Chris J Bennett

List of Publications by Year
in descending order

42 papers	2,059 citations	304743 22 h-index	265206 42 g-index
42 all docs	42 docs citations	42 times ranked	1696 citing authors

#	Article	IF	Citations
1	A Combined Experimental and Theoretical Study on the Formation of the Amino Acid Glycine (NH2CH2COOH) and Its Isomer (CH3NHCOOH) in Extraterrestrial Ices. Astrophysical Journal, 2005, 626, 940-952.	4.5	206
2	Untangling the formation of the cyclic carbon trioxide isomer in low temperature carbon dioxide ices. Physical Chemistry Chemical Physics, 2004, 6, 735.	2.8	156
3	On the Formation of Glycolaldehyde (HCOCH₂OH) and Methyl Formate (HCOOCH₃) in Interstellar Ice Analogs. Astrophysical Journal, 2007, 661, 899-909.	4.5	147
4	Laboratory Studies on the Irradiation of Methane in Interstellar, Cometary, and Solar System Ices. Astrophysical Journal, 2006, 653, 792-811.	4.5	146
5	Mechanistical Studies on the Irradiation of Methanol in Extraterrestrial Ices. Astrophysical Journal, 2007, 660, 1588-1608.	4.5	141
6	Space-Weathering of Solar System Bodies: A Laboratory Perspective. Chemical Reviews, 2013, 113, 9086-9150.	47.7	130
7	A Combined Experimental and Computational Investigation on the Synthesis of Acetaldehyde [CH3CHO(X1Aâ€²)] in Interstellar Ices. Astrophysical Journal, 2005, 624, 1097-1115.	4.5	115
8	MECHANISTICAL STUDIES ON THE PRODUCTION OF FORMAMIDE (H₂NCHO) WITHIN INTERSTELLAR ICE ANALOGS. Astrophysical Journal, 2011, 734, 78.	4.5	104
9	Laboratory Studies on the Formation of Three C2H4O Isomersâ€"Acetaldehyde (CH3CHO), Ethylene Oxide (câ€C2H4O), and Vinyl Alcohol (CH2CHOH)â€"in Interstellar and Cometary Ices. Astrophysical Journal, 2005, 634, 698-711.	4.5	86
10	LABORATORY STUDIES ON THE FORMATION OF FORMIC ACID (HCOOH) IN INTERSTELLAR AND COMETARY ICES. Astrophysical Journal, 2011, 727, 27.	4.5	84
11	The Formation of Acetic Acid (CH3COOH) in Interstellar Ice Analogs. Astrophysical Journal, 2007, 660, 1289-1295.	4.5	75
12	Laboratory Studies on the Formation of Ozone (O3) on Icy Satellites and on Interstellar and Cometary Ices. Astrophysical Journal, 2005, 635, 1362-1369.	4.5	74
13	Mechanistical studies on the formation and destruction of carbon monoxide (CO), carbon dioxide (CO2), and carbon trioxide (CO3) in interstellar ice analog samples. Physical Chemistry Chemical Physics, 2010, 12, 4032.	2.8	55
14	Investigating the Mechanism for the Formation of Nitrous Oxide [N2O(X1Î£+)] in Extraterrestrial Ices. Astrophysical Journal, 2005, 624, 436-447.	4.5	49
15	A CROSSED MOLECULAR BEAM, LOW-TEMPERATURE KINETICS, AND THEORETICAL INVESTIGATION OF THE REACTION OF THE CYANO RADICAL (CN) WITH 1,3-BUTADIENE (C₄H₆). A ROUTE TO COMPLEX NITROGEN-BEARING MOLECULES IN LOW-TEMPERATURE EXTRATERRESTRIAL ENVIRONMENTS. Astrophysical Journal, 2011, 742, 26.	4.5	45
16	High-Sensitivity Raman Spectrometer To Study Pristine and Irradiated Interstellar Ice Analogs. Analytical Chemistry, 2013, 85, 5659-5665.	6.5	41
17	LABORATORY STUDIES ON THE IRRADIATION OF SOLID ETHANE ANALOG ICES AND IMPLICATIONS TO TITAN'S CHEMISTRY. Astrophysical Journal, 2010, 711, 744-756.	4.5	40
18	Mechanistical studies on the formation of carbon dioxide in extraterrestrial carbon monoxide ice analog samples. Physical Chemistry Chemical Physics, 2009, 11, 4210.	2.8	36

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19	A chemical dynamics, kinetics, and theoretical study on the reaction of the cyano radical (CN; X2Î£+) with phenylacetylene (C6H5CCH; X1A1). Physical Chemistry Chemical Physics, 2010, 12, 8737.	2.8	29
20	AN EXPERIMENTAL INVESTIGATION OF THE DECOMPOSITION OF CARBON MONOXIDE AND FORMATION ROUTES TO CARBON DIOXIDE IN INTERSTELLAR ICES. Astrophysical Journal, Supplement Series, 2009, 182, 1-11.	7.7	28
21	On the Interaction of Methyl Azide (CH₃N₃) Ices with Ionizing Radiation: Formation of Methanimine (CH₂NH), Hydrogen Cyanide (HCN), and Hydrogen Isocyanide (HNC). Journal of Physical Chemistry A, 2011, 115, 250-264.	2.5	26
22	On the formation of ozone in oxygen-rich solar system ices via ionizing radiation. Physical Chemistry Chemical Physics, 2011, 13, 9469.	2.8	22
23	FORMATION OF MOLECULAR HYDROGEN FROM METHANE ICE. Astrophysical Journal, 2010, 721, 1656-1662.	4.5	21
24	ON THE INTERACTION OF ADENINE WITH IONIZING RADIATION: MECHANISTICAL STUDIES AND ASTROBIOLOGICAL IMPLICATIONS. Astrophysical Journal, 2011, 730, 69.	4.5	19
25	Multimodal x-ray and electron microscopy of the Allende meteorite. Science Advances, 2019, 5, eaax3009.	10.3	17
26	EXPERIMENTAL STUDIES ON THE FORMATION OF D₂O AND D₂O₂BY IMPLANTATION OF ENERGETIC D⁺IONS INTO OXYGEN ICES. Astrophysical Journal, 2014, 782, 63.	4.5	16
27	Investigating potential sources of Mercury's exospheric Calcium: Photon-stimulated desorption of Calcium Sulfide. Journal of Geophysical Research E: Planets, 2016, 121, 137-146.	3.6	16
28	A Comparison of Medium-Sized Basis Sets for the Prediction of Geometries, Vibrational Frequencies, Infrared Intensities and Raman Activities for Water. Journal of Physics: Conference Series, 2019, 1290, 012013.	0.4	15
29	Infrared spectroscopic detection of the disilenyl (Si2H3) and d3-disilenyl (Si2D3) radicals in silane and d4-silane matrices. Chemical Physics Letters, 2004, 392, 541-548.	2.6	14
30	A Possible Path to Prebiotic Peptides Involving Silica and Hydroxy Acidâ€Mediated Amide Bond Formation. ChemBioChem, 2018, 19, 1913-1917.	2.6	14
31	Mechanistic studies on the decomposition of carbon suboxide in a cometary ice analog. Planetary and Space Science, 2008, 56, 1181-1189.	1.7	13
32	IMPLANTATION OF ENERGETIC D⁺IONS INTO CARBON DIOXIDE ICES AND IMPLICATIONS FOR OUR SOLAR SYSTEM: FORMATION OF D₂O AND D₂CO₃. Astrophysical Journal, 2014, 794, 57.	4.5	13
33	Infrared spectroscopic identification of the methylsilylidyne (SiCH3, X2Aâ€³) and the silenyl (H2CSiH, X2Aâ€²) radicals in methaneâ€“silane matrices. Chemical Physics Letters, 2005, 404, 327-335.	2.6	11
34	FORMATION OF D₂-WATER AND D₂-CARBONIC ACID IN OXYGEN-RICH SOLAR SYSTEM ICES VIA D⁺₂IRRADIATION. Astrophysical Journal, 2011, 733, 79.	4.5	10
35	Rovibrational Spectral Analysis of CO₃ and C₂O₃: Potential Sources for O₂ Observed in Comet 67P/Churyumovâ€“Gerasimenko. Astrophysical Journal Letters, 2019, 886, L10.	8.3	10
36	First infrared spectroscopic characterization of the disilyl (Si2H5) and d5-disilyl (Si2D5) radicals in low temperature silane matrices. Chemical Physics, 2004, 305, 141-153.	1.9	9

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37	A Geoscientific Review on CO and CO2 Ices in the Outer Solar System. Geosciences (Switzerland), 2022, 12, 51.	2.2	7
38	Link between Polycyclic Aromatic Hydrocarbon Size and Aqueous Alteration in Carbonaceous Chondrites Revealed by Laser Mass Spectrometry. ACS Earth and Space Chemistry, 2022, 6, 1413-1428.	2.7	7
39	Infrared spectroscopic detection of the methylsilyl (CH3SiH2, X2Aâ€²) and the silylmethyl (CH2SiH3, X2Aâ€²) radicals and their partially deuterated counterparts in low temperature matrices. Chemical Physics, 2005, 315, 41-52.	1.9	5
40	Role of Suprathermal Chemistry on the Evolution of Carbon Oxides and Organics within Interstellar and Cometary Ices. Accounts of Chemical Research, 2021, 54, 1067-1079.	15.6	4
41	SQUARREL: Scattering Quotient Analysis to Retrieve the Ratio of Elements in X-ray Ptychography. Microscopy and Microanalysis, 2019, 25, 112-113.	0.4	2
42	A computational investigation of the equilibrium geometries, energetics, vibrational frequencies, infrared intensities and Raman activities of C₂O_y (y = 3, 4) species. Molecular Physics, 2021, 119, e1837404.	1.7	1