

Samuel P Kounaves

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.

74
papers

4,065
citations

28
h-index

63
g-index

79
ext. papers

4,559
ext. citations

6.7
avg, IF

5.09
L-index

#	Paper	IF	Citations
74	Degradation of Amino Acids on Mars by UV Irradiation in the Presence of Chloride and Oxychlorine Salts. <i>Astrobiology</i> , 2021 , 21, 793-801	3.7	1
73	The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life. <i>Planetary Science Journal</i> , 2021 , 2, 77	2.9	18
72	Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. <i>Microorganisms</i> , 2021 , 9,	4.9	5
71	Methanogenic Archaea Can Produce Methane in Deliquescence-Driven Mars Analog Environments. <i>Scientific Reports</i> , 2020 , 10, 6	4.9	15
70	Stable nitrogen and oxygen isotope fractionation during precipitation of nitrate salt from saturated solutions. <i>Rapid Communications in Mass Spectrometry</i> , 2020 , 34, e8905	2.2	
69	Effects of Oxygen-Containing Salts on the Detection of Organic Biomarkers on Mars and in Terrestrial Analog Soils. <i>Astrobiology</i> , 2019 , 19, 711-721	3.7	15
68	Indigenous Organic-Oxidized Fluid Interactions in the Tissint Mars Meteorite. <i>Geophysical Research Letters</i> , 2019 , 46, 3090-3098	4.9	14
67	The Role of Titanium Dioxide (TiO ₂) in the Production of Perchlorate (ClO ₄ ⁻) from Chlorite (ClO ₂ ⁻) and Chlorate (ClO ₃ ⁻) on Earth and Mars. <i>ACS Earth and Space Chemistry</i> , 2019 , 3, 1678-1684	3.2	4
66	Volatiles Measured by the Phoenix Lander at the Northern Plains of Mars 2019 , 265-283		4
65	Transitory microbial habitat in the hyperarid Atacama Desert. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 2670-2675	11.5	105
64	Evaluation of the Tindouf Basin Region in Southern Morocco as an Analogue Site for Soil Geochemistry on Noachian Mars. <i>Astrobiology</i> , 2018 , 18, 1318-1328	3.7	7
63	Enhanced Microbial Survivability in Subzero Brines. <i>Astrobiology</i> , 2018 , 18, 1171-1180	3.7	20
62	Perchlorate-Driven Combustion of Organic Matter During Pyrolysis-Gas Chromatography-Mass Spectrometry: Implications for Organic Matter Detection on Earth and Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018 , 123, 1901-1909	4.1	9
61	Survivability of 1-Chloronaphthalene During Simulated Early Diagenesis: Implications for Chlorinated Hydrocarbon Detection on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018 , 123, 2790-2802	4.1	5
60	Solid Contact Ion-Selective Electrodes for in Situ Measurements at High Pressure. <i>Analytical Chemistry</i> , 2017 , 89, 4803-4807	7.8	8
59	Evidence for the distribution of perchlorates on Mars [ERRATUM]. <i>International Journal of Astrobiology</i> , 2017 , 16, 236-236	1.4	0
58	Measurements of Oxychlorine species on Mars. <i>International Journal of Astrobiology</i> , 2017 , 16, 203-217	1.4	22

57	Effect of Hydration State of Martian Perchlorate Salts on Their Decomposition Temperatures During Thermal Extraction. <i>Journal of Geophysical Research E: Planets</i> , 2017 , 122, 2793-2802	4.1	3
56	Deliquescence-induced wetting and RSL-like darkening of a Mars analogue soil containing various perchlorate and chloride salts. <i>Geophysical Research Letters</i> , 2016 , 43, 4880-4884	4.9	34
55	Evidence for the distribution of perchlorates on Mars. <i>International Journal of Astrobiology</i> , 2016 , 15, 311-318	1.4	45
54	The use of graphene oxide as a fixed charge carrier in ion-selective electrodes. <i>Electrochemistry Communications</i> , 2015 , 55, 51-54	5.1	6
53	Nearly Forty Years after Viking: Are We Ready for a New Life-Detection Mission?. <i>Astrobiology</i> , 2015 , 15, 413-9	3.7	10
52	The origins of perchlorate in the Martian soil. <i>Geophysical Research Letters</i> , 2015 , 42, 3739-3745	4.9	93
51	Electrochemistry of aqueous colloidal graphene oxide on Pt electrodes. <i>Langmuir</i> , 2014 , 30, 9599-606	4	5
50	Extraterrestrial. <i>Nanostructure Science and Technology</i> , 2014 , 131-151	0.9	1
49	Identification of the perchlorate parent salts at the Phoenix Mars landing site and possible implications. <i>Icarus</i> , 2014 , 232, 226-231	3.8	96
48	Evidence of martian perchlorate, chlorate, and nitrate in Mars meteorite EETA79001: Implications for oxidants and organics. <i>Icarus</i> , 2014 , 229, 206-213	3.8	110
47	Comparison of the Phoenix Mars Lander WCL soil analyses with Antarctic Dry Valley soils, Mars meteorite EETA79001 sawdust, and a Mars simulant. <i>Icarus</i> , 2013 , 225, 933-939	3.8	9
46	Stability and Lifetime of Potassium Solid-Contact Ion Selective Electrodes for Continuous and Autonomous Measurements. <i>Electroanalysis</i> , 2012 , 24, 2071-2078	3	8
45	An electrochemically based total organic carbon analyzer for planetary and terrestrial on-site applications. <i>Analytical Chemistry</i> , 2012 , 84, 6271-6	7.8	3
44	The oxidation-reduction potential of aqueous soil solutions at the Mars Phoenix landing site. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	20
43	Carbon-nanofiber-based nanocomposite membrane as a highly stable solid-state junction for reference electrodes. <i>Analytical Chemistry</i> , 2011 , 83, 5749-53	7.8	13
42	A perchlorate brine lubricated deformable bed facilitating flow of the north polar cap of Mars: Possible mechanism for water table recharging. <i>Journal of Geophysical Research</i> , 2010 , 115,		21
41	Habitability of the Phoenix landing site. <i>Journal of Geophysical Research</i> , 2010 , 115,		65
40	Wet Chemistry experiments on the 2007 Phoenix Mars Scout Lander mission: Data analysis and results. <i>Journal of Geophysical Research</i> , 2010 , 115,		91

39	Soluble sulfate in the martian soil at the Phoenix landing site. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	77
38	Discovery of natural perchlorate in the Antarctic Dry Valleys and its global implications. <i>Environmental Science & Technology</i> , 2010 , 44, 2360-4	10.3	144
37	H ₂ O at the Phoenix landing site. <i>Science</i> , 2009 , 325, 58-61	33.3	438
36	Evidence for calcium carbonate at the Mars Phoenix landing site. <i>Science</i> , 2009 , 325, 61-4	33.3	257
35	Detection of perchlorate and the soluble chemistry of martian soil at the Phoenix lander site. <i>Science</i> , 2009 , 325, 64-7	33.3	748
34	Possible physical and thermodynamical evidence for liquid water at the Phoenix landing site. <i>Journal of Geophysical Research</i> , 2009 , 114,		117
33	The MECA Wet Chemistry Laboratory on the 2007 Phoenix Mars Scout Lander. <i>Journal of Geophysical Research</i> , 2009 , 114,		41
32	Microbial Detection Array (MDA), a Novel Instrument for Unambiguous Detection of Microbial Metabolic Activity in Astrobiology Applications 2007 ,		2
31	Analysis of Simulated Martian Regolith Using an Array of Ion Selective Electrodes. <i>Electroanalysis</i> , 2005 , 17, 1441-1449	3	11
30	Electrochemical approaches for chemical and biological analysis on Mars. <i>ChemPhysChem</i> , 2003 , 4, 162-83.2		7
29	Mars Surveyor Program 101 Mars Environmental Compatibility Assessment wet chemistry lab: a sensor array for chemical analysis of the Martian soil. <i>Journal of Geophysical Research</i> , 2003 , 108, 13-1 - 13-12		26
28	Microbial life detection with minimal assumptions 2002 , 4495, 137		4
27	Determination of Geochemistry on Mars Using an Array of Electrochemical Sensors. <i>ACS Symposium Series</i> , 2002 , 306-319	0.4	2
26	Voltammetric measurement of arsenic in natural waters. <i>Talanta</i> , 2002 , 58, 23-31	6.2	93
25	Adsorptive Stripping Analysis of Trace Nickel at Iridium-Based Ultramicroelectrode Arrays. <i>Electroanalysis</i> , 2000 , 12, 44-47	3	13
24	The Source of the Anomalous Cathodic Peak During ASV with In Situ Mercury Film Formation in Chloride Solutions. <i>Electroanalysis</i> , 2000 , 12, 96-99	3	13
23	Microfabricated Ultramicroelectrode Arrays: Developments, Advances, and Applications in Environmental Analysis. <i>Electroanalysis</i> , 2000 , 12, 677-684	3	134
22	On-site analysis of arsenic in groundwater using a microfabricated gold ultramicroelectrode array. <i>Analytical Chemistry</i> , 2000 , 72, 2222-8	7.8	186

21	Microfabricated Array of Iridium Microdisks as a Substrate for Direct Determination of Cu ²⁺ or Hg ²⁺ Using Square-Wave Anodic Stripping Voltammetry. <i>Analytical Chemistry</i> , 1999 , 71, 3567-3573	7.8	184
20	Effects of Chloride Ion Concentration on Mercury(I) Chloride Formation during ex Situ and in Situ Mercury Deposition with Selected Electrode Substrates and Electrolytes. <i>Analytical Chemistry</i> , 1999 , 71, 1176-1182	7.8	15
19	Left with the Truth. <i>Science</i> , 1999 , 285, 1013-1013	33.3	
18	Failure analysis of microfabricated iridium ultramicroelectrodes in chloride media. <i>Sensors and Actuators B: Chemical</i> , 1998 , 50, 117-124	8.5	8
17	Analytical Characterization of Microlithographically Fabricated Iridium-Based Ultramicroelectrode Arrays. <i>Electroanalysis</i> , 1998 , 10, 89-93	3	22
16	Determination of Selenium(IV) at a Microfabricated Gold Ultramicroelectrode Array Using Square Wave Anodic Stripping Voltammetry. <i>Electroanalysis</i> , 1998 , 10, 364-368	3	47
15	Effects of mercury electrodeposition on the surface degradation of microlithographically fabricated iridium ultramicroelectrodes. <i>Journal of Electroanalytical Chemistry</i> , 1998 , 453, 39-48	4.1	11
14	Field Evaluation of an Electrochemical Probe for in Situ Screening of Heavy Metals in Groundwater. <i>Environmental Science & Technology</i> , 1998 , 32, 131-136	10.3	79
13	Fabrication and Characterization of a Solid State Reference Electrode for Electroanalysis of Natural Waters with Ultramicroelectrodes. <i>Analytical Chemistry</i> , 1997 , 69, 1244-1247	7.8	80
12	Microfabricated electrochemical analysis system for heavy metal detection. <i>Sensors and Actuators B: Chemical</i> , 1996 , 34, 450-455	8.5	48
11	Electrodeposition of Metal Alloy and Mixed Oxide Films Using a Single-Precursor Tetranuclear Copper-Nickel Complex. <i>Journal of the Electrochemical Society</i> , 1995 , 142, 3357-3365	3.9	96
10	Determination of organonitriles using enzyme-based selectivity mechanisms. 2. A nitrilase-modified glassy carbon microelectrode sensor for benzonitrile. <i>Analytical Chemistry</i> , 1995 , 67, 1679-1683	7.8	14
9	Microfabricated heavy metal ion sensor. <i>Sensors and Actuators B: Chemical</i> , 1995 , 23, 41-47	8.5	64
8	Iridium-based ultramicroelectrode array fabricated by microlithography. <i>Analytical Chemistry</i> , 1994 , 66, 418-423	7.8	69
7	Analytical utility of the iridium-based mercury ultramicroelectrode with square-wave anodic stripping voltammetry. <i>Analytical Chemistry</i> , 1993 , 65, 375-379	7.8	29
6	Determination of organonitriles using enzyme-based selectivity mechanisms. 1. An ammonia gas sensing electrode-based sensor for benzonitrile. <i>Analytical Chemistry</i> , 1993 , 65, 3134-3136	7.8	13
5	Pseudopolarography at the mercury hemisphere ultramicroelectrode: theory and experiment. <i>Analytical Chemistry</i> , 1992 , 64, 2998-3003	7.8	20
4	Acquisition, processing, and presentation of 3-D chromatovoltammographic data using an IBM PS/2 and par model 273 potentiostat. <i>Computers & Chemistry</i> , 1992 , 16, 29-33		2

3	An indium based mercury ultramicroelectrode. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1991 , 301, 77-85		30
2	Carbon fiber electrode cell for square wave voltammetric detection of biogenic amines in high-performance liquid chromatography. <i>Analytical Chemistry</i> , 1989 , 61, 1469-72	7.8	20
1	Studies of cadmium-ethylenediamine complex formation in seawater by computer-assisted stripping polarography. <i>Analytica Chimica Acta</i> , 1979 , 109, 327-339	6.6	16