

Design and evaluation of a pulsed-jet chirped-pulse millimeter-wave source in the 70–102 GHz region

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Chirped-Pulse Millimeter-Wave Spectroscopy of Rydberg-Rydberg Transitions. Physical Review Letters, 2011, 107, 143001.	2.9	22
2	Molecular Orientation and Alignment by Intense Single-Cycle THz Pulses. Physical Review Letters, 2011, 107, 163603.	2.9	261
3	Thermal decomposition of CH ₃ CHO studied by matrix infrared spectroscopy and photoionization mass spectroscopy. Journal of Chemical Physics, 2012, 137, 164308.	1.2	49
4	Cooperative effects in a dense Rydberg gas. Molecular Physics, 2012, 110, 1909-1915.	0.8	3
5	A Ka-band chirped-pulse Fourier transform microwave spectrometer. Journal of Molecular Spectroscopy, 2012, 280, 68-76.	0.4	42
6	An arbitrary waveform generator based chirped pulse Fourier transform spectrometer operating from 260 to 295GHz. Journal of Molecular Spectroscopy, 2012, 280, 3-10.	0.4	72
7	A new approach toward transition state spectroscopy. Faraday Discussions, 2013, 163, 33.	1.6	39
8	Rotational spectroscopy meets theory. Physical Chemistry Chemical Physics, 2013, 15, 6595.	1.3	62
9	THE DETECTION OF INTERSTELLAR ETHANIMINE (CH ₃ CHNH) FROM OBSERVATIONS TAKEN DURING THE GBT PRIMOS SURVEY. Astrophysical Journal Letters, 2013, 765, L9.	3.0	88
10	High-Accuracy Estimates for the Vinylidene-Acetylene Isomerization Energy and the Ground State Rotational Constants of :C ¹³ CH ₂ . Journal of Physical Chemistry A, 2013, 117, 11679-11683.	1.1	40
11	Segmented chirped-pulse Fourier transform submillimeter spectroscopy for broadband gas analysis. Optics Express, 2013, 21, 19743.	1.7	79
12	Chirped-pulse millimeter-wave spectroscopy: Spectrum, dynamics, and manipulation of Rydberg Rydberg transitions. Journal of Chemical Physics, 2013, 138, 014301.	1.2	20
13	Extending high-finesse cavity techniques to the far-infrared. Review of Scientific Instruments, 2013, 84, 075107.	0.6	11
14	Chirped-pulse millimeter-wave spectroscopy for dynamics and kinetics studies of pyrolysis reactions. Physical Chemistry Chemical Physics, 2014, 16, 15739-15751.	1.3	54
15	A chirped-pulse Fourier-transform microwave/pulsed uniform flow spectrometer. II. Performance and applications for reaction dynamics. Journal of Chemical Physics, 2014, 141, 214203.	1.2	54
16	Pure rotational spectrometers for trace-level VOC detection and chemical sensing. , 2014, , .		3
17	Widely tunable THz-wave emitter with linear polarization characteristics based on antenna-integrated UTC-PD. Proceedings of SPIE, 2014, , .	0.8	0
18	Broadband photonic terahertz-wave emitter integrating uni-traveling-carrier photodiode and self-complementary planar antenna. Optical Engineering, 2014, 53, 031209.	0.5	15

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19	A chirped-pulse Fourier-transform microwave/pulsed uniform flow spectrometer. I. The low-temperature flow system. <i>Journal of Chemical Physics</i> , 2014, 141, 154202.	1.2	46
20	A Signature of Roaming Dynamics in the Thermal Decomposition of Ethyl Nitrite: Chirped-Pulse Rotational Spectroscopy and Kinetic Modeling. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3641-3648.	2.1	28
21	Direct detection of Rydberg "Rydberg millimeter-wave transitions in a buffer gas cooled molecular beam. <i>Chemical Physics Letters</i> , 2015, 640, 124-136.	1.2	20
22	High Resolution Laboratory Spectroscopy. <i>EAS Publications Series</i> , 2015, 75-76, 295-307.	0.3	2
23	Broadband terahertz-wave detector implementing zero-biased InGaAsP Schottky-barrier diode. <i>Proceedings of SPIE</i> , 2015, , .	0.8	0
24	Product Branching in the Low Temperature Reaction of CN with Propyne by Chirped-Pulse Microwave Spectroscopy in a Uniform Supersonic Flow. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1599-1604.	2.1	49
25	Edge effects in chirped-pulse Fourier transform microwave spectra. <i>Journal of Molecular Spectroscopy</i> , 2015, 312, 54-57.	0.4	7
26	Millimeter-wave optical double resonance schemes for rapid assignment of perturbed spectra, with applications to the Clf 1B2 state of SO2. <i>Journal of Chemical Physics</i> , 2015, 142, 144201.	1.2	18
27	Broadband multi-resonant strong field coherence breaking as a tool for single isomer microwave spectroscopy. <i>Journal of Chemical Physics</i> , 2016, 145, 114203.	1.2	14
28	Perspective: The first ten years of broadband chirped pulse Fourier transform microwave spectroscopy. <i>Journal of Chemical Physics</i> , 2016, 144, 200901.	1.2	109
29	Fast sweep direct absorption (sub)millimeter-wave spectroscopy. <i>Review of Scientific Instruments</i> , 2016, 87, 113109.	0.6	6
30	Continuous probing of cold complex molecules with infrared frequency comb spectroscopy. <i>Nature</i> , 2016, 533, 517-520.	13.7	92
31	Terahertz-visible two-photon rotational spectroscopy of cold OD^+ . <i>Physical Review A</i> , 2016, 93, .	1.2	20
32	Nonlinear two-dimensional terahertz photon echo and rotational spectroscopy in the gas phase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11800-11805.	3.3	81
33	Weakly Bound Clusters in Astrochemistry? Millimeter and Submillimeter Spectroscopy of trans-HO_3 and Comparison to Astronomical Observations. <i>Journal of Physical Chemistry A</i> , 2016, 120, 657-667.	1.1	17
34	Uniform Supersonic Chemical Reactors: 30 Years of Astrochemical History and Future Challenges. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 8618-8640.	7.2	42
35	Photonic Terahertz-Wave Generation Using Slot-Antenna-Integrated Uni-Travelling-Carrier Photodiodes. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017, 23, 1-7.	1.9	21
36	Chemie mit Äberschall: 30 Jahre astrochemische Forschung und künftige Herausforderungen. <i>Angewandte Chemie</i> , 2017, 129, 8742-8766.	1.6	2

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37	Pseudo-equilibrium geometry of HNO determined by an E-Band CP-FTmmW spectrometer. <i>Chemical Physics Letters</i> , 2017, 680, 101-108.	1.2	11
38	Direct single-shot observation of millimeter-wave superradiance in Rydberg-Rydberg transitions. <i>Physical Review A</i> , 2017, 95, .	1.0	19
39	Time-Resolved Kinetic Chirped-Pulse Rotational Spectroscopy in a Room-Temperature Flow Reactor. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 6180-6188.	2.1	18
40	Coherent laser-millimeter-wave interactions en route to coherent population transfer. <i>Journal of Chemical Physics</i> , 2017, 147, 144201.	1.2	3
41	A laboratory heterodyne emission spectrometer at submillimeter wavelengths. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 5530-5544.	1.3	16
42	Miniature cavity for in situ millimeter wave gas sensing: N ₂ O and CH ₃ OH detection. <i>Sensors and Actuators B: Chemical</i> , 2018, 254, 763-770.	4.0	6
43	Using radio astronomical receivers for molecular spectroscopic characterization in astrochemical laboratory simulations: A proof of concept. <i>Astronomy and Astrophysics</i> , 2018, 609, A15.	2.1	12
44	Direct versus Indirect Photodissociation of Isoxazole from Product Branching: A Chirped-Pulse Fourier Transform mm-Wave Spectroscopy/Pulsed Uniform Flow Investigation. <i>Journal of Physical Chemistry A</i> , 2018, 122, 7523-7531.	1.1	12
45	Chirped-pulse millimetre-wave spectrometer for the 140–180 GHz region. <i>Molecular Physics</i> , 2018, 116, 3656-3665.	0.8	3
46	A 90-102 GHz CMOS based pulsed Fourier transform spectrometer: New approaches for <i>in situ</i> chemical detection and millimeter-wave cavity-based molecular spectroscopy. <i>Review of Scientific Instruments</i> , 2018, 89, 073109.	0.6	11
47	Molecules probed with a slow chirped-pulse excitation: Analytical model of the free-induction-decay signal. <i>Physical Review A</i> , 2019, 100, .	1.0	2
48	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
49	Resonance Enhanced Multiphoton Ionization Detected Millimeter-Wave Absorption: The 115 GHz Line of CO. <i>Journal of Physical Chemistry A</i> , 2019, 123, 2153-2162.	1.1	0
50	A Gas Chromatography–Molecular Rotational Resonance Spectroscopy Based System of Singular Specificity. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 192-196.	7.2	13
51	A Gas Chromatography–Molecular Rotational Resonance Spectroscopy Based System of Singular Specificity. <i>Angewandte Chemie</i> , 2020, 132, 198-202.	1.6	5
52	Photodissociation transition states characterized by chirped pulse millimeter wave spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 146-151.	3.3	11
53	A novel Ka-band chirped-pulse spectrometer used in the determination of pressure broadening coefficients of astrochemical molecules. <i>Journal of Chemical Physics</i> , 2020, 153, 084201.	1.2	2
54	Design and performance of an E-band chirped pulse spectrometer for kinetics applications: OCS – He pressure broadening. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 250, 107001.	1.1	8

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55	The challenging playground of astrochemistry: an integrated rotational spectroscopy “ quantum chemistry strategy. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 6507-6523.	1.3	36
56	Millimeter-wave emission spectrometer based on direct digital synthesis. <i>Review of Scientific Instruments</i> , 2020, 91, 063104.	0.6	9
57	Characterization of the Observed Electric Field and Molecular Relaxation Times for Millimeter-Wave Chirped Pulse Instrumentation. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2020, 41, 1009-1021.	1.2	5
58	High-Resolution Gas Phase Spectroscopy of Molecules Desorbed from an Ice Surface: A Proof-of-Principle Study. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 86-91.	1.2	12
59	Instrumentation for THz Spectroscopy in the Laboratory and in Space. <i>IEEE Journal of Microwaves</i> , 2021, 1, 43-54.	4.9	7
60	Substitution Reactions in the Pyrolysis of Acetone Revealed through a Modeling, Experiment, Theory Paradigm. <i>Journal of the American Chemical Society</i> , 2021, 143, 3124-3142.	6.6	28
61	Interleaved electro-optic dual comb generation to expand bandwidth and scan rate for molecular spectroscopy and dynamics studies near 1.6 μm . <i>Optics Express</i> , 2021, 29, 33155.	1.7	5
62	Terahertz gas phase spectroscopy using a high-finesse Fabry-Pérot cavity. <i>Optica</i> , 2019, 6, 1449.	4.8	34
63	Chirped-Pulse Fourier Transform Millimeter-Wave Spectroscopy of Furan, Isotopologues, and Vibrational Excited States. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 2986-2994.	1.2	11
64	Uniform supersonic flow sampling for detection by chirped-pulse rotational spectroscopy. <i>Journal of Chemical Physics</i> , 2022, 156, 014202.	1.2	6
65	Collisional excitation of HNC by He found to be stronger than for structural isomer HCN in experiments at the low temperatures of interstellar space. <i>Nature Chemistry</i> , 2022, 14, 811-815.	6.6	8
66	The DDS-based Multi-functional Spectrometer. , 2022, , .		0
67	Performance of a chirped-pulse Fourier transform millimeter wave spectrometer in the range of 75–110 GHz. <i>Review of Scientific Instruments</i> , 2023, 94, 034705.	0.6	0