

Isik Kanik

List of Publications by Year in descending order

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47
papers

2,175
citations

236925

25
h-index

223800

46
g-index

47
all docs

47
docs citations

47
times ranked

2392
citing authors

#	ARTICLE	IF	CITATIONS
1	Controls on development and diversity of Early Archean stromatolites. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9548-9555.	7.1	235
2	The Drive to Life on Wet and Icy Worlds. Astrobiology, 2014, 14, 308-343.	3.0	232
3	Trace elements record depositional history of an Early Archean stromatolitic carbonate platform. Chemical Geology, 2010, 270, 148-163.	3.3	154
4	Structural Characterization of Unsaturated Phosphatidylcholines Using Traveling Wave Ion Mobility Spectrometry. Analytical Chemistry, 2009, 81, 8289-8297.	6.5	98
5	Investigation of drift gas selectivity in high resolution ion mobility spectrometry with mass spectrometry detection. Journal of the American Society for Mass Spectrometry, 2002, 13, 300-307.	2.8	97
6	From Chemical Gardens to Fuel Cells: Generation of Electrical Potential and Current Across Self-Assembling Iron Mineral Membranes. Angewandte Chemie - International Edition, 2015, 54, 8184-8187.	13.8	92
7	Iron-Sulfide-Bearing Chimneys as Potential Catalytic Energy Traps at Life's Emergence. Astrobiology, 2011, 11, 933-950.	3.0	77
8	Electrospray Ionization High-Resolution Ion Mobility Spectrometry for the Detection of Organic Compounds, 1. Amino Acids. Analytical Chemistry, 2001, 73, 3028-3034.	6.5	76
9	Experimental and Theoretical Investigation into the Correlation between Mass and Ion Mobility for Choline and Other Ammonium Cations in N_2 . Analytical Chemistry, 2008, 80, 1928-1936.	6.5	76
10	Characterization of Iron-Phosphate-Silicate Chemical Garden Structures. Langmuir, 2012, 28, 3714-3721.	3.5	70
11	Mackinawite and greigite in ancient alkaline hydrothermal chimneys: Identifying potential key catalysts for emergent life. Earth and Planetary Science Letters, 2015, 430, 105-114.	4.4	69
12	Effects of drift-gas polarizability on glycine peptides in ion mobility spectrometry. International Journal of Mass Spectrometry, 2002, 216, 257-268.	1.5	68
13	Design, Fabrication, and Test of a Hydrothermal Reactor for Origin-of-Life Experiments. Astrobiology, 2010, 10, 799-810.	3.0	58
14	Interfacial Reactions of Ozone with Surfactant Protein B in a Model Lung Surfactant System. Journal of the American Chemical Society, 2010, 132, 2254-2263.	13.7	49
15	Pyrophosphate synthesis in iron mineral films and membranes simulating prebiotic submarine hydrothermal precipitates. Geochimica Et Cosmochimica Acta, 2014, 128, 1-12.	3.9	46
16	Photochemistry of methane-water ices. Icarus, 2009, 200, 338-342.	2.5	43
17	Ion mobility spectrometry in space exploration. International Journal of Mass Spectrometry, 2007, 262, 1-15.	1.5	42
18	Peptide and RNA contributions to iron-sulphur chemical gardens as life's first inorganic compartments, catalysts, capacitors and condensers. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 3007-3022.	3.4	42

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19	Electrospray Ionization Ion Mobility Spectrometry of Amino Acids: Ion Mobilities and a Mass Mobility Correlation. Journal of Physical Chemistry A, 2004, 108, 5785-5792.	2.5	41
20	Kinetic energy distributions and line profile measurements of dissociation products of water upon electron impact. Journal of Geophysical Research, 2004, 109, .	3.3	41
21	Ultraviolet photolysis of amino acids in a 100 K water ice matrix: Application to the outer Solar System bodies. Icarus, 2007, 187, 584-591.	2.5	39
22	Time Resolved Studies of Interfacial Reactions of Ozone with Pulmonary Phospholipid Surfactants Using Field Induced Droplet Ionization Mass Spectrometry. Journal of Physical Chemistry B, 2010, 114, 9496-9503.	2.6	37
23	The Fuel Cell Model of Abiogenesis: A New Approach to Origin-of-Life Simulations. Astrobiology, 2014, 14, 254-270.	3.0	33
24	Carbon dioxide segregation in 1:4 and 1:9 CO ₂ :H ₂ O ices. Icarus, 2008, 194, 836-842.	2.5	32
25	Integral cross sections for the electron-impact excitation of the	2.5	28
26	Electrospray Ionization Ion Mobility Spectrometry of Carboxylate Anions: Ion Mobilities and a Mass Mobility Correlation. Journal of Physical Chemistry A, 2005, 109, 7888-7895.	2.5	27
27	Formation of radical species in photolyzed CH ₄ :N ₂ ices. Icarus, 2011, 214, 748-753.	2.5	23
28	From Chemical Gardens to Fuel Cells: Generation of Electrical Potential and Current Across Self-Assembling Iron Mineral Membranes. Angewandte Chemie, 2015, 127, 8302-8305.	2.0	22
29	Simulating Serpentinization as It Could Apply to the Emergence of Life Using the JPL Hydrothermal Reactor. Astrobiology, 2020, 20, 307-326.	3.0	22
30	Methanol on Enceladus. Geophysical Research Letters, 2009, 36, .	4.0	20
31	Medium-resolution studies of extreme-ultraviolet emission from CO by electron impact. Physical Review A, 1995, 51, 2067-2074.	2.5	19
32	HYDROGEN-DEUTERIUM EXCHANGE IN PHOTOLYZED METHANE-WATER ICES. Astrophysical Journal, 2009, 703, 1030-1033.	4.5	18
33	Chemical Gardens as Flow-through Reactors Simulating Natural Hydrothermal Systems. Journal of Visualized Experiments, 2015, , .	0.3	17
34	Kinetic Energy Distribution of H(2p) Atoms from Dissociative Excitation of H ₂ . Physical Review Letters, 1995, 75, 3261-3264.	7.8	16
35	High-resolution studies of extreme-ultraviolet emission from CO by electron impact. Physical Review A, 1997, 55, 3547-3556.	2.5	15
36	Analysis of the Physical Properties of the N ₂ ⁺	4.5	15

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37	Analysis of Underivatized Amino Acids in Geological Samples Using Ion-Pairing Liquid Chromatography and Electrospray Tandem Mass Spectrometry. <i>Astrobiology</i> , 2008, 8, 229-241.	3.0	15
38	Experimental and coupled channels investigation of the radiative properties of the $N_2^+ X^1\Sigma_g^+$ band system. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	13
39	Ultraviolet-Stimulated Fluorescence and Phosphorescence of Aromatic Hydrocarbons in Water Ice. <i>Astrobiology</i> , 2011, 11, 151-156.	3.0	9
40	Extraction and Separation of Chiral Amino Acids for Life Detection on Ocean Worlds Without Using Organic Solvents or Derivatization. <i>Astrobiology</i> , 2021, 21, 575-586.	3.0	9
41	Release of N ₂ , CH ₄ , CO ₂ , and H ₂ O from surface ices on Enceladus. <i>Icarus</i> , 2008, 197, 152-156.	2.5	7
42	Electron-impact excitation and emission cross sections of the H ₂ { ,}p _{xo} { } and d _{xo} { } states and rotational dependence of photodissociation cross sections of the p _{xo} { } and d _{xo} { } continua. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 185203.	1.5	7
43	Online supercritical fluid extraction and chromatography of biomarkers analysis in aqueous samples for in situ planetary applications. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 8091-8101.	3.7	7
44	Electron and photon dissociation cross sections of the H ₂ singlet ungerade continua. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 015201.	1.5	6
45	Supercritical Carbon Dioxide Extraction of Coronene in the Presence of Perchlorate for In Situ Chemical Analysis of Martian Regolith. <i>Astrobiology</i> , 2016, 16, 703-714.	3.0	6
46	A nanoscale soft-ionization membrane: A novel ionizer for ion mobility spectrometers for space applications. , 2002, 4936, 43.		4
47	Extraction of amino acids using supercritical carbon dioxide for in situ astrobiological applications. <i>International Journal of Astrobiology</i> , 2019, 18, 102-111.	1.6	3