Rafael Navarro-GonzÃ¡lez

List of Publications by Year
in descending order

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178 papers	12,676 citations	36203 51 h-index	24915 109 g-index
182 all docs	182 docs citations	182 times ranked	6770 citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	6.0	687
2	Mars-Like Soils in the Atacama Desert, Chile, and the Dry Limit of Microbial Life. Science, 2003, 302, 1018-1021.	6.0	545
3	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
4	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
5	The Sample Analysis at Mars Investigation and Instrument Suite. Space Science Reviews, 2012, 170, 401-478.	3.7	435
6	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 495-514.	1.5	375
7	Mars methane detection and variability at Gale crater. Science, 2015, 347, 415-417.	6.0	373
8	Organic matter preserved in 3-billion-year-old mudstones at Gale crater, Mars. Science, 2018, 360, 1096-1101.	6.0	369
9	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
10	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
11	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	6.0	327
12	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
13	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
14	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the Rocknest aeolian deposit in Gale Crater. Journal of Geophysical Research E: Planets, 2013, 118, 1955-1973.	1.5	306
15	Reanalysis of the Viking results suggests perchlorate and organics at midlatitudes on Mars. Journal of Geophysical Research, 2010, 115, .	3.3	289
16	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
17	Transient liquid water and water activity at Gale crater on Mars. Nature Geoscience, 2015, 8, 357-361.	5.4	277
18	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246

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19	Isotope Ratios of H, C, and O in CO ₂ and H ₂ O of the Martian Atmosphere. Science, 2013, 341, 260-263.	6.0	241
20	A possible nitrogen crisis for Archaean life due to reduced nitrogen fixation by lightning. Nature, 2001, 412, 61-64.	13.7	234
21	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	6.0	224
22	Background levels of methane in Marsâ€™ atmosphere show strong seasonal variations. Science, 2018, 360, 1093-1096.	6.0	224
23	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215
24	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the Curiosity rover investigations at Gale crater, Mars. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4245-4250.	3.3	172
25	Evolved gas analyses of sedimentary rocks and eolian sediment in Gale Crater, Mars: Results of the Curiosity rover's sample analysis at Mars instrument from Yellowknife Bay to the Namib Dune. Journal of Geophysical Research E: Planets, 2017, 122, 2574-2609.	1.5	168
26	Temporal evolution of the shock wave and hot core air in laser induced plasma. Applied Physics Letters, 2000, 77, 3158-3160.	1.5	162
27	The limitations on organic detection in Mars-like soils by thermal volatilization-gas chromatography-MS and their implications for the Viking results. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16089-16094.	3.3	161
28	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
29	The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. Science, 2015, 347, 412-414.	6.0	113
30	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	6.0	103
31	Primordial argon isotope fractionation in the atmosphere of Mars measured by the SAM instrument on Curiosity and implications for atmospheric loss. Geophysical Research Letters, 2013, 40, 5605-5609.	1.5	101
32	Nitrogen fixation by volcanic lightning in the early Earth. Geophysical Research Letters, 1998, 25, 3123-3126.	1.5	92
33	In Situ Compositional Measurements of Rocks and Soils with the Alpha Particle X-ray Spectrometer on NASA's Mars Rovers. Elements, 2015, 11, 39-44.	0.5	91
34	Mexico City air quality: a qualitative review of gas and aerosol measurements (1960â€“2000). Atmospheric Environment, 2001, 35, 4041-4058.	1.9	86
35	Trace element geochemistry (Li, Ba, Sr, and Rb) using Curiosity's ChemCam: Early results for Gale crater from Bradbury Landing Site to Rocknest. Journal of Geophysical Research E: Planets, 2014, 119, 255-285.	1.5	86
36	Complex Refractive Index of Titan's Aerosol Analogues in the 200â€“900 nm Domain. Icarus, 2002, 156, 515-529.	1.1	84

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37	Pressure observations by the Curiosity rover: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 82-92.	1.5	84
38	Description of four novel psychrophilic, ionizing radiation-sensitive Deinococcus species from alpine environments. International Journal of Systematic and Evolutionary Microbiology, 2008, 58, 1252-1258.	0.8	83
39	Oxidants at the Surface of Mars: A Review in Light of Recent Exploration Results. Astrobiology, 2016, 16, 977-996.	1.5	83
40	Preliminary interpretation of the REMS pressure data from the first 100 sols of the MSL mission. Journal of Geophysical Research E: Planets, 2014, 119, 440-453.	1.5	80
41	Abundances and implications of volatileâ€bearing species from evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 237-254.	1.5	73
42	Isotopes of nitrogen on Mars: Atmospheric measurements byâ€‰Curiosity's mass spectrometer. Geophysical Research Letters, 2013, 40, 6033-6037.	1.5	72
43	A Twoâ€Step Kâ€Ar Experiment on Mars: Dating the Diagenetic Formation of Jarosite from Amazonian Groundwaters. Journal of Geophysical Research E: Planets, 2017, 122, 2803-2818.	1.5	72
44	Seasonal Variations in Atmospheric Composition as Measured in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2019, 124, 3000-3024.	1.5	71
45	ChemCam passive reflectance spectroscopy of surface materials at the Curiosity landing site, Mars. Icarus, 2015, 249, 74-92.	1.1	70
46	Sulfur-bearing phases detected by evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 373-393.	1.5	65
47	Compositions of coarse and fine particles in martian soils at gale: A window into the production of soils. Icarus, 2015, 249, 22-42.	1.1	64
48	Curiosity's Mission of Exploration at Gale Crater, Mars. Elements, 2015, 11, 19-26.	0.5	55
49	A new extraction technique for in situ analyses of amino and carboxylic acids on Mars by gas chromatography mass spectrometry. Planetary and Space Science, 2006, 54, 1592-1599.	0.9	54
50	Large sulfur isotope fractionations in Martian sediments at Gale crater. Nature Geoscience, 2017, 10, 658-662.	5.4	53
51	Can laboratory tholins mimic the chemistry producing Titan's aerosols? A review in light of ACP experimental results. Planetary and Space Science, 2013, 77, 91-103.	0.9	51
52	First Detections of Dichlorobenzene Isomers and Trichloromethylpropane from Organic Matter Indigenous to Mars Mudstone in Gale Crater, Mars: Results from the Sample Analysis at Mars Instrument Onboard the Curiosity Rover. Astrobiology, 2020, 20, 292-306.	1.5	50
53	The nitrate/(per)chlorate relationship on Mars. Geophysical Research Letters, 2017, 44, 2643-2651.	1.5	49
54	Pyrolysis of alanine and Î±-aminoisobutyric acid: identification of less-volatile products using gas chromatography/Fourier transform infrared spectroscopy/mass spectrometry. Journal of Analytical and Applied Pyrolysis, 1998, 45, 89-102.	2.6	46

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55	Atmospheric tides in Gale Crater, Mars. Icarus, 2016, 268, 37-49.	1.1	45
56	Production of nitrogen oxides by lightning and coronae discharges in simulated early earth, venus and mars environments. Advances in Space Research, 2001, 27, 217-223.	1.2	44
57	Diurnal variations of energetic particle radiation at the surface of Mars as observed by the Mars Science Laboratory Radiation Assessment Detector. Journal of Geophysical Research E: Planets, 2014, 119, 1345-1358.	1.5	44
58	Aldehydes, Ketones, and Carboxylic Acids Formed Radiolytically in Aqueous Solutions of Cyanides and Simple Nitriles. Radiation Research, 1983, 95, 248.	0.7	43
59	Comparison of Martian surface ionizing radiation measurements from MSLâ€RAD with Badhwarâ€O'Neill 2011/HZETRN model calculations. Journal of Geophysical Research E: Planets, 2014, 119, 1311-1321.	1.5	42
60	Chemical and Biological Sensing Using Diatom Photonic Crystal Biosilica With In-Situ Growth Plasmonic Nanoparticles. IEEE Transactions on Nanobioscience, 2016, 15, 828-834.	2.2	42
61	Identification of hexahydroimidazo[1,2-a]pyrazine-3,6-diones and hexahydroimidazo[1,2-a]imidazo[1,2-d]pyrazine-3,8-diones, unusual products of silica-catalyzed amino acid thermal condensation and products of their thermal decomposition using coupled high-performance liquid chromatographyâ€“particle beam mass spectrometry and gas chromatographyâ€“Fourier transform infrared spectroscopyâ€“mass spectrometry. Journal of Chromatography A, 1997, 776, 255-273.	1.8	41
62	Indigenous and exogenous organics and surfaceâ€“atmosphere cycling inferred from carbon and oxygen isotopes at Gale crater. Nature Astronomy, 2020, 4, 526-532.	4.2	41
63	Determining Mineralogy on Mars with the CheMin X-Ray Diffractometer. Elements, 2015, 11, 45-50.	0.5	39
64	Light and variable 37 Cl/ 35 Cl ratios in rocks from Gale Crater, Mars: Possible signature of perchlorate. Earth and Planetary Science Letters, 2016, 438, 14-24.	1.8	39
65	Possible role of volcanic ash-gas clouds in the Earth's prebiotic chemistry. Origins of Life and Evolution of Biospheres, 1996, 26, 173-194.	0.8	37
66	The physical mechanism of nitric oxide formation in simulated lightning. Geophysical Research Letters, 2001, 28, 3867-3870.	1.5	37
67	Nitrogen fixation on early Mars by volcanic lightning and other sources. Geophysical Research Letters, 2005, 32, .	1.5	37
68	Characterization of Organics, Microorganisms, Desert Soils, and Mars-like Soils by Thermal Volatilization Coupled to Mass Spectrometry and Their Implications for the Search for Organics on Mars by Phoenix and Future Space Missions. Astrobiology, 2009, 9, 703-715.	1.5	37
69	Gale crater and impact processes â€“ Curiosityâ€™s first 364 Sols on Mars. Icarus, 2015, 249, 108-128.	1.1	37
70	Corona discharge of Titan's troposphere. Advances in Space Research, 1997, 19, 1121-1133.	1.2	36
71	Development of a gas chromatography compatible Sample Processing System (SPS) for the in-situ analysis of refractory organic matter in martian soil: preliminary results. Advances in Space Research, 2009, 43, 143-151.	1.2	36
72	Possible contribution of different energy sources to the production of organics in Titan's atmosphere. Advances in Space Research, 2001, 27, 261-270.	1.2	34

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73	Local variations of bulk hydrogen and chlorineâ€equivalent neutron absorption content measured at the contact between the Sheepbed and Gillespie Lake units in Yellowknife Bay, Gale Crater, using the DAN instrument onboard Curiosity. Journal of Geophysical Research E: Planets, 2014, 119, 1259-1275.	1.5	33
74	Recovery of Fatty Acids from Mineralogic Mars Analogs by TMAH Thermochemolysis for the Sample Analysis at Mars Wet Chemistry Experiment on the Curiosity Rover. Astrobiology, 2019, 19, 522-546.	1.5	33
75	Production of hydrocarbons and nitriles by electrical processes in Titan's atmosphere. Advances in Space Research, 2001, 27, 271-282.	1.2	32
76	Analysis of complex mixtures recovered from space missions. Journal of Chromatography A, 2001, 939, 69-77.	1.8	32
77	Did life exist on Mars? Search for organic and inorganic signatures, one of the goals for â€œSAMâ€• (sample analysis at Mars). Advances in Space Research, 2004, 33, 2240-2245.	1.2	32
78	Atacama Desert Soil Microbiology. Soil Biology, 2008, , 117-132.	0.6	32
79	Constraints on the Mineralogy and Geochemistry of Vera Rubin Ridge, Gale Crater, Mars, From Mars Science Laboratory Sample Analysis at Mars Evolved Gas Analyses. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006309.	1.5	32
80	Magnesium sulfate as a key mineral for the detection of organic molecules on Mars using pyrolysis. Journal of Geophysical Research E: Planets, 2016, 121, 61-74.	1.5	31
81	Identification of Chlorobenzene in the Viking Gas Chromatographâ€Mass Spectrometer Data Sets: Reanalysis of Viking Mission Data Consistent With Aromatic Organic Compounds on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1674-1683.	1.5	31
82	Search for past life on Mars: Physical and chemical characterization of minerals of biotic and abiotic origin: part 1 - Calcite. Geophysical Research Letters, 2005, 32, .	1.5	29
83	Soil carbon distribution and site characteristics in hyper-arid soils of the Atacama Desert: A site with Mars-like soils. Advances in Space Research, 2012, 50, 108-122.	1.2	29
84	Organic molecules revealed in Marsâ€™s Bagnold Dunes by Curiosityâ€™s derivatization experiment. Nature Astronomy, 2022, 6, 129-140.	4.2	29
85	Pyrolytic Behavior of Amino Acids and Nucleic Acid Bases: Implications for Their Survival during Extraterrestrial Delivery. Icarus, 1998, 134, 269-278.	1.1	27
86	Nitrogen Fixation By Corona Discharge On The Early Precambrian Earth. Origins of Life and Evolution of Biospheres, 2005, 35, 401-409.	0.8	27
87	Paleoecology reconstruction from trapped gases in a fulgurite from the late Pleistocene of the Libyan Desert. Geology, 2007, 35, 171.	2.0	27
88	In situ analysis of martian regolith with the SAM experiment during the first mars year of the MSL mission: Identification of organic molecules by gas chromatography from laboratory measurements. Planetary and Space Science, 2016, 129, 88-102.	0.9	27
89	Organic chemistry induced by corona discharges in Titanâ€™s troposphere: Laboratory simulations. Advances in Space Research, 2005, 36, 274-280.	1.2	26
90	Chlorate/Feâ€Bearing Phase Mixtures as a Possible Source of Oxygen and Chlorine Detected by the Sample Analysis at Mars Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2920-2938.	1.5	26

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91	Behavior of amino acids when volatilized in the presence of silica gel and pulverized basaltic lava. Origins of Life and Evolution of Biospheres, 1998, 28, 167-193.	0.8	25
92	Detection of Reduced Sulfur on Vera Rubin Ridge by Quadratic Discriminant Analysis of Volatiles Observed During Evolved Gas Analysis. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006304.	1.5	25
93	Abiotic Input of Fixed Nitrogen by Bolide Impacts to Gale Crater During the Hesperian: Insights From the Mars Science Laboratory. Journal of Geophysical Research E: Planets, 2019, 124, 94-113.	1.5	23
94	A numerical and experimental study of the time-evolution of a low Mach number jet. Monthly Notices of the Royal Astronomical Society, 2001, 324, 206-212.	1.6	22
95	Multidisciplinary approach of the hyperarid desert of Pampas de La Joya in southern Peru as a new Mars-like soil analog. Geochimica Et Cosmochimica Acta, 2011, 75, 1975-1991.	1.6	21
96	H2S emissions from Cerro Prieto geothermal power plant, Mexico, and air pollutants measurements in the area. Geothermics, 2013, 46, 55-65.	1.5	21
97	Reply to comment by Biemann and Bada on â€œReanalysis of the Viking results suggests perchlorate and organics at midlatitudes on Marsâ€• Journal of Geophysical Research, 2011, 116, .	3.3	20
98	Major Volatiles Evolved From Eolian Materials in Gale Crater. Geophysical Research Letters, 2018, 45, 10,240.	1.5	19
99	Chemical and optical behaviour of tholins, laboratory analogues of Titan aerosols. Advances in Space Research, 2001, 27, 289-297.	1.2	18
100	A quantitative assay of biologically important compounds in simulated primitive earth experiments. Advances in Space Research, 1989, 9, 63-66.	1.2	17
101	Experimental simulation of early martian volcanic lightning. Advances in Space Research, 2001, 27, 201-206.	1.2	16
102	Pyrolysis of Î³-irradiated bisphenol-A polycarbonate. Polymer Bulletin, 2002, 48, 43-51.	1.7	16
103	Search for past life on Mars: Physical and chemical characterization of minerals of biotic and abiotic origin: 2. Aragonite. Geophysical Research Letters, 2007, 34, .	1.5	16
104	The Î³-irradiation of aqueous solutions of urea. Implications for chemical evolution. Origins of Life and Evolution of Biospheres, 1989, 19, 109-118.	0.8	15
105	The Î³-irradiation of aqueous hydrogen cyanide in the presence of ferrocyanide or ferricyanide: Implications to prebiotic chemistry. Advances in Space Research, 1989, 9, 57-61.	1.2	15
106	Transport of extraterrestrial biomolecules to the Earth: Problem of thermal stability. Advances in Space Research, 1999, 24, 505-514.	1.2	14
107	A comparative radiation degradation of some aromatic polyesters. Polymer Bulletin, 2006, 57, 499-504.	1.7	14
108	Correction to â€œReanalysis of the Viking results suggests perchlorate and organics at midlatitudes on Marsâ€• Journal of Geophysical Research, 2011, 116, .	3.3	14

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109	Application of TMAH thermochemolysis to the detection of nucleobases: Application to the MOMA and SAM space experiment. Talanta, 2019, 204, 802-811.	2.9	14
110	A Review of Sample Analysis at Mars-Evolved Gas Analysis Laboratory Analog Work Supporting the Presence of Perchlorates and Chlorates in Gale Crater, Mars. Minerals (Basel, Switzerland), 2021, 11, 475.	0.8	14
111	Organic carbon concentrations in 3.5-billion-year-old lacustrine mudstones of Mars. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	14
112	Images from Curiosity: A New Look at Mars. Elements, 2015, 11, 27-32.	0.5	13
113	Role of the TenaxÂ® Adsorbent in the Interpretation of the EGA and GCâ€MS Analyses Performed With the Sample Analysis at Mars in Gale Crater. Journal of Geophysical Research E: Planets, 2019, 124, 2819-2851.	1.5	13
114	Volatile and Isotopic Imprints of Ancient Mars. Elements, 2015, 11, 51-56.	0.5	12
115	Dust in the universe: Implications for terrestrial prebiotic chemistry. Origins of Life and Evolution of Biospheres, 1995, 25, 457-493.	0.8	11
116	Thermally evolved gas analysis (TEGA) of hyperarid soils doped with microorganisms from the Atacama Desert in southern Peru: Implications for the Phoenix mission. Advances in Space Research, 2009, 44, 254-266.	1.2	11
117	Influence of Calcium Perchlorate on Organics Under SAMâ€Like Pyrolysis Conditions: Constraints on the Nature of Martian Organics. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006359.	1.5	11
118	Lightning Associated to Archean Volcanic Ash-Gas Clouds. , 1996, , 123-142.		11
119	Power measurements of spark discharge experiments. Origins of Life and Evolution of Biospheres, 1998, 28, 131-153.	0.8	10
120	PM3, AM1, MNDO and MINDO3 semi-empirical IR spectra simulations for compounds of interest for Titan's chemistry: diazomethane, methyl azide, methyl isocyanide, diacetylene and triacetylene. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2001, 57, 505-511.	2.0	10
121	Production Of Low Molecular Weight Hydrocarbons By Volcanic Eruptions On Early Mars. Origins of Life and Evolution of Biospheres, 2005, 35, 477-487.	0.8	10
122	Climatological characteristics in the extreme hyper-arid region of Pampas de La Joya, Peru. Astrobiological approach in four years of observation: 2004â€“2008. International Journal of Astrobiology, 2012, 11, 25-35.	0.9	10
123	MICROORGANISMS, ORGANIC CARBON, AND THEIR RELATIONSHIP WITH OXIDANT ACTIVITY IN HYPER-ARID MARS-LIKE SOILS: IMPLICATIONS FOR SOIL HABITABILITY. Palaios, 2016, 31, 1-9.	0.6	10
124	Influence of Calcium Perchlorate on the Search for Organics on Mars with Tetramethylammonium Hydroxide Thermochemolysis. Astrobiology, 2021, 21, 279-297.	1.5	10
125	PM3, AM1, MINDO3 semi-empirical IR spectra simulations for some nitriles of interest for Titanâ€™s chemistry. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2000, 56, 1157-1165.	2.0	9
126	Experimental simulation of a double return-stroke lightning flash by lasers. Geophysical Research Letters, 2002, 29, 1-1-1-4.	1.5	9

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127	On the oxidation ability of the NASA Marsâ€1 soil simulant during the thermal volatilization step: Implications for the search of organics on Mars. Geophysical Research Letters, 2009, 36, .	1.5	9
128	Production of nitrates and perchlorates by laser ablation of sodium chloride in simulated Martian atmospheres. Implications for their formation by electric discharges in dust devils. Life Sciences in Space Research, 2019, 22, 125-136.	1.2	9
129	The Î³-irradiation of aqueous acetic acid-clay suspensions. Origins of Life and Evolution of Biospheres, 1990, 20, 377-387.	0.8	7
130	Radiolysis of aqueous formaldehyde relevant to cometary environments. Advances in Space Research, 1992, 12, 57-62.	1.2	7
131	An extended cellular space method for simulating autocatalytic oligonucleotides. Computers & Chemistry, 1994, 18, 33-43.	1.2	7
132	On the survivability of an enantiomeric excess of amino acids in comet nuclei during the decay of26Al and other radionuclides. Astrophysics and Space Science, 1996, 236, 49-60.	0.5	7
133	Optimisation and analysis of the synthesis of a cellular glass-ceramic produced from water purification sludge and clay. Applied Clay Science, 2016, 123, 232-238.	2.6	7
134	Analysis of keto acids as their methyl esters of 2,4-dinitrophenylhydrazone derivatives by gas chromatography and gas chromatography-mass spectrometry. Journal of Chromatography A, 1991, 587, 247-254.	1.8	6
135	Interpretation of chromatographic data recovered from space missions: decoding of complex chromatograms by Fourier analysis. Planetary and Space Science, 2003, 51, 581-590.	0.9	6
136	Highâ€Temperature HCl Evolutions From Mixtures of Perchlorates and Chlorides With Waterâ€Bearing Phases: Implications for the SAM Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006173.	1.5	6
137	Influence of Calcium Perchlorate on the Search for Martian Organic Compounds with MTBSTFA/DMF Derivatization. Astrobiology, 2021, 21, 1137-1156.	1.5	6
138	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the rocknest aeolian deposit in gale crater. Journal of Geophysical Research E: Planets, 2013, , n/a-n/a.	1.5	6
139	Experimental and computational study of the radiation-induced decomposition of formaldehyde. Implications to cometary nuclei. Origins of Life and Evolution of Biospheres, 1991, 21, 39-49.	0.8	5
140	Radiation-induced syntheses in cometary simulated models. Advances in Space Research, 1992, 12, 63-66.	1.2	5
141	Role of trace metal ions in chemical evolution. The case of free-radical reactions. Advances in Space Research, 1995, 15, 357-364.	1.2	5
142	Computer simulation of IR spectra as a useful tool for GC/FTIR/MS identification of unusual amidine products of amino acid condensation. , 1997, 3090, 372.		5
143	Corona Chemistry in Titan.. Uchu Seibutsu Kagaku, 1998, 12, 81-91.	1.0	5
144	Formation of prebiotic organics in space: Its simulation on ground and conceptual design of space experiment in earth orbit. Advances in Space Research, 2002, 30, 1495-1500.	1.2	5

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145	Time resolved study of simulated volcanic lightning by laser induced plasma in a plume of ablated basalt. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	5
146	Radiolytic Degradation of Soil Carbon from the Mojave Desert by⁶⁰Co Gamma Rays: Implications for the Survival of Martian Organic Compounds Due to Cosmic Radiation. Astrobiology, 2021, 21, 381-393.	1.5	5
147	Prebiotic Synthesis by Lightning in Martian Volcanic Plumes. , 1998, , 255-260.		5
148	The Sample Analysis at Mars Investigation and Instrument Suite. , 2012, , 401-478.		5
149	Gaseous products formed by Î³-irradiation of bisphenol-A polycarbonate. Polymer Bulletin, 2000, 45, 419-424.	1.7	4
150	Decomposition of sodium formate and L- and D-alanine in the Pampas de La Joya soils: Implications as a new geochemical analogue to Martian regolith. Advances in Space Research, 2012, 49, 821-833.	1.2	4
151	Emission spectra of a simulated Chicxulub impact-vapor plume at the Cretaceousâ€“Paleogene boundary. Icarus, 2020, 346, 113813.	1.1	4
152	Tropical Alpine Environments: A Plausible Analog for Ancient and Future Life on Mars. , 2000, , 297-302.		4
153	Dust particles in the atmospheres of terrestrial planets and their roles for prebiotic chemistry: An overview. Astrophysics and Space Science, 1996, 236, 61-75.	0.5	3
154	A Conceptual Design for Cosmo-biology Experiments in Earth's Orbit.. Uchu Seibutsu Kagaku, 1998, 12, 106-111.	1.0	3
155	A method for monitoring glacial loss and temperature variation using satellite observations: Case study of Pico de Orizaba and IztaccÃhuatl (Mexico). Arctic, Antarctic, and Alpine Research, 2019, 51, 379-396.	0.4	3
156	Asymmetry and the Origin of Life. , 1990, , 193-203.		3
157	Volcanic Lightning and the Availability of Reactive Nitrogen and Phosphorus for Chemical Evolution. , 2001, , 201-210.		3
158	Experimental Simulation of Volcanic Lightning on Early Mars. , 2000, , 293-296.		3
159	Chemical studies on the possible existence of life on Mars. Advances in Space Research, 1995, 15, 177-184.	1.2	2
160	An inquiry into the selective protection of glycine during the radiolysis of glycine-alanine mixtures in aqueous solutions and its implications to the preservation of optically active amino acids in the early earth. Journal of Biological Physics, 1996, 22, 87-100.	0.7	2
161	Prebiotic Chemistry: Laboratory Experiments and Planetary Observation. Advances in Astrobiology and Biogeophysics, 2005, , 449-471.	0.6	2
162	Field method for rapid quantification of labile organic carbon in hyper-arid desert soils validated by two thermal methods. International Journal of Astrobiology, 2014, 13, 182-189.	0.9	2

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163	Detection of trace organics in Martian soil analogs using fluorescence-free surface enhanced 1064-nm Raman Spectroscopy. Optics Express, 2016, 24, 22104.	1.7	2
164	The Possible Role of Volcanic Lightning in Chemical Evolution. , 2004, , 139-152.		2
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