# Samuel P Kounaves

## List of Publications by Citations

**Source:** https://exaly.com/author-pdf/3654716/samuel-p-kounaves-publications-by-citations.pdf
**Version:** 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
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 | Detection of perchlorate and the soluble chemistry of martian soil at the Phoenix lander site. *Science*, **2009**, 325, 64-7 | 33.3 | 748 |
| 73 | H2O at the Phoenix landing site. *Science*, **2009**, 325, 58-61 | 33.3 | 438 |
| 72 | Evidence for calcium carbonate at the Mars Phoenix landing site. *Science*, **2009**, 325, 61-4 | 33.3 | 257 |
| 71 | On-site analysis of arsenic in groundwater using a microfabricated gold ultramicroelectrode array. *Analytical Chemistry*, **2000**, 72, 2222-8 | 7.8 | 186 |
| 70 | 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 | 7.8 | 184 |
| 69 | Discovery of natural perchlorate in the Antarctic Dry Valleys and its global implications. *Environmental Science & Technology*, **2010**, 44, 2360-4 | 10.3 | 144 |
| 68 | Microfabricated Ultramicroelectrode Arrays: Developments, Advances, and Applications in Environmental Analysis. *Electroanalysis*, **2000**, 12, 677-684 | 3 | 134 |
| 67 | Possible physical and thermodynamical evidence for liquid water at the Phoenix landing site. *Journal of Geophysical Research*, **2009**, 114, | | 117 |
| 66 | Evidence of martian perchlorate, chlorate, and nitrate in Mars meteorite EETA79001: Implications for oxidants and organics. *Icarus*, **2014**, 229, 206-213 | 3.8 | 110 |
| 65 | 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 | 11.5 | 105 |
| 64 | Identification of the perchlorate parent salts at the Phoenix Mars landing site and possible implications. *Icarus*, **2014**, 232, 226-231 | 3.8 | 96 |
| 63 | Electrodeposition of Metal Alloy and Mixed Oxide Films Using a Single-Precursor Tetranuclear Copper-Nickel Complex. *Journal of the Electrochemical Society*, **1995**, 142, 3357-3365 | 3.9 | 96 |
| 62 | The origins of perchlorate in the Martian soil. *Geophysical Research Letters*, **2015**, 42, 3739-3745 | 4.9 | 93 |
| 61 | Voltammetric measurement of arsenic in natural waters. *Talanta*, **2002**, 58, 23-31 | 6.2 | 93 |
| 60 | Wet Chemistry experiments on the 2007 Phoenix Mars Scout Lander mission: Data analysis and results. *Journal of Geophysical Research*, **2010**, 115, | | 91 |
| 59 | Fabrication and Characterization of a Solid State Reference Electrode for Electroanalysis of Natural Waters with Ultramicroelectrodes. *Analytical Chemistry*, **1997**, 69, 1244-1247 | 7.8 | 80 |
| 58 | Field Evaluation of an Electrochemical Probe forin SituScreening of Heavy Metals in Groundwater. *Environmental Science & Technology*, **1998**, 32, 131-136 | 10.3 | 79 |

| | | | |
|---|---|---|---|
| 57 | Soluble sulfate in the martian soil at the Phoenix landing site. *Geophysical Research Letters*, **2010**, 37, n/a-n/a | 4.9 | 77 |
| 56 | Iridium-based ultramicroelectrode array fabricated by microlithography. *Analytical Chemistry*, **1994**, 66, 418-423 | 7.8 | 69 |
| 55 | Habitability of the Phoenix landing site. *Journal of Geophysical Research*, **2010**, 115, | | 65 |
| 54 | Microfabricated heavy metal ion sensor. *Sensors and Actuators B: Chemical*, **1995**, 23, 41-47 | 8.5 | 64 |
| 53 | Microfabricated electrochemical analysis system for heavy metal detection. *Sensors and Actuators B: Chemical*, **1996**, 34, 450-455 | 8.5 | 48 |
| 52 | Determination of Selenium(IV) at a Microfabricated Gold Ultramicroelectrode Array Using Square Wave Anodic Stripping Voltammetry. *Electroanalysis*, **1998**, 10, 364-368 | 3 | 47 |
| 51 | Evidence for the distribution of perchlorates on Mars. *International Journal of Astrobiology*, **2016**, 15, 311-318 | 1.4 | 45 |
| 50 | The MECA Wet Chemistry Laboratory on the 2007 Phoenix Mars Scout Lander. *Journal of Geophysical Research*, **2009**, 114, | | 41 |
| 49 | Deliquescence-induced wetting and RSL-like darkening of a Mars analogue soil containing various perchlorate and chloride salts. *Geophysical Research Letters*, **2016**, 43, 4880-4884 | 4.9 | 34 |
| 48 | An indium based mercury ultramicroelectrode. *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*, **1991**, 301, 77-85 | | 30 |
| 47 | Analytical utility of the iridium-based mercury ultramicroelectrode with square-wave anodic stripping voltammetry. *Analytical Chemistry*, **1993**, 65, 375-379 | 7.8 | 29 |
| 46 | 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 | | 26 |
| 45 | Measurements of Oxychlorine species on Mars. *International Journal of Astrobiology*, **2017**, 16, 203-217 | 1.4 | 22 |
| 44 | Analytical Characterization of Microlithographically Fabricated Iridium-Based Ultramicroelectrode Arrays. *Electroanalysis*, **1998**, 10, 89-93 | 3 | 22 |
| 43 | 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, | | 21 |
| 42 | Enhanced Microbial Survivability in Subzero Brines. *Astrobiology*, **2018**, 18, 1171-1180 | 3.7 | 20 |
| 41 | The oxidation-reduction potential of aqueous soil solutions at the Mars Phoenix landing site. *Geophysical Research Letters*, **2011**, 38, n/a-n/a | 4.9 | 20 |
| 40 | Pseudopolarography at the mercury hemisphere ultramicroelectrode: theory and experiment. *Analytical Chemistry*, **1992**, 64, 2998-3003 | 7.8 | 20 |

| | | | |
|---|---|---|---|
| 39 | Carbon fiber electrode cell for square wave voltammetric detection of biogenic amines in high-performance liquid chromatography. *Analytical Chemistry*, **1989**, 61, 1469-72 | 7.8 | 20 |
| 38 | The Enceladus Orbilander Mission Concept: Balancing Return and Resources in the Search for Life. *Planetary Science Journal*, **2021**, 2, 77 | 2.9 | 18 |
| 37 | Studies of cadmium□ethylenediamine complex formation in seawater by computer-assisted stripping polarography. *Analytica Chimica Acta*, **1979**, 109, 327-339 | 6.6 | 16 |
| 36 | Effects of Oxygen-Containing Salts on the Detection of Organic Biomarkers on Mars and in Terrestrial Analog Soils. *Astrobiology*, **2019**, 19, 711-721 | 3.7 | 15 |
| 35 | 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 | 7.8 | 15 |
| 34 | Methanogenic Archaea Can Produce Methane in Deliquescence-Driven Mars Analog Environments. *Scientific Reports*, **2020**, 10, 6 | 4.9 | 15 |
| 33 | Indigenous Organic-Oxidized Fluid Interactions in the Tissint Mars Meteorite. *Geophysical Research Letters*, **2019**, 46, 3090-3098 | 4.9 | 14 |
| 32 | Determination of organonitriles using enzyme-based selectivity mechanisms. 2. A nitrilase-modified glassy carbon microelectrode sensor for benzonitrile. *Analytical Chemistry*, **1995**, 67, 1679-1683 | 7.8 | 14 |
| 31 | Carbon-nanofiber-based nanocomposite membrane as a highly stable solid-state junction for reference electrodes. *Analytical Chemistry*, **2011**, 83, 5749-53 | 7.8 | 13 |
| 30 | Adsorptive Stripping Analysis of Trace Nickel at Iridium-Based Ultramicroelectrode Arrays. *Electroanalysis*, **2000**, 12, 44-47 | 3 | 13 |
| 29 | The Source of the Anomalous Cathodic Peak During ASV with In Situ Mercury Film Formation in Chloride Solutions. *Electroanalysis*, **2000**, 12, 96-99 | 3 | 13 |
| 28 | Determination of organonitriles using enzyme-based selectivity mechanisms. 1. An ammonia gas sensing electrode-based sensor for benzonitrile. *Analytical Chemistry*, **1993**, 65, 3134-3136 | 7.8 | 13 |
| 27 | Effects of mercury electrodeposition on the surface degradation of microlithographically fabricated iridium ultramicroelectrodes. *Journal of Electroanalytical Chemistry*, **1998**, 453, 39-48 | 4.1 | 11 |
| 26 | Analysis of Simulated Martian Regolith Using an Array of Ion Selective Electrodes. *Electroanalysis*, **2005**, 17, 1441-1449 | 3 | 11 |
| 25 | Nearly Forty Years after Viking: Are We Ready for a New Life-Detection Mission?. *Astrobiology*, **2015**, 15, 413-9 | 3.7 | 10 |
| 24 | Perchlorate-Driven Combustion of Organic Matter During Pyrolysis-Gas Chromatography-Mass Spectrometry: Implications for Organic Matter Detection on Earth and Mars. *Journal of Geophysical Research E: Planets*, **2018**, 123, 1901-1909 | 4.1 | 9 |
| 23 | 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 | 3.8 | 9 |
| 22 | Solid Contact Ion-Selective Electrodes for in Situ Measurements at High Pressure. *Analytical Chemistry*, **2017**, 89, 4803-4807 | 7.8 | 8 |

| | | | |
|---|---|---|---|
| 21 | Stability and Lifetime of Potassium Solid-Contact Ion Selective Electrodes for Continuous and Autonomous Measurements. *Electroanalysis*, **2012**, 24, 2071-2078 | 3 | 8 |
| 20 | Failure analysis of microfabricated iridium ultramicroelectrodes in chloride media. *Sensors and Actuators B: Chemical*, **1998**, 50, 117-124 | 8.5 | 8 |
| 19 | Evaluation of the Tindouf Basin Region in Southern Morocco as an Analogue Site for Soil Geochemistry on Noachian Mars. *Astrobiology*, **2018**, 18, 1318-1328 | 3.7 | 7 |
| 18 | Electrochemical approaches for chemical and biological analysis on Mars. *ChemPhysChem*, **2003**, 4, 162-8 | 3.2 | 7 |
| 17 | The use of graphene oxide as a fixed charge carrier in ion-selective electrodes. *Electrochemistry Communications*, **2015**, 55, 51-54 | 5.1 | 6 |
| 16 | Electrochemistry of aqueous colloidal graphene oxide on Pt electrodes. *Langmuir*, **2014**, 30, 9599-606 | 4 | 5 |
| 15 | Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. *Microorganisms*, **2021**, 9, | 4.9 | 5 |
| 14 | Survivability of 1-Chloronapthalene During Simulated Early Diagenesis: Implications for Chlorinated Hydrocarbon Detection on Mars. *Journal of Geophysical Research E: Planets*, **2018**, 123, 2790-2802 | 4.1 | 5 |
| 13 | The Role of Titanium Dioxide (TiO2) in the Production of Perchlorate ($ClO_4^-$) from Chlorite ($ClO_2^-$) and Chlorate ($ClO_3^-$) on Earth and Mars. *ACS Earth and Space Chemistry*, **2019**, 3, 1678-1684 | 3.2 | 4 |
| 12 | Microbial life detection with minimal assumptions **2002**, 4495, 137 | | 4 |
| 11 | Volatiles Measured by the Phoenix Lander at the Northern Plains of Mars **2019**, 265-283 | | 4 |
| 10 | 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 | 4.1 | 3 |
| 9 | An electrochemically based total organic carbon analyzer for planetary and terrestrial on-site applications. *Analytical Chemistry*, **2012**, 84, 6271-6 | 7.8 | 3 |
| 8 | Microbial Detection Array (MDA), a Novel Instrument for Unambiguous Detection of Microbial Metabolic Activity in Astrobiology Applications **2007**, | | 2 |
| 7 | Determination of Geochemistry on Mars Using an Array of Electrochemical Sensors. *ACS Symposium Series*, **2002**, 306-319 | 0.4 | 2 |
| 6 | 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 | | 2 |
| 5 | Extraterrestrial. *Nanostructure Science and Technology*, **2014**, 131-151 | 0.9 | 1 |
| 4 | Degradation of Amino Acids on Mars by UV Irradiation in the Presence of Chloride and Oxychlorine Salts. *Astrobiology*, **2021**, 21, 793-801 | 3.7 | 1 |

| | | | |
|---|---|---|---|
| 3 | Evidence for the distribution of perchlorates on Mars ERRATUM. *International Journal of Astrobiology*, **2017**, 16, 236-236 | 1.4 | 0 |
| 2 | Left with the Truth. *Science*, **1999**, 285, 1013-1013 | 33.3 | |
| 1 | Stable nitrogen and oxygen isotope fractionation during precipitation of nitrate salt from saturated solutions. *Rapid Communications in Mass Spectrometry*, **2020**, 34, e8905 | 2.2 | |