# Samuel P Kounaves

List of Publications by Year
in descending order



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|---|---|---|---|
| 76 papers | 5,095 citations | 147801 31 h-index | 88630 70 g-index |
| 79 all docs | 79 docs citations | 79 times ranked | 4123 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Science Objectives for Flagship-Class Mission Concepts for the Search for Evidence of Life at Enceladus. Astrobiology, 2022, 22, 685-712. | 3.0 | 21 |
| 2 | Degradation of Amino Acids on Mars by UV Irradiation in the Presence of Chloride and Oxychlorine Salts. Astrobiology, 2021, 21, 793-801. | 3.0 | 5 |
| 3 | The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life. Planetary Science Journal, 2021, 2, 77. | 3.6 | 74 |
| 4 | Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. Microorganisms, 2021, 9, 1038. | 3.6 | 19 |
| 5 | Methanogenic Archaea Can Produce Methane in Deliquescence-Driven Mars Analog Environments. Scientific Reports, 2020, 10, 6. | 3.3 | 30 |
| 6 | Stable nitrogen and oxygen isotope fractionation during precipitation of nitrate salt from saturated solutions. Rapid Communications in Mass Spectrometry, 2020, 34, e8905. | 1.5 | 0 |
| 7 | The Role of Titanium Dioxide (TiO<sub>2</sub>) in the Production of Perchlorate (ClO<sub>4</sub><sup>â€“</sup>) from Chlorite (ClO<sub>2</sub><sup>â€“</sup>) and Chlorate (ClO<sub>3</sub><sup>â€“</sup>) on Earth and Mars. ACS Earth and Space Chemistry, 2019, 3, 1678-1684. | 2.7 | 8 |
| 8 | 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 |
| 9 | Indigenous Organicâ€Oxidized Fluid Interactions in the Tissint Mars Meteorite. Geophysical Research Letters, 2019, 46, 3090-3098. | 4.0 | 25 |
| 10 | Volatiles Measured by the Phoenix Lander at the Northern Plains of Mars. , 2019, , 265-283. | | 4 |
| 11 | 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 |
| 12 | Evaluation of the Tindouf Basin Region in Southern Morocco as an Analogue Site for Soil Geochemistry on Noachian Mars. Astrobiology, 2018, 18, 1318-1328. | 3.0 | 8 |
| 13 | Enhanced Microbial Survivability in Subzero Brines. Astrobiology, 2018, 18, 1171-1180. | 3.0 | 32 |
| 14 | Survivability of 1â€Chloronapthalene During Simulated Early Diagenesis: Implications for Chlorinated Hydrocarbon Detection on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2790-2802. | 3.6 | 6 |
| 15 | Perchlorateâ€Driven Combustion of Organic Matter During Pyrolysisâ€Gas Chromatographyâ€Mass Spectrometry: Implications for Organic Matter Detection on Earth and Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1901-1909. | 3.6 | 12 |
| 16 | Solid Contact Ion-Selective Electrodes for in Situ Measurements at High Pressure. Analytical Chemistry, 2017, 89, 4803-4807. | 6.5 | 12 |
| 17 | Evidence for the distribution of perchlorates on Mars â€“ ERRATUM. International Journal of Astrobiology, 2017, 16, 236-236. | 1.6 | 1 |
| 18 | Measurements of Oxychlorine species on Mars. International Journal of Astrobiology, 2017, 16, 203-217. | 1.6 | 33 |

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|---|---|---|---|
| 19 | Effect of Hydration State of Martian Perchlorate Salts on Their Decomposition Temperatures During Thermal Extraction. Journal of Geophysical Research E: Planets, 2017, 122, 2793-2802. | 3.6 | 5 |
| 20 | Evidence for the distribution of perchlorates on Mars. International Journal of Astrobiology, 2016, 15, 311-318. | 1.6 | 73 |
| 21 | 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 |
| 22 | The origins of perchlorate in the Martian soil. Geophysical Research Letters, 2015, 42, 3739-3745. | 4.0 | 119 |
| 23 | The use of graphene oxide as a fixed charge carrier in ion-selective electrodes. Electrochemistry Communications, 2015, 55, 51-54. | 4.7 | 6 |
| 24 | Nearly Forty Years after Viking: Are We Ready for a New Life-Detection Mission?. Astrobiology, 2015, 15, 413-419. | 3.0 | 18 |
| 25 | Extraterrestrial. Nanostructure Science and Technology, 2014, , 131-151. | 0.1 | 2 |
| 26 | Identification of the perchlorate parent salts at the Phoenix Mars landing site and possible implications. Icarus, 2014, 232, 226-231. | 2.5 | 123 |
| 27 | Evidence of martian perchlorate, chlorate, and nitrate in Mars meteorite EETA79001: Implications for oxidants and organics. Icarus, 2014, 229, 206-213. | 2.5 | 133 |
| 28 | Electrochemistry of Aqueous Colloidal Graphene Oxide on Pt Electrodes. Langmuir, 2014, 30, 9599-9606. | 3.5 | 7 |
| 29 | Comparison of the Phoenix Mars Lander WCL soil analyses with Antarctic Dry Valley soils, Mars meteorite EETA79001 sawdust, and a Mars simulant. Icarus, 2013, 225, 933-939. | 2.5 | 12 |
| 30 | Stability and Lifetime of Potassium Solidâ€Contact Ion Selective Electrodes for Continuous and Autonomous Measurements. Electroanalysis, 2012, 24, 2071-2078. | 2.9 | 12 |
| 31 | An Electrochemically Based Total Organic Carbon Analyzer for Planetary and Terrestrial On-Site Applications. Analytical Chemistry, 2012, 84, 6271-6276. | 6.5 | 4 |
| 32 | Carbon-Nanofiber-Based Nanocomposite Membrane as a Highly Stable Solid-State Junction for Reference Electrodes. Analytical Chemistry, 2011, 83, 5749-5753. | 6.5 | 16 |
| 33 | The oxidation-reduction potential of aqueous soil solutions at the Mars Phoenix landing site. Geophysical Research Letters, 2011, 38, n/a-n/a. | 4.0 | 28 |
| 34 | A perchlorate brine lubricated deformable bed facilitating flow of the north polar cap of Mars: Possible mechanism for water table recharging. Journal of Geophysical Research, 2010, 115, . | 3.3 | 24 |
| 35 | Habitability of the Phoenix landing site. Journal of Geophysical Research, 2010, 115, . | 3.3 | 82 |
| 36 | Wet Chemistry experiments on the 2007 Phoenix Mars Scout Lander mission: Data analysis and results. Journal of Geophysical Research, 2010, 115, . | 3.3 | 119 |

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|---|---|---|---|
| 37 | Soluble sulfate in the martian soil at the Phoenix landing site. Geophysical Research Letters, 2010, 37, . | 4.0 | 96 |
| 38 | Discovery of Natural Perchlorate in the Antarctic Dry Valleys and Its Global Implications. Environmental Science & Technology, 2010, 44, 2360-2364. | 10.0 | 167 |
| 39 | H <sub>2</sub> O at the Phoenix Landing Site. Science, 2009, 325, 58-61. | 12.6 | 500 |
| 40 | Evidence for Calcium Carbonate at the Mars Phoenix Landing Site. Science, 2009, 325, 61-64. | 12.6 | 300 |
| 41 | Detection of Perchlorate and the Soluble Chemistry of Martian Soil at the Phoenix Lander Site. Science, 2009, 325, 64-67. | 12.6 | 913 |
| 42 | Possible physical and thermodynamical evidence for liquid water at the Phoenix landing site. Journal of Geophysical Research, 2009, 114, . | 3.3 | 137 |
| 43 | The MECA Wet Chemistry Laboratory on the 2007 Phoenix Mars Scout Lander. Journal of Geophysical Research, 2009, 114, . | 3.3 | 56 |
| 44 | Microbial Detection Array (MDA), a Novel Instrument for Unambiguous Detection of Microbial Metabolic Activity in Astrobiology Applications. , 2007, , . | | 3 |
| 45 | Analysis of Simulated Martian Regolith Using an Array of Ion Selective Electrodes. Electroanalysis, 2005, 17, 1441-1449. | 2.9 | 13 |
| 46 | Electrochemical Approaches for Chemical and Biological Analysis on Mars. ChemPhysChem, 2003, 4, 162-168. | 2.1 | 10 |
| 47 | Mars Surveyor Program '01 Mars Environmental Compatibility Assessment wet chemistry lab: A sensor array for chemical analysis of the Martian soil. Journal of Geophysical Research, 2003, 108, 13-1 - 13-12. | 3.3 | 35 |
| 48 | Planar Array REDOX Cells and pH Sensors for ISS Water Quality and Microbe Detection. , 2003, , . | | 2 |
| 49 | <title>Microbial life detection with minimal assumptions</title>. , 2002, 4495, 137. | | 7 |
| 50 | Determination of Geochemistry on Mars Using an Array of Electrochemical Sensors. ACS Symposium Series, 2002, , 306-319. | 0.5 | 3 |
| 51 | Voltammetric measurement of arsenic in natural waters. Talanta, 2002, 58, 23-31. | 5.5 | 108 |
| 52 | Adsorptive Stripping Analysis of Trace Nickel at Iridium-Based Ultramicroelectrode Arrays. Electroanalysis, 2000, 12, 44-47. | 2.9 | 18 |
| 53 | The Source of the Anomalous Cathodic Peak During ASV with In Situ Mercury Film Formation in Chloride Solutions. Electroanalysis, 2000, 12, 96-99. | 2.9 | 13 |
| 54 | Microfabricated Ultramicroelectrode Arrays: Developments, Advances, and Applications in Environmental Analysis. Electroanalysis, 2000, 12, 677-684. | 2.9 | 156 |

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| 55 | On-Site Analysis of Arsenic in Groundwater Using a Microfabricated Gold Ultramicroelectrode Array. Analytical Chemistry, 2000, 72, 2222-2228. | 6.5 | 213 |
| 56 | Microfabricated Array of Iridium Microdisks as a Substrate for Direct Determination of Cu2+or Hg2+Using Square-Wave Anodic Stripping Voltammetry. Analytical Chemistry, 1999, 71, 3567-3573. | 6.5 | 203 |
| 57 | Effects of Chloride Ion Concentration on Mercury(I) Chloride Formation during ex Situ and in Situ Mercury Deposition with Selected Electrode Substrates and Electrolytes. Analytical Chemistry, 1999, 71, 1176-1182. | 6.5 | 16 |
| 58 | Left with the Truth. Science, 1999, 285, 1013-1013. | 12.6 | 0 |
| 59 | Failure analysis of microfabricated iridium ultramicroelectrodes in chloride media. Sensors and Actuators B: Chemical, 1998, 50, 117-124. | 7.8 | 8 |
| 60 | Analytical Characterization of Microlithographically Fabricated Iridium-Based Ultramicroelectrode Arrays. Electroanalysis, 1998, 10, 89-93. | 2.9 | 27 |
| 61 | Determination of Selenium(IV) at a Microfabricated Gold Ultramicroelectrode Array Using Square Wave Anodic Stripping Voltammetry. Electroanalysis, 1998, 10, 364-368. | 2.9 | 60 |
| 62 | Effects of mercury electrodeposition on the surface degradation of microlithographically fabricated iridium ultramicroelectrodes. Journal of Electroanalytical Chemistry, 1998, 453, 39-48. | 3.8 | 12 |
| 63 | Field Evaluation of an Electrochemical Probe forin SituScreening of Heavy Metals in Groundwater. Environmental Science & Technology, 1998, 32, 131-136. | 10.0 | 91 |
| 64 | Fabrication and Characterization of a Solid State Reference Electrode for Electroanalysis of Natural Waters with Ultramicroelectrodes. Analytical Chemistry, 1997, 69, 1244-1247. | 6.5 | 93 |
| 65 | Microfabricated electrochemical analysis system for heavy metal detection. Sensors and Actuators B: Chemical, 1996, 34, 450-455. | 7.8 | 67 |
| 66 | Microfabricated heavy metal ion sensor. Sensors and Actuators B: Chemical, 1995, 23, 41-47. | 7.8 | 75 |
| 67 | Electrodeposition of Metal Alloy and Mixed Oxide Films Using a Singleâ€Precursor Tetranuclear Copperâ€Nickel Complex. Journal of the Electrochemical Society, 1995, 142, 3357-3365. | 2.9 | 127 |
| 68 | Determination of organonitriles using enzyme-based selectivity mechanisms. 2. A nitrilase-modified glassy carbon microelectrode sensor for benzonitrile. Analytical Chemistry, 1995, 67, 1679-1683. | 6.5 | 15 |
| 69 | Iridium-based ultramicroelectrode array fabricated by microlithography. Analytical Chemistry, 1994, 66, 418-423. | 6.5 | 79 |
| 70 | Analytical utility of the iridium-based mercury ultramicroelectrode with square-wave anodic stripping voltammetry. Analytical Chemistry, 1993, 65, 375-379. | 6.5 | 34 |
| 71 | Determination of organonitriles using enzyme-based selectivity mechanisms. 1. An ammonia gas sensing electrode-based sensor for benzonitrile. Analytical Chemistry, 1993, 65, 3134-3136. | 6.5 | 14 |
| 72 | Pseudopolarography at the mercury hemisphere ultramicroelectrode: theory and experiment. Analytical Chemistry, 1992, 64, 2998-3003. | 6.5 | 23 |

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| 73 | Acquisition, processing, and presentation of 3-D chromatovoltammographic data using an IBM PS/2 and par model 273 potentiostat. Computers & Chemistry, 1992, 16, 29-33. | 1.2 | 2 |
| 74 | An indium based mercury ultramicroelectrode. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 301, 77-85. | 0.1 | 38 |
| 75 | Carbon fiber electrode cell for square wave voltammetric detection of biogenic amines in high-performance liquid chromatography. Analytical Chemistry, 1989, 61, 1469-1472. | 6.5 | 27 |
| 76 | Studies of cadmiumâ€"ethylenediamine complex formation in seawater by computer-assisted stripping polarography. Analytica Chimica Acta, 1979, 109, 327-339. | 5.4 | 24 |