

# AntonÃ- n KnÃ- Å¾¾ek

## List of Publications by Year in descending order

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Version: 2024-02-01

40  
papers

614  
citations

687220

13  
h-index

610775

24  
g-index

45  
all docs

45  
docs citations

45  
times ranked

642  
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation of nucleobases in a Miller-Urey reducing atmosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4306-4311.	3.3	120
2	High Energy Radical Chemistry Formation of HCN-rich Atmospheres on early Earth. <i>Scientific Reports</i> , 2017, 7, 6275.	1.6	70
3	Prebiotic synthesis initiated in formaldehyde by laser plasma simulating high-velocity impacts. <i>Astronomy and Astrophysics</i> , 2019, 626, A52.	2.1	35
4	HNCO-based synthesis of formamide in planetary atmospheres. <i>Astronomy and Astrophysics</i> , 2018, 616, A150.	2.1	34
5	TiO <sub>2</sub> -catalyzed synthesis of sugars from formaldehyde in extraterrestrial impacts on the early Earth. <i>Scientific Reports</i> , 2016, 6, 23199.	1.6	31
6	The origin of methane and biomolecules from a CO <sub>2</sub> cycle on terrestrial planets. <i>Nature Astronomy</i> , 2017, 1, 721-726.	4.2	27
7	Identifiable Acetylene Features Predicted for Young Earth-like Exoplanets with Reducing Atmospheres Undergoing Heavy Bombardment. <i>Astrophysical Journal</i> , 2020, 888, 21.	1.6	25
8	Calibration-free quantitative elemental analysis of meteor plasma using reference laser-induced breakdown spectroscopy of meteorite samples. <i>Astronomy and Astrophysics</i> , 2018, 610, A73.	2.1	24
9	Formation of Methane and (Per)Chlorates on Mars. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 221-232.	1.2	24
10	One-Pot Hydrogen Cyanide-Based Prebiotic Synthesis of Canonical Nucleobases and Glycine Initiated by High-Velocity Impacts on Early Earth. <i>Astrobiology</i> , 2020, 20, 1476-1488.	1.5	24
11	Meteorite-catalyzed synthesis of nucleosides and other prebiotic compounds. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 7109-7110.	3.3	20
12	Photocatalytic transformation of CO <sub>2</sub> to CH <sub>4</sub> and CO on acidic surface of TiO <sub>2</sub> anatase. <i>Optical Materials</i> , 2016, 56, 80-83.	1.7	18
13	Photoacoustic spectroscopy with mica and graphene micro-mechanical levers for multicomponent analysis of acetic acid, acetone and methanol mixture. <i>Microchemical Journal</i> , 2019, 144, 203-208.	2.3	17
14	Main spectral features of meteors studied using a terawatt-class high-power laser. <i>Astronomy and Astrophysics</i> , 2019, 630, A127.	2.1	16
15	Formic Acid, a Ubiquitous but Overlooked Component of the Early Earth Atmosphere. <i>Chemistry - A European Journal</i> , 2020, 26, 12075-12080.	1.7	15
16	Comparative SIFT-MS, GC-MS and FTIR analysis of methane fuel produced in biogas stations and in artificial photosynthesis over acidic anatase TiO <sub>2</sub> and montmorillonite. <i>Journal of Molecular Spectroscopy</i> , 2018, 348, 152-160.	0.4	14
17	Prebiotic synthesis at impact craters: the role of Fe-clays and iron meteorites. <i>Chemical Communications</i> , 2019, 55, 10563-10566.	2.2	13
18	Elemental composition, mineralogy and orbital parameters of the Porangaba meteorite. <i>Icarus</i> , 2020, 341, 113670.	1.1	13

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19	Spectroscopic investigations of high-energy-density plasma transformations in a simulated early reducing atmosphere containing methane, nitrogen and water. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 27317-27325.	1.3	11
20	Spontaneous Oxygen Isotope Exchange between Carbon Dioxide and Oxygen-Containing Minerals: Do the Minerals "Breathe" CO <sub>2</sub> ?. <i>Journal of Physical Chemistry C</i> , 2016, 120, 508-516.	1.5	11
21	Application of a dielectric breakdown induced by high-power lasers for a laboratory simulation of meteor plasma. <i>Experimental Astronomy</i> , 2021, 51, 425-451.	1.6	11
22	Electron-impact vibrational excitation of isocyanic acid HNCO. <i>Physical Review A</i> , 2020, 102, .	1.0	7
23	Acidic Hydrogen Enhanced Photocatalytic Reduction of CO <sub>2</sub> on Planetary Surfaces. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 1001-1009.	1.2	6
24	Nitrogen Oxide Production in Laser-Induced Breakdown Simulating Impacts on the Hadean Atmosphere. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	5
25	Spontaneous oxygen isotope exchange between carbon dioxide and natural clays: Refined rate constants referenced to TiO <sub>2</sub> (anatase/rutile). <i>Applied Clay Science</i> , 2017, 137, 6-10.	2.6	3
26	The Chemistry of CO <sub>2</sub> and TiO <sub>2</sub> . <i>Springer Briefs in Molecular Science</i> , 2019, , .	0.1	3
27	Abiotic Formation of Methane and Prebiotic Molecules on Mars and Other Planets. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1172-1179.	1.2	2
28	Thermal Decomposition of Cocaine and Methamphetamine Investigated by Infrared Spectroscopy and Quantum Chemical Simulations. <i>ACS Omega</i> , 2021, 6, 14447-14457.	1.6	2
29	The spectrum of ammonia near 0.793 Å. <a altimg="si32.svg" href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> altimg="si32.svg" <math>1/4</math> <a altimg="si1.svg" href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> altimg="si1.svg" <math>m</math>. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 273, 107838.	1.1	2
30	Morphology of Meteorite Surfaces Ablated by High-Power Lasers: Review and Applications. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 4869.	1.3	2
31	Formamide-Based Post-impact Thermal Prebiotic Synthesis in Simulated Craters: Intermediates, Products and Mechanism. <i>Frontiers in Astronomy and Space Sciences</i> , 2022, 9, .	1.1	2
32	Recording and evaluation of high resolution optical meteor spectra and comparative laboratory measurements using laser ablation of solid meteorite specimens. , 2017, , .		1
33	Ariel "a window to the origin of life on early earth?. <i>Experimental Astronomy</i> , 2020, , 1. High resolution emission FT spectra of sodium in a microwave discharge: Intensity variation of the D	1.6	1
34	<a altimg="si5.svg" href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> altimg="si5.svg" <math>1</math> /D <a altimg="si1.svg" href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> altimg="si1.svg" <math>1</math>	1.1	1
35	Quantum Dots in Peroxidase-like Chemistry and Formamide-Based Hot Spring Synthesis of Nucleobases. <i>Journal of Astrobiology</i> , 2022, , .	1.5	1
36	Spontaneous oxygen isotope exchange between carbon dioxide and oxygen containing minerals (Do) Tj ETQq0 0 0 rgBT /Overlock 10 Tf		

#	ARTICLE	IF	CITATIONS
37	Additional Views on Prebiotic Molecules. Springer Briefs in Molecular Science, 2019, , 69-76.	0.1	0
38	Oxygen Atoms Exchange Between Carbon Dioxide and TiO <sub>2</sub> (Light Induced and Spontaneous). Springer Briefs in Molecular Science, 2019, , 9-39.	0.1	0
39	Carbon Dioxide and the Effects on Climate. Springer Briefs in Molecular Science, 2019, , 1-7.	0.1	0
40	Photochemical Reduction of CO <sub>2</sub> on Terrestrial Planets. , 2019, , .		0