, 363-76	1.4	183
36	End-specific covalent photo-dependent immobilisation of synthetic DNA to paramagnetic beads. <i>Nucleic Acids Research</i> , 2000 , 28, E98	20.1	17
35	From Reconfigurability to Evolution in Construction Systems: Spanning the Electronic, Microfluidic and Biomolecular Domains. <i>Lecture Notes in Computer Science</i> , 2000 , 286-299	0.9	7
34	Complex patterns predicted in an in vitro experimental model system for the evolution of molecular cooperation. <i>Biophysical Chemistry</i> , 1999 , 79, 163-86	3.5	7
33	In vitro DNA-based predator-prey system with oscillatory kinetics. <i>Bulletin of Mathematical Biology</i> , 1998 , 60, 329-354	2.1	17

32	In vitro evolution of molecular cooperation in CATCH, a cooperatively coupled amplification system. <i>Chemistry and Biology</i> , 1998 , 5, 729-41		24
31	Evolving reaction-diffusion ecosystems with self-assembling structures in thin films. <i>Artificial Life</i> , 1998 , 4, 25-40	1.4	28
30	Hardware evolution with a massively parallel dynamically reconfigurable computer: POLYP. <i>Lecture Notes in Computer Science</i> , 1998 , 364-371	0.9	8
29	A Microflow Reactor for Two Dimensional Investigations of In Vitro Amplification Systems 1998 , 233-244		6
28	Monitoring the amplification of CATCH, a 3SR based cooperatively coupled isothermal amplification system, by fluorimetric methods. <i>Nucleic Acids Research</i> , 1997 , 25, 4697-9	20.1	16
27	Single Molecule Detection in Microstructures. <i>Nucleosides & Nucleotides</i> , 1997 , 16, 635-642		2
26	Cooperative amplification of templates by cross-hybridization (CATCH). <i>FEBS Journal</i> , 1997 , 243, 358-64		35
25	A molecular predator and its prey: coupled isothermal amplification of nucleic acids. <i>Chemistry and Biology</i> , 1997 , 4, 25-33		50
24	Spatially resolved in vitro molecular ecology. <i>Biophysical Chemistry</i> , 1997 , 66, 145-58	3.5	36
23	NGEN: A massively parallel reconfigurable computer for biological simulation: Towards a self-organizing computer. <i>Lecture Notes in Computer Science</i> , 1997 , 260-276	0.9	8
22	Monte Carlo approach to tissue-cell populations. <i>Physical Review E</i> , 1995 , 52, 6635-6657	2.4	116
21	Spatially resolved evolution studies in an open reactor. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1994 , 98, 1203-1203		5
20	Fluorescence imaging of evolving RNA in capillaries. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1994 , 98, 1202-1202		1
19	NGEN [Configurable computer hardware to simulate long-time self-organization of biopolymers. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1994 , 98, 1114-1114		5
18	Template-directed and template-free RNA synthesis by Q beta replicase. <i>Journal of Molecular Biology</i> , 1993 , 231, 175-9	6.5	32
17	Images of evolution: origin of spontaneous RNA replication waves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993 , 90, 4191-5	11.5	39
16	Equilibrium Distribution of Secondary Structures for Large RNA 1993 , 29-42		
15	Replication of viruses in a growing plaque: a reaction-diffusion model. <i>Biophysical Journal</i> , 1992 , 61, 1540-9		94

14	The equilibrium partition function and base pair binding probabilities for RNA secondary structure. <i>Biopolymers</i> , 1990 , 29, 1105-19	2.2	965
13	Evolution im Laboratorium. <i>Nachrichten Aus Der Chemie</i> , 1989 , 37, 484-488		6
12	Traveling waves of in vitro evolving RNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1989 , 86, 7937-41	11.5	47
11	Painlevé solution of the poisson-boltzmann equation for a cylindrical polyelectrolyte in excess salt solution. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1988 , 84, 161-179		20
10	Molecular quasi-species. <i>The Journal of Physical Chemistry</i> , 1988 , 92, 6881-6891		465
9	A localization threshold for macromolecular quasispecies from continuously distributed replication rates. <i>Journal of Chemical Physics</i> , 1984 , 80, 5194-5202	3.9	68
8	The role of bound states in electronic transport. <i>Journal of Physics and Chemistry of Solids</i> , 1984 , 45, 215-222	3.2	6
7	A stochastic theory of macromolecular evolution. <i>Biological Cybernetics</i> , 1984 , 50, 63-73	2.8	48
6	Surface friction constant and range of dynamical interaction between adatoms on metal surfaces. <i>Surface Science</i> , 1983 , 131, 34-48	1.8	3
5	Finite concentration fluorescence quenching in the presence of diffusion. <i>Journal of Chemical Physics</i> , 1983 , 78, 6598-6601	3.9	9
4	Review article:electronic transport in short mean-free path liquid metals. <i>Physics and Chemistry of Liquids</i> , 1982 , 12, 1-16	1.5	13
3	On the theory of the Stern-Volmer coefficient for dense fluids. <i>Journal of Chemical Physics</i> , 1981 , 74, 6812-6816	3.9	10
2	Fokker-Planck interpretation of picosecond intramolecular dynamics in solutions. <i>Chemical Physics</i> , 1979 , 44, 389-402	2.3	76
1	Competitive adsorption from binary mixtures: Adhesive hard sphere model. <i>Journal of Colloid and Interface Science</i> , 1979 , 72, 27-40	9.3	22