Benjamin J Mccall

List of Publications by Year
in descending order

98 papers	4,669 citations	117571 34 h-index	98753 67 g-index
98 all docs	98 docs citations	98 times ranked	2929 citing authors

#	Article	IF	Citations
1	A lifecycle cost analysis of transitioning to a fully-electrified, renewably powered, and carbon-neutral campus at the University of Dayton. Sustainable Energy Technologies and Assessments, 2020, 37, 100576.	1.7	14
2	Electrical Properties of Reversed-Polarity Ball Plasmoid Discharges. Plasma, 2020, 3, 92-102.	0.7	2
3	The Central 300 pc of the Galaxy Probed by Infrared Spectra of and CO. I. Predominance of Warm and Diffuse Gas and High H₂ Ionization Rate. Astrophysical Journal, 2019, 883, 54.	1.6	56
4	Sub-Doppler rovibrational spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></</mml:mrow> fundamental band of D2H+. Journal of Molecular Spectroscopy, 2019, 355, 8-13.	0.4	6
5	Highly accurate experimentally determined energy levels of H3+. Journal of Chemical Physics, 2019, 150, 214303.	1.2	8
6	Extended sub-Doppler resolution spectroscopy of the Î½3 band of methane. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 215, 9-12.	1.1	10
7	SUB-DOPPLER SPECTROSCOPY OF THE Î½2 FUNDAMENTAL BAND AND FIRST HOT BAND OF THE H3+ CATION. , 2018, , .		2
8	Improving cavity-enhanced spectroscopy of molecular ions in the mid-infrared with up-conversion detection and Brewster-plate spoilers. Optics Express, 2017, 25, 3709.	1.7	9
9	Mid-infrared concentration-modulated noise-immune cavity-enhanced optical heterodyne molecular spectroscopy of a continuous supersonic expansion discharge source. Review of Scientific Instruments, 2016, 87, 063111.	0.6	3
10	Quantitative velocity modulation spectroscopy. Journal of Chemical Physics, 2016, 144, 184201.	1.2	1
11	HIGH PRECISION ROVIBRATIONAL SPECTROSCOPY OF OH⁺. Astrophysical Journal, 2016, 817, 138.	1.6	15
12	Infrared emission spectroscopy of atmospheric-pressure ball plasmoids. Journal of Molecular Spectroscopy, 2016, 322, 1-8.	0.4	8
13	HIGHLY ACCURATE AND PRECISE INFRARED TRANSITION FREQUENCIES OF THE H3+ CATION. , 2016, , .		2
14	Tilt-tuned etalon locking for tunable laser stabilization. Optics Letters, 2015, 40, 2696.	1.7	4
15	High-precision R-branch transition frequencies in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ fundamental band of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" overflow="scroll"><mml:mrow><mml:msubsup><mml:mrow><mml:mtext>H</mml:mtext></mml:mrow><mml:mrow><mml:mn>3</mml:mn></	0.4	10
16	Rotationally-resolved spectroscopy of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>Î½</mml:mi></mml:mrow><mml:mrow><mml:mn>16</mml:mn></ band of 1,3,5-trioxane. Journal of Molecular Spectroscopy, 2015, 317, 47-49.	0.4	2
17	Mass spectrometry of atmospheric-pressure ball plasmoids. International Journal of Mass Spectrometry, 2015, 376, 39-45.	0.7	14
18	Communication: High precision sub-Doppler infrared spectroscopy of the HeH+ ion. Journal of Chemical Physics, 2014, 141, 101101.	1.2	24

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19	OBSERVATIONAL RESULTS OF A MULTI-TELESCOPE CAMPAIGN IN SEARCH OF INTERSTELLAR UREA [(NH₂)₂CO]. Astrophysical Journal, 2014, 783, 77.	1.6	55
20	MID-INFRARED NICE-OHMS SPECTROMETER FOR THE STUDY OF COLD MOLECULAR IONS. , 2014, , .		1
21	Applications of NICE-OHMS to Molecular Spectroscopy. Springer Series in Optical Sciences, 2014, , 253-270.	0.5	3
22	Rotationally-Resolved Spectroscopy of the Donor Bending Mode of (D₂O)₂. Journal of Physical Chemistry A, 2013, 117, 13491-13499.	1.1	7
23	On the Symmetry and Degeneracy of H₃⁺. Journal of Physical Chemistry A, 2013, 117, 9950-9958.	1.1	4
24	Cosmic-ray astrochemistry. Chemical Society Reviews, 2013, 42, 7763.	18.7	34
25	Indirect Rotational Spectroscopy of HCO⁺. Journal of Physical Chemistry A, 2013, 117, 10034-10040.	1.1	12
26	Tribute to Takeshi Oka. Journal of Physical Chemistry A, 2013, 117, 9305-9307.	1.1	1
27	On the discovery of the diffuse interstellar bands. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120604.	1.0	37
28	High-precision and high-accuracy rovibrational spectroscopy of molecular ions. Journal of Chemical Physics, 2013, 139, 164201.	1.2	27
29	The Properties of Near-Infrared Diffuse Interstellar Bands. Proceedings of the International Astronomical Union, 2013, 9, 100-102.	0.0	0
30	Inefficient Vibrational Cooling of C₆₀ in a Supersonic Expansion. , 2013, 2013, 1-10.		13
31	Broadly tunable mid-infrared noise-immune cavity-enhanced optical heterodyne molecular spectrometer. Optics Letters, 2012, 37, 4422.	1.7	24
32	The orthoâ€‰:â€‰para ratio of H ₃ ⁺ in laboratory and astrophysical plasmas. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5055-5065.	1.6	8
33	THE LOW-TEMPERATURE NUCLEAR SPIN EQUILIBRIUM OF H⁺₃IN COLLISIONS WITH H₂. Astrophysical Journal, 2012, 759, 21.	1.6	22
34	INVESTIGATING THE COSMIC-RAY IONIZATION RATE IN THE GALACTIC DIFFUSE INTERSTELLAR MEDIUM THROUGH OBSERVATIONS OF H⁺₃. Astrophysical Journal, 2012, 745, 91.	1.6	274
35	DISSOCIATIVE RECOMBINATION OF VIBRATIONALLY COLD CH⁺₃AND INTERSTELLAR IMPLICATIONS. Astrophysical Journal, 2012, 758, 55.	1.6	16
36	Storage ring measurements of the dissociative recombination of H ₃ ⁺. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5088-5100.	1.6	12

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37	Additional bands of the Arâ€“D2O intramolecular bending mode observed using a quantum cascade laser. Journal of Molecular Spectroscopy, 2012, 282, 34-38.	0.4	10
38	Sub-Doppler mid-infrared spectroscopy of molecular ions. Chemical Physics Letters, 2012, 551, 1-6.	1.2	34
39	Extending the Limits of Rotationally Resolved Absorption Spectroscopy: Pyrene. Journal of Physical Chemistry Letters, 2012, 3, 1985-1988.	2.1	21
40	Noise immune cavity enhanced optical heterodyne velocity modulation spectroscopy. Optics Express, 2011, 19, 24822.	1.7	25
41	Refractive index measurements of solid parahydrogen. Optics Letters, 2011, 36, 840.	1.7	14
42	ON THEORTHO:PARARATIO OF H⁺₃IN DIFFUSE MOLECULAR CLOUDS. Astrophysical Journal, 2011, 729, 15.	1.6	67
43	STUDIES OF DIFFUSE INTERSTELLAR BANDS V. PAIRWISE CORRELATIONS OF EIGHT STRONG DIBs AND NEUTRAL HYDROGEN, MOLECULAR HYDROGEN, AND COLOR EXCESS. Astrophysical Journal, 2011, 727, 33.	1.6	141
44	Application of nuclear permutation inversion group theory to the benzenium ion. Journal of Molecular Spectroscopy, 2011, 268, 157-163.	0.4	1
45	High-resolution spectroscopy of the Î½8 band of methylene bromide using a quantum cascade laser. Journal of Molecular Spectroscopy, 2011, 266, 57-62.	0.4	12
46	Absorption-Line Survey of H$_3^extbf{+}$ toward the Galactic Center Sources. III. Extent of Warm and Diffuse Clouds. Publication of the Astronomical Society of Japan, 2011, 63, L13-L17.	1.0	31
47	Nuclear spin dependence of the reaction of ${m H}_3^+$H3+ with H2. I. Kinetics and modeling. Journal of Chemical Physics, 2011, 134, 194310.	1.2	27
48	Ultra-sensitive high-precision spectroscopy of a fast molecular ion beam. Journal of Chemical Physics, 2011, 135, 224201.	1.2	14
49	Disclosing Identities in Diffuse Interstellar Bands. Science, 2011, 331, 293-294.	6.0	39
50	Nuclear spin dependence of the reaction of ${m H}_3^+$H3+ with H2. II. Experimental measurements. Journal of Chemical Physics, 2011, 134, 194311.	1.2	33
51	CONSTRAINING THE ENVIRONMENT OF CH⁺FORMATION WITH CH⁺₃OBSERVATIONS. Astrophysical Journal, 2010, 711, 1338-1342.	1.6	28
52	INVESTIGATING THE COSMIC-RAY IONIZATION RATE NEAR THE SUPERNOVA REMNANT IC 443 THROUGH H⁺₃OBSERVATIONS,. Astrophysical Journal, 2010, 724, 1357-1365.	1.6	72
53	Precision cavity enhanced velocity modulation spectroscopy. Chemical Physics Letters, 2010, 501, 1-5.	1.2	15
54	A quantum cascade laser cw cavity ringdown spectrometer coupled to a supersonic expansion source. Review of Scientific Instruments, 2010, 81, 063102.	0.6	30

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55	High-resolution storage-ring measurements of the dissociative recombination of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msubsup><mml:mi mathvariant="normal">H</mml:mi><mml:mrow><mml:mn>3</mml:mn></mml:mrow><mml:mrow><mml:mo>+</mml:mo></mml:mr a supersonic expansion ion source. Physical Review A, 2010, 82, .	1.0	48
56	Note: A modular and robust continuous supersonic expansion discharge source. Review of Scientific Instruments, 2010, 81, 086103.	0.6	6
57	STUDIES OF THE DIFFUSE INTERSTELLAR BANDS. IV. THE NEARLY PERFECT CORRELATION BETWEEN Î»Î»6196.0 AND 6613.6. Astrophysical Journal, 2010, 708, 1628-1638.	1.6	75
58	Communications: Development and characterization of a source of rotationally cold, enriched para-H3+. Journal of Chemical Physics, 2010, 132, 081103.	1.2	6
59	Temperature Dependence of Two Key Interstellar Reactions of H₃⁺: O(³P) + H₃⁺ and CO + H₃⁺. Journal of Physical Chemistry A, 2010, 114, 278-290.	1.1	44
60	Cavity-enhanced velocity modulation spectroscopy. Optics Letters, 2010, 35, 1266.	1.7	10
61	THE IMPLICATIONS OF A HIGH COSMIC-RAY IONIZATION RATE IN DIFFUSE INTERSTELLAR CLOUDS. Astrophysical Journal, 2009, 694, 257-267.	1.6	86
62	INTERSTELLAR METASTABLE HELIUM ABSORPTION AS A PROBE OF THE COSMIC-RAY IONIZATION RATE. Astrophysical Journal, 2009, 703, 2131-2137.	1.6	19
63	Producing and quantifying enriched para-H2. Review of Scientific Instruments, 2009, 80, 016108.	0.6	62
64	Dissociative recombination of highly enriched para-H3+. Journal of Chemical Physics, 2009, 130, 031101.	1.2	31
65	IS HO⁺₂A DETECTABLE INTERSTELLAR MOLECULE?. Astrophysical Journal, 2009, 697, 601-609.	1.6	35
66	STUDIES OF THE DIFFUSE INTERSTELLAR BANDS. III. HD 183143. Astrophysical Journal, 2009, 705, 32-45.	1.6	199
67	Continuous-wave cavity ringdown spectroscopy of the Meinel system (2,1) band. Journal of Molecular Spectroscopy, 2008, 249, 14-22.	0.4	3
68	The dissociative recombination of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mrow><mml:msubsup><mml:mrow><mml:mtext>H</mml:mtext></mml:mrow><mml:mrow><mml:mn>3</mml:mn â€“ a saga coming to an end?. Chemical Physics Letters, 2008, 462, 145-151.	1.2	35
69	A Catalog of Diffuse Interstellar Bands in the Spectrum of HD 204827. Astrophysical Journal, 2008, 680, 1256-1270.	1.6	214
70	Absorption Line Survey of $mathrm{H},^{+}_{3}$ toward the Galactic Center Sources. II. Eight Infrared Sources within 30 pc of the Galactic Center. Astrophysical Journal, 2008, 688, 306-319.	1.6	77
71	documentclass[aastex]{aastex} usepackage{amssymb} usepackage{amsfonts} usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss} enewcommandencodingdefault{OT2} ormalfont selectfont} DeclareTextFontCommand{extcyr}{cyr} pagestyle{empty} DeclareMathSizes{10}{9}{7}{6} egin{	1.6	217
72	A Search for ortho -benzyne (o -C ₆ H ₄) in CRL 618. Astrophysical Journal, 2007, 671, L153-L156.	1.6	16

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73	Diffuse Atomic and Molecular Clouds. Annual Review of Astronomy and Astrophysics, 2006, 44, 367-414.	8.1	452
74	Dissociative recombination of cold and its interstellar implications. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2953-2963.	1.6	35
75	The interstellar Medium of IRAS 08572+3915 NW: documentclass{aastex} usepackage{amsbsy} usepackage{amsfonts} usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss} enewcommandencodingdefault{OT2} ormalfont selectfont} DeclareTextFontCommand{extcyr}	1.6	37
76	Recombination cool and fast. Nature, 2006, 440, 157-158.	13.7	2
77	Diffuse Interstellar Bands Toward HD 62542. Astrophysical Journal, 2005, 625, 857-863.	1.6	16
78	Hot and Diffuse Clouds near the Galactic Center Probed by Metastable documentclass{aastex} usepackage{amsbsy} usepackage{amsfonts} usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss} enewcommandencodingdefault{OT2} ormalfont selectfont} DeclareTextFontCommand{e. Astr	1.6	172
79	[illegible] usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss} enewcommandencodingdefault{OT2} ormalfont selectfont} DeclareTextFontCommand{extcyr}	1.6	17
80	Optical and Infrared Observations of Diffuse Clouds. Proceedings of the International Astronomical Union, 2005, 1, 165.	0.0	1
81	Infrared Cavity Ringdown Spectroscopy of Jet-Cooled Polycyclic Aromatic Hydrocarbons. ChemPhysChem, 2004, 5, 321-326.	1.0	31
82	A re-examination of the 4051 Ã… band of C3 using cavity ringdown spectroscopy of a supersonic plasma. Chemical Physics Letters, 2003, 374, 583-586.	1.2	21
83	An enhanced cosmic-ray flux towards Î¶ Persei inferred from a laboratory study of the H3+â€“e- recombination rate. Nature, 2003, 422, 500-502.	13.7	300
84	Near-infrared spectroscopy of H3+ above the barrier to linearity. Journal of Chemical Physics, 2003, 118, 10890-10899.	1.2	41
85	Stimulated Stokes downconversion in liquid and solid parahydrogen. Applied Physics Letters, 2003, 82, 1350-1352.	1.5	9
86	Observations of Rotationally Resolved C3in Translucent Sight Lines. Astrophysical Journal, 2003, 595, 235-246.	1.6	48
87	Some Diffuse Interstellar Bands Related to Interstellar C2Molecules. Astrophysical Journal, 2003, 584, 339-356.	1.6	135
88	Observations of C3in Translucent Sight Lines. Astrophysical Journal, 2003, 582, 823-829.	1.6	78
89	Absorption Line Survey of H3+ toward the Galactic Center Sources I. GCS 3-2 and GC IRS3. Publication of the Astronomical Society of Japan, 2002, 54, 951-961.	1.0	55
90	Unusually Weak Diffuse Interstellar Bands toward HD 62542. Astrophysical Journal, 2002, 573, 670-677.	1.6	28

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91	usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss}	1.6	138
92	Rejection of the C[FORMULA][F][SUP]-[/SUP][INF]7[/INF][/F][/FORMULA] Diffuse Interstellar Band Hypothesis. Astrophysical Journal, 2001, 559, L49-L53.	1.6	45
93	Comprehensive Evaluation and Compilation of H3+ Spectroscopy. Journal of Molecular Spectroscopy, 2001, 210, 60-83.	0.4	140
94	Laboratory spectroscopy of H 3 +. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 2385-2401.	1.6	19
95	Combination band spectroscopy of H3+. Journal of Chemical Physics, 2000, 113, 3104-3110.	1.2	25
96	MOLECULAR SPECTROSCOPY:H3+--an Ion with Many Talents. Science, 2000, 287, 1941-1942.	6.0	68
97	H3+ in dense and diffuse clouds. Faraday Discussions, 1998, 109, 267-280.	1.6	30
98	Detection of H3+ in the Diffuse Interstellar Medium Toward Cygnus OB2 No. 12 . Science, 1998, 279, 1910-1913.	6.0	189