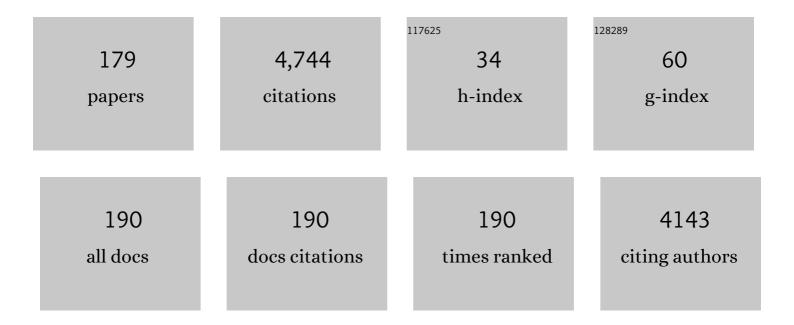
Dirk Schulze-Makuch

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Whole genome sequencing of cyanobacterium Nostoc sp. CCCryo 231-06 using microfluidic single cell technology. IScience, 2022, 25, 104291.	4.1	6
2	The Microbial Enhanced Oil Recovery (MEOR) potential of Halanaerobiales under dynamic conditions in different porous media. Journal of Petroleum Science and Engineering, 2021, 196, 107578.	4.2	15
3	New type of sand wedge polygons in the salt cemented soils of the hyper-arid Atacama Desert. Geomorphology, 2021, 373, 107481.	2.6	11
4	Inhibition of microbial souring with molybdate and its application under reservoir conditions. International Biodeterioration and Biodegradation, 2021, 157, 105158.	3.9	9
5	Machine Learning Algorithms Applied to Identify Microbial Species by Their Motility. Life, 2021, 11, 44.	2.4	6
6	The Case (or Not) for Life in the Venusian Clouds. Life, 2021, 11, 255.	2.4	6
7	Influence of surface mineralogy on the activity of Halanaerobium sp. during microbial enhanced oil recovery (MEOR). Fuel, 2021, 290, 119973.	6.4	9
8	Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. Microorganisms, 2021, 9, 1038.	3.6	19
9	Venus, an Astrobiology Target. Astrobiology, 2021, 21, 1163-1185.	3.0	38
10	Evolution of default genetic control mechanisms. PLoS ONE, 2021, 16, e0251568.	2.5	0
11	A roadmap for planetary caves science and exploration. Nature Astronomy, 2021, 5, 524-525.	10.1	19
12	Diverse Viruses Carrying Genes for Microbial Extremotolerance in the Atacama Desert Hyperarid Soil. MSystems, 2021, 6, .	3.8	27
13	Habitability Models for Astrobiology. Astrobiology, 2021, 21, 1017-1027.	3.0	13
14	Evaluating the Microbial Habitability of Rogue Planets and Proposing Speculative Scenarios on How They Might Act as Vectors for Panspermia. Life, 2021, 11, 833.	2.4	2
15	Geochemical proxies for water-soil interactions in the hyperarid Atacama Desert, Chile. Catena, 2021, 206, 105531.	5.0	8
16	Physicochemical Parameters Limiting Growth of Debaryomyces hansenii in Solutions of Hygroscopic Compounds and Their Effects on the Habitability of Martian Brines. Life, 2021, 11, 1194.	2.4	8
17	Leave no stone unturned: individually adapted xerotolerant Thaumarchaeota sheltered below the boulders of the Atacama Desert hyperarid core. Microbiome, 2021, 9, 234.	11.1	18
18	New types of boulder accumulations in the hyper-arid Atacama Desert. Geomorphology, 2020, 350, 106897.	2.6	12

#	Article	IF	CITATIONS
19	Methanogenic Archaea Can Produce Methane in Deliquescence-Driven Mars Analog Environments. Scientific Reports, 2020, 10, 6.	3.3	30
20	A chemical and microbial characterization of selected mud volcanoes in Trinidad reveals pathogens introduced by surface water and rain water. Science of the Total Environment, 2020, 707, 136087.	8.0	5
21	In Search for a Planet Better than Earth: Top Contenders for a Superhabitable World. Astrobiology, 2020, 20, 1394-1404.	3.0	16
22	A New Record for Microbial Perchlorate Tolerance: Fungal Growth in NaClO4 Brines and its Implications for Putative Life on Mars. Life, 2020, 10, 53.	2.4	26
23	Physicochemical Salt Solution Parameters Limit the Survival of Planococcus halocryophilus in Martian Cryobrines. Frontiers in Microbiology, 2020, 11, 1284.	3.5	5
24	Thiophenes on Mars: Biotic or Abiotic Origin?. Astrobiology, 2020, 20, 552-561.	3.0	20
25	The Astrobiology of Alien Worlds: Known and Unknown Forms of Life. Universe, 2020, 6, 130.	2.5	17
26	Bacterial Growth in Chloride and Perchlorate Brines: Halotolerances and Salt Stress Responses of <i>Planococcus halocryophilus</i> . Astrobiology, 2019, 19, 1377-1387.	3.0	30
27	The Naked Mole-Rat: An Unusual Organism with an Unexpected Latent Potential for Increased Intelligence?. Life, 2019, 9, 76.	2.4	8
28	Effects of Oxygen-Containing Salts on the Detection of Organic Biomarkers on Mars and in Terrestrial Analog Soils. Astrobiology, 2019, 19, 711-721.	3.0	24
29	Limits of Life and the Habitability of Mars: The ESA Space Experiment BIOMEX on the ISS. Astrobiology, 2019, 19, 145-157.	3.0	111
30	Functional Traits Co-Occurring with Mobile Genetic Elements in the Microbiome of the Atacama Desert. Diversity, 2019, 11, 205.	1.7	5
31	Review of David Deamer's Book Assembling Life: How Can Life Begin on Earth and Other Habitable Planets?. Astrobiology, 2019, 19, 1540-1541.	3.0	0
32	Planetary Protection and the astrobiological exploration of Mars: Proactive steps in moving forward. Advances in Space Research, 2019, 63, 1491-1497.	2.6	11
33	Intelligenz – ein neues Konzept?. , 2019, , 163-192.		0
34	Wie erkennen wir ein lebendiges Universum?. , 2019, , 213-236.		0
35	Die erste Zelle und das Problem vom Ursprung des Lebens. , 2019, , 41-62.		0

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37	Die Hypothese vom lebendigen Universum und der Werkzeugkasten der Evolution. , 2019, , 3-13.		Ο
38	Technologisch fortgeschrittene Intelligenz. , 2019, , 193-209.		0
39	Voraussetzungen fļr komplexes Leben. , 2019, , 15-38.		0
40	Endosymbiose und die ersten Eukaryoten. , 2019, , 93-112.		0
41	Transitory microbial habitat in the hyperarid Atacama Desert. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2670-2675.	7.1	172
42	Enhanced Microbial Survivability in Subzero Brines. Astrobiology, 2018, 18, 1171-1180.	3.0	32
43	Is Searching for Martian Life a Priority for the Mars Community?. Astrobiology, 2018, 18, 101-107.	3.0	8
44	Life in the Universe. , 2018, , .		23
45	Life Detection: Past and Present. , 2018, , 183-202.		0
46	Exoplanets and Exomoons. , 2018, , 229-246.		0
47	The Future and Fate of Living Systems. , 2018, , 255-264.		0
48	The Search for Extraterrestrial Intelligent Life. , 2018, , 265-273.		0
49	Optimizing Space Exploration. , 2018, , 275-286.		Ο
50	Energy Sources and Life. , 2018, , 75-100.		25
51	Signatures of Life. , 2018, , 165-181.		0
52	Lessons from the History of Life on Earth. , 2018, , 51-73.		0
53	Life and the Need for a Solvent. , 2018, , 123-147.		3
54	The Development of an Effective Bacterial Single-Cell Lysis Method Suitable for Whole Genome Amplification in Microfluidic Platforms. Micromachines, 2018, 9, 367.	2.9	31

DIRK SCHULZE-MAKUCH

#	Article	IF	CITATIONS
55	Was There an Early Habitability Window for Earth's Moon?. Astrobiology, 2018, 18, 985-988.	3.0	22
56	Time to consider search strategies for complex life on exoplanets. Nature Astronomy, 2018, 2, 432-433.	10.1	6
57	Building Blocks of Life. , 2018, , 101-121.		2
58	Habitats of Life. , 2018, , 149-164.		0
59	Long-lived volcanism within Argyre basin, Mars. Icarus, 2017, 293, 8-26.	2.5	8
60	Searching for Life on Mars Before It Is Too Late. Astrobiology, 2017, 17, 962-970.	3.0	61
61	Endosymbiosis and the First Eukaryotes. , 2017, , 77-94.		Ο
62	The Cosmic Zoo. , 2017, , .		14
63	How to Test the Cosmic Zoo Hypothesis. , 2017, , 181-200.		0
64	The First Cell and the Origin of Life Challenge. , 2017, , 35-52.		14
65	The Adaptability of Life on Earth and the Diversity of Planetary Habitats. Frontiers in Microbiology, 2017, 8, 2011.	3.5	23
66	Pre-conditions for Complex Life. , 2017, , 13-32.		4
67	The First Multicellular Organisms. , 2017, , 107-120.		1
68	Intelligence, a New Concept?. , 2017, , 137-162.		0
69	Technologically Advanced Intelligence. , 2017, , 163-177.		0
70	The Cosmic Zoo Hypothesis and the Evolutionary Tool Set. , 2017, , 3-12.		0
71	Effects of Low-Temperature Plasma-Sterilization on Mars Analog Soil Samples Mixed with Deinococcus radiodurans. Life, 2016, 6, 22.	2.4	2
72	The Cosmic Zoo: The (Near) Inevitability of the Evolution of Complex, Macroscopic Life. Life, 2016, 6, 25.	2.4	24

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73	Another Earth 2.0? Not So Fast. Astrobiology, 2016, 16, 817-821.	3.0	15
74	A question of Curiosity. New Scientist, 2016, 231, 18-19.	0.0	0
75	Deliquescenceâ€induced wetting and RSLâ€like darkening of a Mars analogue soil containing various perchlorate and chloride salts. Geophysical Research Letters, 2016, 43, 4880-4884.	4.0	41
76	The Argyre Region as a Prime Target for <i>in situ</i> Astrobiological Exploration of Mars. Astrobiology, 2016, 16, 143-158.	3.0	4
77	The Last Possible Outposts for Life on Mars. Astrobiology, 2016, 16, 159-168.	3.0	63
78	The landscape of life. , 2015, , 81-94.		4
79	How Many Biochemistries Are Available To Build a Cell?. ChemBioChem, 2015, 16, 2137-2139.	2.6	9
80	The Physical, Chemical and Physiological Limits of Life. Life, 2015, 5, 1472-1486.	2.4	9
81	Autonomous exploration of planetary lava tubes using a multi-rover framework. , 2015, , .		9
82	Mechanisms of Evolutionary Innovation Point to Genetic Control Logic as the Key Difference Between Prokaryotes and Eukaryotes. Journal of Molecular Evolution, 2015, 81, 34-53.	1.8	13
83	Geological and hydrological histories of the Argyre province, Mars. Icarus, 2015, 253, 66-98.	2.5	24
84	Nearly Forty Years after Viking: Are We Ready for a New Life-Detection Mission?. Astrobiology, 2015, 15, 413-419.	3.0	18
85	Fluorine-Rich Planetary Environments as Possible Habitats for Life. Life, 2014, 4, 374-385.	2.4	19
86	Assessing the Possibility of Biological Complexity on Other Worlds, with an Estimate of the Occurrence of Complex Life in the Milky Way Galaxy. Challenges, 2014, 5, 159-174.	1.7	48
87	Supercritical Carbon Dioxide and Its Potential as a Life-Sustaining Solvent in a Planetary Environment. Life, 2014, 4, 331-340.	2.4	88
88	Water droplets in oil are microhabitats for microbial life. Science, 2014, 345, 673-676.	12.6	118
89	Adaptation of an Antarctic lichen to Martian niche conditions can occur within 34 days. Planetary and Space Science, 2014, 98, 182-190.	1.7	82
90	A cold hydrological system in Gale crater, Mars. Planetary and Space Science, 2014, 93-94, 101-118.	1.7	34

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91	Astrobiology—a melting pot of open scientific questions. Science and Fiction, 2014, , 225-236.	0.0	0
92	Alien Encounter. Science and Fiction, 2014, , .	0.0	0
93	Extremophiles on Alien Worlds: What Types of Organismic Adaptations are Feasible on Other Planetary Bodies. Cellular Origin and Life in Extreme Habitats, 2013, , 253-265.	0.3	7
94	Drastic environmental change and its effects on a planetary biosphere. Icarus, 2013, 225, 775-780.	2.5	28
95	The overprotection of Mars. Nature Geoscience, 2013, 6, 510-511.	12.9	25
96	Locally Targeted Ecosynthesis: A Proactive <i>in situ</i> Search for Extant Life on Other Worlds. Astrobiology, 2013, 13, 674-678.	3.0	16
97	Simulations of Prebiotic Chemistry under Post-Impact Conditions on Titan. Life, 2013, 3, 538-549.	2.4	6
98	Pavilion Lake Microbialites: Morphological, Molecular and Biochemical Evidence for a Cold-Water Transition to Colonial Aggregates. Life, 2013, 3, 21-37.	2.4	10
99	Planetary Imaging in Powers of Ten: A Multiscale, Multipurpose Astrobiological Imager. Astrobiology, 2013, 13, 1005-1010.	3.0	7
100	Nutrient and population dynamics in a subglacial reservoir: a simulation case study of the Blood Falls ecosystem with implications for astrobiology. International Journal of Astrobiology, 2013, 12, 304-311.	1.6	7
101	Application of Raman Spectroscopy as In Situ Technology for the Search for Life. Cellular Origin and Life in Extreme Habitats, 2013, , 331-345.	0.3	3
102	Organic Molecules in Lunar Ice: A Window to the Early Evolution of Life on Earth. Cellular Origin and Life in Extreme Habitats, 2013, , 115-125.	0.3	2
103	A Dynamic Scheme to Assess Habitability of Exoplanets. Cellular Origin and Life in Extreme Habitats, 2012, , 307-321.	0.3	1
104	Glacial paleoenvironments on Mars revealed by the paucity of hydrated silicates in the Noachian crust of the Northern Lowlands. Planetary and Space Science, 2012, 70, 126-133.	1.7	6
105	Optimizing the detection of carotene in cyanobacteria in a martian regolith analogue with a Raman spectrometer for the ExoMars mission. Planetary and Space Science, 2012, 60, 356-362.	1.7	77
106	The Biological Oxidant and Life Detection (BOLD) mission: A proposal for a mission to Mars. Planetary and Space Science, 2012, 67, 57-69.	1.7	32
107	Frozen Desert. , 2011, , 105-135.		0

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109	Meteorites at Meridiani Planum provide evidence for significant amounts of surface and nearâ€surface water on early Mars. Meteoritics and Planetary Science, 2011, 46, 1832-1841.	1.6	17
110	A Two-Tiered Approach to Assessing the Habitability of Exoplanets. Astrobiology, 2011, 11, 1041-1052.	3.0	117
111	Microbial Life in a Liquid Asphalt Desert. Astrobiology, 2011, 11, 241-258.	3.0	49
112	The power of social structure: how we became an intelligent lineage. International Journal of Astrobiology, 2011, 10, 15-23.	1.6	6
113	Cosmic Biology. , 2011, , .		35
114	Suspended Animation. , 2011, , 153-172.		3
115	Petrolakes. , 2011, , 225-251.		0
116	Deep and Dark. , 2011, , 173-200.		0
117	A formation mechanism for hematite-rich spherules on Mars. Planetary and Space Science, 2010, 58, 401-410.	1.7	12
118	The Solar Wind Power Satellite as an alternative to a traditional Dyson Sphere and its implications for remote detection. International Journal of Astrobiology, 2010, 9, 89-99.	1.6	4
119	Noachian and more recent phyllosilicates in impact craters on Mars. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12095-12100.	7.1	73
120	Searching for Life Beyond Our Planet: Are We There Yet?. Eos, 2010, 91, 280-280.	0.1	1
121	New Priorities in the Robotic Exploration of Mars: The Case for <i>In Situ</i> Search for Extant Life. Astrobiology, 2010, 10, 705-710.	3.0	31
122	New evidence for a magmatic influence on the origin of Valles Marineris, Mars. Journal of Volcanology and Geothermal Research, 2009, 185, 12-27.	2.1	31
123	Possibilities for the detection of hydrogen peroxide–water-based life on Mars by the Phoenix Lander. Planetary and Space Science, 2009, 57, 449-453.	1.7	6
124	Investigation of water signatures at gully-exposed sites on Mars by hyperspectral image analysis. Planetary and Space Science, 2009, 57, 93-104.	1.7	7
125	Evidence for Amazonian acidic liquid water on Mars—A reinterpretation of MER mission results. Planetary and Space Science, 2009, 57, 276-287.	1.7	36
126	GRS evidence and the possibility of paleooceans on Mars. Planetary and Space Science, 2009, 57, 664-684.	1.7	107

DIRK SCHULZE-MAKUCH

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127	The Search for Alien Life in Our Solar System: Strategies and Priorities. Astrobiology, 2009, 9, 335-343.	3.0	87
128	The immune system as key to cancer treatment: Triggering its activity with microbial agents. Bioscience Hypotheses, 2009, 2, 388-392.	0.2	2
129	Limnology of Pavilion Lake, B. C., Canada Characterization of a microbialite forming environment. Fundamental and Applied Limnology, 2009, 173, 329-351.	0.7	46
130	The ALH84001 Case for Life on Mars. Cellular Origin and Life in Extreme Habitats, 2009, , 471-489.	0.3	1
131	Applications of particle-tracking techniques to bank infiltration: a case study from El Paso, Texas, USA. Environmental Geology, 2008, 55, 505-515.	1.2	11
132	The search for life beyond Earth through fuzzy expert systems. Planetary and Space Science, 2008, 56, 448-472.	1.7	23
133	Recent geological and hydrological activity on Mars: The Tharsis/Elysium corridor. Planetary and Space Science, 2008, 56, 985-1013.	1.7	92
134	Automated Global Feature Analyzer - A Driver for Tier-Scalable Reconnaissance. Aerospace Conference Proceedings IEEE, 2008, , .	0.0	12
135	A new hypothesis for the origin and redistribution of sulfates in the equatorial region of western Mars. Geophysical Research Letters, 2008, 35, .	4.0	7
136	Testing the H2O2-H2O Hypothesis for Life on Mars with the TEGA Instrument on the Phoenix Lander. Astrobiology, 2008, 8, 205-214.	3.0	9
137	Subsurface formation of oxidants on Mars and implications for the preservation of organic biosignatures. Earth and Planetary Science Letters, 2008, 272, 456-463.	4.4	45
138	Session 3. Approaches and Technologies to Detect Life on Mars. Astrobiology, 2008, 8, 302-305.	3.0	2
139	Amino acid synthesis in Europa's subsurface environment. International Journal of Astrobiology, 2008, 7, 193-203.	1.6	6
140	The case for life on Mars. International Journal of Astrobiology, 2008, 7, 117-141.	1.6	37
141	A possible biogenic origin for hydrogen peroxide on Mars: the Viking results reinterpreted. International Journal of Astrobiology, 2007, 6, 147-152.	1.6	60
142	Adaptations to environmental extremes by multicellular organisms. International Journal of Astrobiology, 2007, 6, 199-215.	1.6	19
143	The Biological Oxidant and Life Detection (BOLD) mission: an outline for a new mission to Mars. Proceedings of SPIE, 2007, , .	0.8	2
144	The hydrogen peroxide-water hypothesis for life on Mars and the problem of detection. Proceedings of SPIE, 2007, , .	0.8	0

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145	Tier-Scalable Reconnaissance Missions For The Autonomous Exploration Of Planetary Bodies. , 2007, , .		32
146	Exploration of hydrothermal targets on Mars. Icarus, 2007, 189, 308-324.	2.5	140
147	Formation and disruption of aquifers in southwestern Chryse Planitia, Mars. Icarus, 2007, 191, 545-567.	2.5	38
148	Microbial Survival Rates of Escherichia coli and Deinococcus radiodurans Under Low Temperature, Low Pressure, and UV-Irradiation Conditions, and Their Relevance to Possible Martian Life. Astrobiology, 2006, 6, 332-347.	3.0	68
149	Sorption heat engines: Simple inanimate negative entropy generators. Physica A: Statistical Mechanics and Its Applications, 2006, 362, 369-381.	2.6	15
150	Thermal Energy and the Origin of Life. Origins of Life and Evolution of Biospheres, 2006, 36, 177-189.	1.9	28
151	The prospect of alien life in exotic forms on other worlds. Die Naturwissenschaften, 2006, 93, 155-172.	1.6	105
152	Prime candidate sites for astrobiological exploration through the hydrogeological history of Mars. Planetary and Space Science, 2005, 53, 1355-1375.	1.7	22
153	Longitudinal dispersivity data and implications for scaling behavior. Ground Water, 2005, 43, 443-456.	1.3	264
154	Low frequency electromagnetic waves as a supplemental energy source to sustain microbial growth?. Die Naturwissenschaften, 2005, 92, 115-120.	1.6	10
155	Extraterrestrial hydrogeology. Hydrogeology Journal, 2005, 13, 51-68.	2.1	23
156	Venus, Mars, and the Ices on Mercury and the Moon: Astrobiological Implications and Proposed Mission Designs. Astrobiology, 2005, 5, 778-795.	3.0	44
157	Biologically Enhanced Energy and Carbon Cycling on Titan?. Astrobiology, 2005, 5, 560-567.	3.0	106
158	Scenarios for the evolution of life on Mars. Journal of Geophysical Research, 2005, 110, .	3.3	48
159	A Sulfur-Based Survival Strategy for Putative Phototrophic Life in the Venusian Atmosphere. Astrobiology, 2004, 4, 11-18.	3.0	149
160	Genetic code: Lucky chance or fundamental law of nature?. Physics of Life Reviews, 2004, 1, 202-229.	2.8	14
161	The Effect of Critical pH on Virus Fate and Transport in Saturated Porous Medium. Ground Water, 2003, 41, 701-708.	1.3	35
162	Field Evaluation of the Effectiveness of Surfactant Modified Zeolite and Iron-Oxide-Coated Sand for Removing Viruses and Bacteria from Ground Water. Ground Water Monitoring and Remediation, 2003, 23, 68-74.	0.8	24

DIRK SCHULZE-MAKUCH

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163	Microbial and chemical characterization of a groundwater flow system in an intermontane basin of southern New Mexico, USA. Hydrogeology Journal, 2003, 11, 401-412.	2.1	9
164	Correlation between microbiological and chemical parameters of some hydrothermal springs in New Mexico, USA. Journal of Hydrology, 2003, 280, 272-284.	5.4	20
165	Strategy for Modeling Putative Multilevel Ecosystems on Europa. Astrobiology, 2003, 3, 813-821.	3.0	33
166	Introduction to the Special Paper Collection: Methodologies and Techniques for Detecting Extraterrestrial (Microbial) Life. Astrobiology, 2003, 3, 487-488.	3.0	4
167	Locating Potential Biosignatures on Europa from Surface Geology Observations. Astrobiology, 2003, 3, 851-861.	3.0	39
168	Effects of pH and Geological Medium on Bacteriophage MS2 Transport in a Model Aquifer. Geomicrobiology Journal, 2003, 20, 73-84.	2.0	17
169	Reassessing the Possibility of Life on Venus: Proposal for an Astrobiology Mission. Astrobiology, 2002, 2, 197-202.	3.0	104
170	Energy Cycling and Hypothetical Organisms in Europa's Ocean. Astrobiology, 2002, 2, 105-121.	3.0	64
171	Surfactant-modified zeolite can protect drinking water wells from viruses and bacteria. Eos, 2002, 83, 193-201.	0.1	20
172	Search parameters for the remote detection of extraterrestrial life. Planetary and Space Science, 2002, 50, 675-683.	1.7	27
173	Assessing the Plausibility of Life on Other Worlds. Astrobiology, 2001, 1, 143-160.	3.0	49
174	Microbiological and chemical characterization of hydrothermal fluids at Tortugas Mountain Geothermal Area, southern New Mexico, USA. Hydrogeology Journal, 2000, 8, 295-309.	2.1	14
175	Scale Dependency of Hydraulic Conductivity in Heterogeneous Media. Ground Water, 1999, 37, 904-919.	1.3	212
176	Variations in hydraulic conductivity with scale of measurement during aquifer tests in heterogeneous, porous carbonate rocks. Hydrogeology Journal, 1998, 6, 204-215.	2.1	78
177	Method developed for extrapolating scale behavior. Eos, 1997, 78, 3.	0.1	26
178	Survey of the Outline of an Early Roman Marching-camp in Germany by Rammner's Current Line Pertubation Method. Journal of Archaeological Science, 1996, 23, 883-887.	2.4	0
179	Astrobiology and the Search for Life in the Universe. , 0, , 349-358.		2