

Michael C Mccarthy

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1984384/publications.pdf>

Version: 2024-02-01

158
papers

6,558
citations

61945

43
h-index

79644

73
g-index

163
all docs

163
docs citations

163
times ranked

3242
citing authors

#	ARTICLE	IF	CITATIONS
1	Laboratory and Astronomical Identification of the Negative Molecular Ion C ₆ H ⁻ . <i>Astrophysical Journal</i> , 2006, 652, L141-L144.	1.6	406
2	Detection of the aromatic molecule benzonitrile (C ₆ H ₅ CN) in the interstellar medium. <i>Science</i> , 2018, 359, 202-205.	6.0	370
3	Detection of the Carbon Chain Negative Ion C ₈ H ⁻ in TMC-1. <i>Astrophysical Journal</i> , 2007, 664, L43-L46.	1.6	250
4	Detection of two interstellar polycyclic aromatic hydrocarbons via spectral matched filtering. <i>Science</i> , 2021, 371, 1265-1269.	6.0	236
5	Laboratory and Astronomical Detection of the Negative Molecular Ion C ₃ N ⁻ . <i>Astrophysical Journal</i> , 2008, 677, 1132-1139.	1.6	216
6	Detection of C ₅ N ⁻ and Vibrationally Excited C ₆ H in IRC +10216. <i>Astrophysical Journal</i> , 2008, 688, L83-L86.	1.6	214
7	Detection and Characterization of the Cumulene Carbenes H ₂ C ₅ and H ₂ C ₆ . <i>Science</i> , 1997, 275, 518-520.	6.0	175
8	Eight New Carbon Chain Molecules. <i>Astrophysical Journal</i> , Supplement Series, 1997, 113, 105-120.	3.0	150
9	Microwave Spectra of 11 Polyne Carbon Chains. <i>Astrophysical Journal</i> , Supplement Series, 2000, 129, 611-623.	3.0	146
10	Microwave and laser spectroscopy of carbon chains and rings. <i>Chemical Society Reviews</i> , 2001, 30, 177-185.	18.7	109
11	DETECTION OF E-CYANOMETHANIMINE TOWARD SAGITTARIUS B2(N) IN THE GREEN BANK TELESCOPE PRIMOS SURVEY. <i>Astrophysical Journal Letters</i> , 2013, 765, L10.	3.0	99
12	Interstellar detection of the highly polar five-membered ring cyanocyclopentadiene. <i>Nature Astronomy</i> , 2021, 5, 176-180.	4.2	96
13	Discovery of the Pure Polycyclic Aromatic Hydrocarbon Indene (c-C ₉ H ₈) with GOTHAM Observations of TMC-1. <i>Astrophysical Journal Letters</i> , 2021, 913, L18.	3.0	96
14	Rotational Spectra of the Carbon Chain Negative Ions C ₄ H ⁻ and C ₈ H ⁻ . <i>Astrophysical Journal</i> , 2007, 655, L57-L60.	1.6	88
15	THE DETECTION OF INTERSTELLAR ETHANIMINE (CH ₃ CHNH) FROM OBSERVATIONS TAKEN DURING THE GBT PRIMOS SURVEY. <i>Astrophysical Journal Letters</i> , 2013, 765, L9.	3.0	88
16	The Simplest Criegee Intermediate (H ₂ C=O): Isotopic Spectroscopy, Equilibrium Structure, and Possible Formation from Atmospheric Lightning. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 4133-4139.	2.1	88
17	Stabilization of the Simplest Criegee Intermediate from the Reaction between Ozone and Ethylene: A High-Level Quantum Chemical and Kinetic Analysis of Ozonolysis. <i>Journal of Physical Chemistry A</i> , 2015, 119, 5524-5533.	1.1	83
18	LABORATORY AND TENTATIVE INTERSTELLAR DETECTION OF TRANS-METHYL FORMATE USING THE PUBLICLY AVAILABLE GREEN BANK TELESCOPE PRIMOS SURVEY. <i>Astrophysical Journal</i> , 2012, 755, 153.	1.6	75

#	ARTICLE	IF	CITATIONS
19	Observation of the simplest Criegee intermediate CH ₂ OO in the gas-phase ozonolysis of ethylene. <i>Science Advances</i> , 2015, 1, e1400105.	4.7	73
20	Mono- and Dibridged Isomers of Si ₂ H ₃ and Si ₂ H ₄ : The True Ground State Global Minima. Theory and Experiment in Concert. <i>Journal of the American Chemical Society</i> , 2003, 125, 11409-11417.	6.6	71
21	DETECTION OF A NEW INTERSTELLAR MOLECULE: THIOCYANIC ACID HSCN. <i>Astrophysical Journal</i> , 2009, 702, L124-L127.	1.6	68
22	Supersonic-jet cryogenic-resonator coaxially oriented beam-resonator arrangement Fourier transform microwave spectrometer. <i>Review of Scientific Instruments</i> , 2005, 76, 093106.	0.6	66
23	LABORATORY DETECTION OF HOCN AND TENTATIVE IDENTIFICATION IN Sgr B2. <i>Astrophysical Journal</i> , 2009, 697, 880-885.	1.6	65
24	The rotational spectra of the HCCCNH ⁺ , NCCNH ⁺ , and CH ₃ CNH ⁺ ions. <i>Journal of Chemical Physics</i> , 2000, 113, 1910-1915.	1.2	63
25	Cavity ringdown spectroscopy of the linear carbon chains HC ₇ H, HC ₉ H, HC ₁₁ H, and HC ₁₃ H. <i>Journal of Chemical Physics</i> , 2000, 112, 10149-10155.	1.2	61
26	Spontaneous and Selective Formation of HSNO, a Crucial Intermediate Linking H ₂ S and Nitroso Chemistries. <i>Journal of the American Chemical Society</i> , 2016, 138, 11441-11444.	6.6	60
27	Early Science from GOTHAM: Project Overview, Methods, and the Detection of Interstellar Propargyl Cyanide (HCCCH ₂ CN) in TMC-1. <i>Astrophysical Journal Letters</i> , 2020, 900, L10.	3.0	60
28	AN INTERFEROMETRIC SPECTRAL-LINE SURVEY OF IRC+10216 IN THE 345 GHz BAND. <i>Astrophysical Journal, Supplement Series</i> , 2011, 193, 17.	3.0	58
29	Structures of the linear silicon carbides SiC ₄ and SiC ₆ : Isotopic substitution and Ab Initio theory. <i>Journal of Chemical Physics</i> , 2000, 113, 5311.	1.2	57
30	A SURVEY OF C ₄ H, C ₆ H, AND C ₆ H ⁺ WITH THE GREEN BANK TELESCOPE. <i>Astrophysical Journal</i> , 2009, 691, 1494-1500.	1.6	54
31	Microwave spectral taxonomy: A semi-automated combination of chirped-pulse and cavity Fourier-transform microwave spectroscopy. <i>Journal of Chemical Physics</i> , 2016, 144, 124201.	1.2	54
32	Rotational Spectra of Sulfur-Carbon Chains. I. The Radicals C ₄ S, C ₅ S, C ₆ S, C ₇ S, C ₈ S, and C ₉ S. <i>Astrophysical Journal, Supplement Series</i> , 2001, 134, 311-317.	3.0	53
33	The Rotational Spectrum and Geometrical Structure of Thiozone, S ₃ . <i>Journal of the American Chemical Society</i> , 2004, 126, 4096-4097.	6.6	53
34	Rotational transitions of SO, SiO, and SiS excited by a discharge in a supersonic molecular beam: Vibrational temperatures, Dunham coefficients, Born-Oppenheimer breakdown, and hyperfine structure. <i>Journal of Chemical Physics</i> , 2003, 119, 11715-11727.	1.2	52
35	Experimental Structures of the Carbon Chains HC ₇ N, HC ₉ N, and HC ₁₁ N by Isotopic Substitution. <i>Journal of Molecular Spectroscopy</i> , 2000, 203, 75-81.	0.4	51
36	Rotational spectroscopy of the isotopic species of silicon monosulfide, SiS. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 1579-1586.	1.3	50

#	ARTICLE	IF	CITATIONS
37	INTERSTELLAR DETECTION OF c-C ₃ D ₂ . <i>Astrophysical Journal Letters</i> , 2013, 769, L19.	3.0	50
38	Aromatics and Cyclic Molecules in Molecular Clouds: A New Dimension of Interstellar Organic Chemistry. <i>Journal of Physical Chemistry A</i> , 2021, 125, 3231-3243.	1.1	50
39	The Radio Spectrum of the Phenyl Radical. <i>Astrophysical Journal</i> , 2003, 590, L61-L64.	1.6	49
40	Rotational Spectra of Small PAHs: Acenaphthene, Acenaphthylene, Azulene, and Fluorene. <i>Astrophysical Journal</i> , 2007, 662, 1309-1314.	1.6	49
41	An investigation of spectral line stacking techniques and application to the detection of HC11N. <i>Nature Astronomy</i> , 2021, 5, 188-196.	4.2	49
42	Ubiquitous aromatic carbon chemistry at the earliest stages of star formation. <i>Nature Astronomy</i> , 2021, 5, 181-187.	4.2	49
43	The Molecular Structure of <i>cis</i> -1,3-Butadiene: Experimental Establishment of Nonplanarity. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 1821-1825.	7.2	46
44	Rotational spectra of the carbon chain free radicals C ₁₀ H, C ₁₂ H, C ₁₃ H, and C ₁₄ H. <i>Journal of Chemical Physics</i> , 1998, 109, 5433-5438.	1.2	45
45	The Rotational Spectrum of TiO ₂ . <i>Astrophysical Journal</i> , 2008, 676, 1367-1371.	1.6	45
46	Laser and Fourier Transform Spectroscopy of PtH and PtD. <i>Journal of Molecular Spectroscopy</i> , 1993, 158, 208-236.	0.4	43
47	Isofulminic acid, HONC: <i>Ab initio</i> theory and microwave spectroscopy. <i>Journal of Chemical Physics</i> , 2009, 131, 174308.	1.2	43
48	A Molecular Precursor to Phosphaethyne and Its Application in Synthesis of the Aromatic 1,2,3,4-Phosphatriazolate Anion. <i>Journal of the American Chemical Society</i> , 2016, 138, 6731-6734.	6.6	40
49	Rotational Spectra of Sulfur-Carbon Chains. II. HC 5 S, HC 6 S, HC 7 S, and HC 8 S, and H 2 C 4 S, H 2 C 5 S, H 2 C 6. <i>Astrophysical Journal, Supplement Series</i> , 2002, 138, 297-303.	3.0	39
50	Spatial Distributions and Interstellar Reaction Processes. <i>Journal of Physical Chemistry A</i> , 2011, 115, 6472-6480.	1.1	39
51	Automated microwave double resonance spectroscopy: A tool to identify and characterize chemical compounds. <i>Journal of Chemical Physics</i> , 2016, 144, 124202.	1.2	39
52	Communication: Thermal unimolecular decomposition of syn-CH ₃ CHOO: A kinetic study. <i>Journal of Chemical Physics</i> , 2016, 145, 131102.	1.2	38
53	Exhaustive Product Analysis of Three Benzene Discharges by Microwave Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2020, 124, 5170-5181.	1.1	38
54	The isocyanopolyynes HC ₄ NC and HC ₆ NC: Microwave spectra and <i>ab initio</i> calculations. <i>Journal of Chemical Physics</i> , 1998, 109, 3108-3115.	1.2	37

#	ARTICLE	IF	CITATIONS
55	Rotational spectra of SiCN, SiNC, and the SiCnH (n=2, 4-6) radicals. <i>Journal of Chemical Physics</i> , 2001, 115, 870-877.	1.2	37
56	The rotational spectrum of CN ⁺ . <i>Journal of Chemical Physics</i> , 2007, 126, 191101.	1.2	37
57	Bonding in the Heavy Analogue of Hydrogen Cyanide: The Curious Case of Bridged HPSi. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5661-5664.	7.2	37
58	Gas-phase synthetic pathways to benzene and benzonitrile: a combined microwave and thermochemical investigation. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 2946-2956.	1.3	37
59	Vibrational excitation and relaxation of five polyatomic molecules in an electrical discharge. <i>Journal of Chemical Physics</i> , 2005, 122, 194319.	1.2	36
60	Discovery of a Missing Link: Detection and Structure of the Elusive Disilicon Carbide Cluster. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 2107-2111.	2.1	36
61	Detection of Interstellar HC ₅ O in TMC-1 with the Green Bank Telescope. <i>Astrophysical Journal Letters</i> , 2017, 843, L28.	3.0	36
62	Rotational spectra of C ₄ N, C ₆ N, and the isotopic species of C ₃ N. <i>Journal of Chemical Physics</i> , 2003, 118, 3549-3557.	1.2	33
63	Interstellar Detection of 2-cyanocyclopentadiene, C ₅ H ₅ CN, a Second Five-membered Ring toward TMC-1. <i>Astrophysical Journal Letters</i> , 2021, 910, L2.	3.0	33
64	Rotational Spectroscopy of Isotopologues of Silicon Monoxide, SiO, and Spectroscopic Parameters from a Combined Fit of Rotational and Rovibrational Data. <i>Journal of Physical Chemistry A</i> , 2013, 117, 13843-13854.	1.1	32
65	Detection of Interstellar HC ₄ NC and an Investigation of Isocyanopolyne Chemistry under TMC-1 Conditions. <i>Astrophysical Journal Letters</i> , 2020, 900, L9.	3.0	32
66	Detection of low-frequency lambda-doublet transitions of the free 12CH and 13CH radicals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12263-12268.	3.3	31
67	On the molecular structure of HOOO. <i>Journal of Chemical Physics</i> , 2012, 136, 034303.	1.2	31
68	Spectroscopic Detection and Structure of Hydroxidooxidosulfur (HOSO) Radical, An Important Intermediate in the Chemistry of Sulfur-Bearing Compounds. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 4074-4079.	2.1	31
69	Rotational Spectra of the Nitrogen-Sulfur Carbon Chains NC _n S, n = 1-7. <i>Astrophysical Journal, Supplement Series</i> , 2003, 144, 287-297.	3.0	30
70	SUBMILLIMETER NARROW EMISSION LINES FROM THE INNER ENVELOPE OF IRC+10216. <i>Astrophysical Journal</i> , 2009, 692, 1205-1210.	1.6	29
71	Cyclic SiS ₂ : A New Perspective on the Walsh Rules. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 3695-3698.	7.2	29
72	Detection and Structure of HOON: Microwave Spectroscopy Reveals an O-O Bond Exceeding 1.9 Å... <i>Science</i> , 2013, 342, 1354-1357.	6.0	29

#	ARTICLE	IF	CITATIONS
73	Laboratory Detection of HS[CLC]i[/CLC]CN and HS[CLC]i[/CLC]NC. <i>Astrophysical Journal</i> , 2002, 577, L71-L74.	1.6	29
74	Sulfur monoxide thermal release from an anthracene-based precursor, spectroscopic identification, and transfer reactivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5866-5871.	3.3	28
75	The ozonolysis of isoprene in a cryogenic buffer gas cell by high resolution microwave spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16828-16834.	1.3	28
76	Laser Spectroscopy of Gadolinium Monofluoride: Ligand Field Assignments of States in the 0â€“3 eV Range. <i>Journal of Molecular Spectroscopy</i> , 1996, 176, 148-161.	0.4	26
77	Ab initio theory and rotational spectra of linear carbon chains SiCnS. <i>Journal of Chemical Physics</i> , 2002, 116, 10719-10729.	1.2	25
78	Molecular Structure of o-Benzyne from Microwave Measurements. <i>Journal of Physical Chemistry A</i> , 2004, 108, 2645-2651.	1.1	25
79	Synthetic and Spectroscopic Investigations Enabled by Modular Synthesis of Molecular Phosphaalkyne Precursors. <i>Journal of the American Chemical Society</i> , 2018, 140, 17985-17991.	6.6	25
80	High sensitivity microwave spectroscopy in a cryogenic buffer gas cell. <i>Review of Scientific Instruments</i> , 2019, 90, 053104.	0.6	25
81	Study of Benzene Fragmentation, Isomerization, and Growth Using Microwave Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 2408-2413.	2.1	25
82	Microwave Detection of Sulfoxylic Acid (HOSO). <i>Journal of Physical Chemistry A</i> , 2013, 117, 3608-3613.	1.1	24
83	Exotic SiO ₂ H ₂ Isomers: Theory and Experiment Working in Harmony. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1895-1900.	2.1	24
84	Laser Spectroscopy of Cerium Monofluoride: Ligand Field Assignments of Some 4f5d6pâ†•4f5d6s Transitions. <i>Journal of Molecular Spectroscopy</i> , 1996, 177, 251-262.	0.4	23
85	Rotational spectra of the van der Waals complexes of molecular hydrogen and OCS. <i>Journal of Chemical Physics</i> , 2007, 127, 054305.	1.2	23
86	Building blocks of dust: A coordinated laboratory and astronomical study of the archtype AGB carbon star IRC+10216. <i>Journal of Molecular Spectroscopy</i> , 2019, 356, 7-20.	0.4	22
87	Bayesian Analysis of Theoretical Rotational Constants from Low-Cost Electronic Structure Methods. <i>Journal of Physical Chemistry A</i> , 2020, 124, 898-910.	1.1	22
88	Monobridged Si2H4. <i>Journal of Chemical Physics</i> , 2006, 124, 074303.	1.2	21
89	Communication: The ground electronic state of Si2C: Rovibrational level structure, quantum monodromy, and astrophysical implications. <i>Journal of Chemical Physics</i> , 2015, 142, 231101.	1.2	21
90	Isotopic studies of <i>trans</i> and <i>cis</i>-HOCO using rotational spectroscopy: Formation, chemical bonding, and molecular structures. <i>Journal of Chemical Physics</i> , 2016, 144, 124304.	1.2	21

#	ARTICLE	IF	CITATIONS
91	Molecule Identification with Rotational Spectroscopy and Probabilistic Deep Learning. <i>Journal of Physical Chemistry A</i> , 2020, 124, 3002-3017.	1.1	21
92	Silicon Oxysulfide, OSiS: Rotational Spectrum, Quantum-Chemical Calculations, and Equilibrium Structure. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 1228-1231.	2.1	20
93	Two Isomers of Protonated Isocyanic Acid: Evidence for an Ion-Neutral Molecule Pathway for HNC ⁺ HOCN Isomerization. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 3420-3424.	2.1	20
94	Rotational spectrum and equilibrium structure of silanethione, H ₂ SiCS. <i>Chemical Communications</i> , 2008, , 5292.	2.2	19
95	High-resolution rotational spectroscopy of the carbon chain anions C ₃ N ⁻ , C ₄ H ⁻ , and C ₄ D ⁻ . <i>Journal of Chemical Physics</i> , 2008, 129, 054314.	1.2	19
96	Laboratory detection of protonated SO ₂ in two isomeric forms. <i>Journal of Chemical Physics</i> , 2010, 133, 194305.	1.2	19
97	Nuclear hyperfine interaction of rotating hydrogen: A spectroscopic investigation of hydrogen-OCS van der Waals complexes. <i>Journal of Chemical Physics</i> , 2005, 123, 221106.	1.2	18
98	Laboratory detection of the elusive HSCO ⁺ isomer. <i>Journal of Chemical Physics</i> , 2007, 127, 221104.	1.2	17
99	Rotational spectra and equilibrium structures of H ₂ SiS and Si ₂ S. <i>Journal of Chemical Physics</i> , 2011, 134, 034306.	1.2	17
100	Jet-Cooled Spectroscopy of the $\hat{\pm}$ -Methylbenzyl Radical: Probing the State-Dependent Effects of Methyl Rocking Against a Radical Site. <i>Journal of Physical Chemistry A</i> , 2013, 117, 13465-13480.	1.1	17
101	Molecular polymorphism: microwave spectra, equilibrium structures, and an astronomical investigation of the HNCS isomeric family. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 22693-22705.	1.3	17
102	Vibrational satellites of C ₂ S, C ₃ S, and C ₄ S: microwave spectral taxonomy as a stepping stone to the millimeter-wave band. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 13870-13889.	1.3	17
103	Descendant of the X-ogen carrier and a $\hat{\epsilon}$ -mass of 69 $\hat{\epsilon}$ ™: infrared action spectroscopic detection of HC ₃ O ⁺ and HC ₃ S ⁺ . <i>Molecular Physics</i> , 2020, 118, e1776409.	0.8	17
104	Laser spectroscopic studies of terbium monofluoride: ligand field assignments of some f ₈ [7F] ^{sp} -f ₈ [7F] ^{s2} transitions. <i>Molecular Physics</i> , 1994, 83, 881-905.	0.8	16
105	Gas-Phase Structure Determination of Dihydroxycarbene, One of the Smallest Stable Singlet Carbenes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 4089-4092.	7.2	16
106	Fundamental Vibrational Frequencies and Spectroscopic Constants of <i>cis</i> - and <i>trans</i> -HOCS, HSCO, and Isotopologues via Quartic Force Fields. <i>Journal of Physical Chemistry B</i> , 2014, 118, 6498-6510.	1.2	16
107	An Accurate Molecular Structure of Phenyl, the Simplest Aryl Radical. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 1808-1811.	7.2	16
108	Relatively Selective Production of the Simplest Criegee Intermediate in a CH ₄ /O ₂ Electric Discharge: Kinetic Analysis of a Plausible Mechanism. <i>Journal of Physical Chemistry A</i> , 2015, 119, 7197-7204.	1.1	16

#	ARTICLE	IF	CITATIONS
109	Laser Spectroscopy of Dysprosium Monofluoride: Ligand Field Assignments of States Belonging to the 4f ⁹ 6s ² , 4f ¹⁰ 6s, and 4f ⁹ 6s6p Superconfigurations. <i>Journal of Molecular Spectroscopy</i> , 1996, 179, 253-262.	0.4	15
110	Detection of Two Highly Stable Silicon Nitrides: HSiNSi and H ₃ SiNSi. <i>Journal of Physical Chemistry A</i> , 2013, 117, 11282-11288.	1.1	15
111	A laboratory and theoretical study of silicon hydroxide SiOH. <i>Journal of Chemical Physics</i> , 2008, 129, 184301.	1.2	14
112	A laboratory and theoretical study of protonated carbon disulfide, HSCS ⁺ . <i>Journal of Chemical Physics</i> , 2009, 130, 234304.	1.2	14
113	Detection of protonated vinyl cyanide, CH ₂ CHCNH ⁺ , a prototypical branched nitrile cation. <i>Journal of Chemical Physics</i> , 2013, 138, 094316.	1.2	14
114	Germanium Dicarbide: Evidence for a T-Shaped Ground State Structure. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3776-3781.	2.1	14
115	Pyrolysis of the Simplest Carbohydrate, Glycolaldehyde (CHO-CH ₂ OH), and Glyoxal in a Heated Microreactor. <i>Journal of Physical Chemistry A</i> , 2016, 120, 2161-2172.	1.1	13
116	Interconversion of Methyltropylium and Xylyl Radicals: A Pathway Unavailable to the Benzyl-Tropylium Rearrangement. <i>Journal of Physical Chemistry A</i> , 2018, 122, 1261-1269.	1.1	13
117	Characterization of the simplest hydroperoxide ester, hydroperoxymethyl formate, a precursor of atmospheric aerosols. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 18065-18070.	1.3	13
118	Searches for Interstellar HCCSH and H ₂ CCS. <i>Astrophysical Journal</i> , 2019, 883, 201.	1.6	13
119	Discovery of Interstellar trans-cyanovinylacetylene (HC≡CCH=C≡N) and vinylcyanoacetylene (H ₂ C=C≡C≡N) in GOTHAM Observations of TMC-1. <i>Astrophysical Journal Letters</i> , 2021, 908, L11.	3.0	13
120	High resolution microwave spectroscopy of the isomeric pair vinylcyanoacetylene and cyanovinylacetylene. <i>Journal of Molecular Spectroscopy</i> , 2004, 225, 93-95.	0.4	12
121	The far-infrared and microwave spectra of the CH radical in the v=1 level of the X ² Σ state. <i>Journal of Molecular Spectroscopy</i> , 2008, 247, 128-139.	0.4	11
122	To kink or not: A search for long-chain cumulenes using microwave spectral taxonomy. <i>Journal of Chemical Physics</i> , 2017, 146, 154301.	1.2	11
123	Machine Learning of Interstellar Chemical Inventories. <i>Astrophysical Journal Letters</i> , 2021, 917, L6.	3.0	11
124	Detection of Nitrogen-Protonated Nitrous Oxide (HNNO ⁺) by Rotational Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2013, 117, 9968-9974.	1.1	10
125	Spectroscopic and structural characterization of three silaisocyanides: exploring an elusive class of reactive molecules at high resolution. <i>Chemical Communications</i> , 2015, 51, 11305-11308.	2.2	10
126	The Molecular Structure of gauche-1,3-Butadiene: Experimental Establishment of Nonplanarity. <i>Angewandte Chemie</i> , 2018, 130, 1839-1843.	1.6	10

#	ARTICLE	IF	CITATIONS
127	Gas phase detection and rotational spectroscopy of ethynethiol, HCCSH. <i>Molecular Physics</i> , 2019, 117, 1381-1391.	0.8	10
128	A rotational and vibrational investigation of phenylpropionitrile (C ₆ H ₅ C ₃ N). <i>Journal of Molecular Spectroscopy</i> , 2021, 377, 111425.	0.4	10
129	CH ₃ -Terminated Carbon Chains in the GOTHAM Survey of TMC-1: Evidence of Interstellar CH ₃ C ₇ N. <i>Astrophysical Journal</i> , 2022, 924, 21.	1.6	9
130	A LABORATORY STUDY OF C ₃ H ⁺ AND THE C ₃ H RADICAL IN THREE NEW VIBRATIONALLY EXCITED ² Σ STATES USING A PIN-HOLE NOZZLE DISCHARGE SOURCE. <i>Astrophysical Journal, Supplement Series</i> , 2015, 217, 10.	3.0	8
131	The Hunt for Elusive Molecules: Insights from Joint Theoretical and Experimental Investigations. <i>Chemistry - A European Journal</i> , 2019, 25, 7243-7258.	1.7	8
132	Rotational Characterization of the Elusive <i>gauche</i> -Isoprene. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 1981-1985.	2.1	8
133	SOLEIL and ALMA views on prototypical organic nitriles: C ₂ H ₅ CN. <i>Journal of Molecular Spectroscopy</i> , 2021, 375, 111392.	0.4	8
134	Automated Construction of Potential Energy Surfaces Suitable to Describe van der Waals Complexes with Highly Excited Nascent Molecules: The Rotational Spectra of ArCS(v) and ArSi(v). <i>Journal of Physical Chemistry A</i> , 2020, 124, 4445-4454.	1.1	7
135	The rotational spectrum of HC ₈ N, a linear molecule with a triplet ground state. <i>Journal of Molecular Spectroscopy</i> , 2005, 232, 351-357.	0.4	6
136	The rotational spectrum and potential energy surface of the ArSiO complex. <i>Journal of Chemical Physics</i> , 2018, 149, 134308.	1.2	6
137	Detection and structural characterization of nitrosamide H ₂ NNO: A central intermediate in deNO _x processes. <i>Journal of Chemical Physics</i> , 2017, 147, 134301.	1.2	5
138	Electron Donor-Acceptor Nature of the EthanolCO ₂ Dimer. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6283-6287.	1.1	5
139	Equilibrium molecular structures of vinyl carbon chains: Vinyl acetylene, vinyl diacetylene, and vinyl cyanide. <i>Journal of Molecular Spectroscopy</i> , 2018, 350, 10-17.	0.4	5
140	Generation and structural characterization of Ge carbides GeC _n (<i>n</i> = 4, 5, 6) by laser ablation, broadband rotational spectroscopy, and quantum chemistry. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 18911-18919.	1.3	5
141	Oxygen-18 Isotopic Studies of HOOO and DOOO. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6296-6303.	1.1	4
142	Synchrotron-Based High Resolution Far-Infrared Spectroscopy of <i>trans</i> -Butadiene. <i>Journal of Physical Chemistry A</i> , 2020, 124, 2427-2435.	1.1	4
143	A high speed fitting program for rotational spectroscopy. <i>Journal of Molecular Spectroscopy</i> , 2021, 379, 111467.	0.4	3
144	Rotational spectrum of anti- and <i>gauche</i> -4-cyano-1-butyne (C ₅ H ₅ N) - An open-chain isomer of pyridine. <i>Journal of Molecular Spectroscopy</i> , 2022, 385, 111604.	0.4	3

#	ARTICLE	IF	CITATIONS
145	Laboratory Astrophysics and Radio Astronomy: Some Recent Successes. AIP Conference Proceedings, 2006, , .	0.3	2
146	Detecting Laser-Volatilized Salts with a Miniature 100-GHz Spectrometer. Journal of Physical Chemistry A, 2020, 124, 1429-1436.	1.1	2
147	Carbon-13 studies of sulphur-terminated carbon chains: chemical bonding, molecular structures, and formation pathways. Molecular Physics, 0, , .	0.8	1
148	CARBON-13 STUDIES OF SULFUR-TERMINATED CARBON CHAINS: CHEMICAL BONDING, MOLECULAR STRUCTURES AND FORMATION PATHWAYS. , 2018, , .		1
149	HSCO+ and DSCO+: a multi-technique approach in the laboratory for the spectroscopy of interstellar ions. Astronomy and Astrophysics, 2018, 620, A184.	2.1	1
150	BENZENE'S INFERNO, PART II: AUTOMATED ANALYSIS AND IDENTIFICATION. , 2019, , .		1
151	Building Blocks of Dust: A Coordinated Laboratory and Astronomical Study of AGB Stars. Journal of Molecular Spectroscopy, 2019, 356, 7-20.	0.4	1
152	Infrared action spectroscopy of fundamental nitrilium ions: Protonated vinyl- and ethyl cyanide. Journal of Molecular Spectroscopy, 2022, 386, 111615.	0.4	1
153	Laboratory and Astronomical Detection of New Carbon Chains and Rings. Symposium - International Astronomical Union, 2000, 197, 273-282.	0.1	0
154	The Rotational Spectrum and Geometrical Structure of Thiozone, S3.. ChemInform, 2004, 35, no.	0.1	0
155	Laboratory study of isocyanic acid ions: Rotational spectroscopy of NCO ⁺ , H2NCO ⁺ , and HNCOH ⁺ . , 2015, , .		0
156	SMA Spectral Line Survey of the Proto-Planetary Nebula CRL 618. Proceedings of the International Astronomical Union, 2018, 14, 483-484.	0.0	0
157	Frontispiece: The Hunt for Elusive Molecules: Insights from Joint Theoretical and Experimental Investigations. Chemistry - A European Journal, 2019, 25, .	1.7	0
158	First Laboratory Detection of N ¹³ CO ⁺ and Semiexperimental Equilibrium Structure of the NCO ⁺ Anion. Journal of Physical Chemistry A, 2022, 126, 1899-1904.	1.1	0