

# Arnaud Cuisset

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4482463/publications.pdf>

Version: 2024-02-01

102  
papers

1,387  
citations

304743

22  
h-index

395702

33  
g-index

103  
all docs

103  
docs citations

103  
times ranked

1137  
citing authors

#	ARTICLE	IF	CITATIONS
1	Detection and quantification of multiple molecular species in mainstream cigarette smoke by continuous-wave terahertz spectroscopy. <i>Optics Letters</i> , 2006, 31, 2356.	3.3	115
2	Performance of the AILES THz-Infrared beamline at SOLEIL for High resolution spectroscopy. <i>AIP Conference Proceedings</i> , 2010, . .	0.4	70
3	THz photomixing synthesizer based on a fiber frequency comb. <i>Optics Express</i> , 2009, 17, 22031.	3.4	50
4	Chlorofluoroiodomethane as a potential candidate for parity violation measurements. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 79-92.	2.8	46
5	Continuous-wave terahertz by photomixing: applications to gas phase pollutant detection and quantification. <i>Comptes Rendus Physique</i> , 2008, 9, 262-275.	0.9	44
6	Gas-Phase Vibrational Spectroscopy and Ab Initio Study of Organophosphorous Compounds: Discrimination between Species and Conformers. <i>Journal of Physical Chemistry B</i> , 2008, 112, 12516-12525.	2.6	43
7	Multiple component analysis of cigarette smoke using THz spectroscopy, comparison with standard chemical analytical methods. <i>Applied Physics B: Lasers and Optics</i> , 2007, 86, 579-586.	2.2	42
8	Theoretical and experimental studies of CH <sub>3</sub> X <sup>Y</sup> rotational line shapes for atmospheric spectra modelling: application to room-temperature CH <sub>3</sub> Cl <sup>O</sup> . <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 20326.	2.8	39
9	Spatially resolved Raman analysis of laser induced refractive index variation in chalcogenide glass. <i>Optical Materials Express</i> , 2012, 2, 1768.	3.0	39
10	Analysis of self-broadened pure rotational and rovibrational lines of methyl chloride at room temperature. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 116, 87-100.	2.3	35
11	Terahertz gas phase spectroscopy using a high-finesse Fabry-Pérot cavity. <i>Optica</i> , 2019, 6, 1449.	9.3	34
12	Widely tunable THz synthesizer. <i>Applied Physics B: Lasers and Optics</i> , 2011, 104, 763-768.	2.2	32
13	Monitoring of food spoilage by high resolution THz analysis. <i>Analyst, The</i> , 2018, 143, 5536-5544.	3.5	32
14	Terahertz spectroscopy applied to the measurement of strengths and self-broadening coefficients for high-J lines of OCS. <i>Journal of Molecular Spectroscopy</i> , 2006, 239, 182-189.	1.2	31
15	Structure of Se <sup>Te</sup> glasses by Raman spectroscopy and <i>DFT</i> modeling. <i>Journal of the American Ceramic Society</i> , 2018, 101, 5188-5197.	3.8	31
16	Oxygen, nitrogen and air broadening of HCN spectral lines at terahertz frequencies. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 2857-2868.	2.3	30
17	High density terahertz frequency comb produced by coherent synchrotron radiation. <i>Nature Communications</i> , 2015, 6, 7733.	12.8	30
18	Anomalous dispersion measurement in terahertz frequency region by photomixing. <i>Applied Physics Letters</i> , 2006, 88, 181105.	3.3	29

#	ARTICLE	IF	CITATIONS
19	Recent Developments of an Opto-Electronic THz Spectrometer for High-Resolution Spectroscopy. Sensors, 2009, 9, 9039-9057.	3.8	29
20	Versatile Sub-THz Spectrometer for Trace Gas Analysis. IEEE Sensors Journal, 2013, 13, 133-138.	4.7	28
21	Experimental studies by complementary terahertz techniques and semi-classical calculations of N <sub>2</sub> -broadening coefficients of CH <sub>3</sub> Cl. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1113-1126.	2.3	27
22	THz media characterization by means of coherent homodyne detection, results and potential applications. Applied Physics B: Lasers and Optics, 2007, 89, 395-399.	2.2	26
23	New investigation on THz spectra of OH and SH radicals ( $X \ll m$ ). Chemical Physics Letters, 2012, 550, 8-14.	2.6	22
24	Towards the Detection of Explosive Taggants: Microwave and Millimetre-Wave Gas-Phase Spectroscopies of 3-Nitrotoluene. ChemPhysChem, 2018, 19, 1056-1067.	2.1	21
25	Infrared spectroscopy of secondary organic aerosol precursors and investigation of the hygroscopicity of SOA formed from the OH reaction with guaiacol and syringol. Applied Optics, 2017, 56, E116.	2.1	19
26	A COMPLETE SPECTROSCOPIC CHARACTERIZATION OF SO AND ITS ISOTOPOLOGUES UP TO THE TERAHERTZ DOMAIN. Astrophysical Journal, 2015, 799, 115.	4.5	18
27	Rotational spectroscopy and dynamics of carbonyl sulphide studied by terahertz free induction decays signals. Optics Communications, 2008, 281, 3111-3119.	2.1	17
28	Effects of scavengers of Criegee intermediates and OH radicals on the formation of secondary organic aerosol in the ozonolysis of limonene. Journal of Aerosol Science, 2017, 110, 70-83.	3.8	17
29	Structural analysis of xCsCl(1-x)Ga <sub>2</sub> S <sub>3</sub> glasses by means of DFT calculations and Raman spectroscopy. Journal of Raman Spectroscopy, 2010, 41, 1050-1058.	2.5	16
30	Terahertz Rotational Spectroscopy of Greenhouse Gases Using Long Interaction Path-Lengths. Applied Sciences (Switzerland), 2021, 11, 1229.	2.5	16
31	Theoretical Spectroscopic Characterization at Low Temperatures of Dimethyl Sulfoxide: The Role of Anharmonicity. Journal of Physical Chemistry A, 2015, 119, 9644-9652.	2.5	15
32	Vibrational dynamics of deuterium chloride in solid nitrogen probed by linear and nonlinear spectroscopy. Journal of Chemical Physics, 2003, 118, 9582-9588.	3.0	14
33	The Chiral Molecule CHClF <sub>2</sub> : First Determination of Its Molecular Parameters by Fourier Transform Microwave and Millimeter-Wave Spectroscopies Supplemented by ab Initio Calculations. Journal of Physical Chemistry A, 2005, 109, 5708-5716.	2.5	14
34	Gas-Phase Synchrotron FTIR Spectroscopy of Weakly Volatile Alkyl Phosphonate and Alkyl Phosphate Compounds: Vibrational and Conformational Analysis in the Terahertz/Far-IR Spectral Domain. Journal of Physical Chemistry B, 2010, 114, 16936-16947.	2.6	14
35	Rotation-vibration interactions in the spectra of polycyclic aromatic hydrocarbons: Quinoline as a test-case species. Journal of Chemical Physics, 2015, 142, 104310.	3.0	14
36	Electronic relaxation of aniline in argon matrix: A site selective laser spectroscopy. Journal of Chemical Physics, 2002, 116, 4993.	3.0	13

#	ARTICLE	IF	CITATIONS
37	Mercury thioarsenate glasses: a hybrid chain/pyramidal network. RSC Advances, 2014, 4, 49236-49246.	3.6	13
38	Doppler limited rotational transitions of OH and SH radicals measured by continuous-wave terahertz photomixing. Journal of Molecular Structure, 2011, 1006, 13-19.	3.6	12
39	Spectral lines of methane measured up to 2.6 THz at sub-MHz accuracy with a CW-THz photomixing spectrometer: Line positions of rotational transitions induced by centrifugal distortion. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 349-354.	2.3	12
40	Large Amplitude Torsions in Nitrotoluene Isomers Studied by Rotational Spectroscopy and Quantum Chemistry Calculations. ChemPhysChem, 2020, 21, 2523-2538.	2.1	12
41	Far-infrared high resolution synchrotron FTIR spectroscopy of the $\hat{1}/211$ bending vibrational fundamental transition of dimethylsulfoxide. Chemical Physics Letters, 2010, 492, 30-34.	2.6	11
42	Infrared spectroscopy of methoxyphenols involved as atmospheric secondary organic aerosol precursors: Gas-phase vibrational cross-sections. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 179, 51-58.	2.3	11
43	Full Conformational Landscape of 3-Methoxyphenol Revealed by Room Temperature mm-Wave Rotational Spectroscopy Supported by Quantum Chemical Calculations. ChemPhysChem, 2018, 19, 1572-1578.	2.1	11
44	Rotational structure of the five lowest frequency fundamental vibrational states of dimethylsulfoxide. Chemical Physics Letters, 2013, 586, 10-15.	2.6	10
45	Synchrotron FT-FIR spectroscopy of nitro-derivatives vapors: New spectroscopic signatures of explosive taggants and degradation products. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 132, 838-845.	3.9	10
46	Synthesis and properties of new CdSe-Ag-As <sub>2</sub> Se <sub>3</sub> chalcogenide glasses. Materials Research Bulletin, 2011, 46, 210-215.	5.2	9
47	Rotational spectrum of formaldehyde reinvestigated using a photomixing THz synthesizer. Journal of Molecular Spectroscopy, 2012, 279, 12-15.	1.2	9
48	Chirped Pulse Spectrometer Operating at 200 GHz. Journal of Infrared, Millimeter, and Terahertz Waves, 2018, 39, 105-119.	2.2	9
49	Diagnosis of Diabetes Based on Analysis of Exhaled Air by Terahertz Spectroscopy and Machine Learning. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 809-814.	0.6	9
50	Intramolecular H-Bond Dynamics of Catechol Investigated by THz High-Resolution Spectroscopy of Its Low-Frequency Modes. Molecules, 2021, 26, 3645.	3.8	9
51	Gyroscopic Destabilization of Molecular Rotation and Quantum Bifurcation Observed in the Structure of the $\hat{1}/2$ Fundamental of Dimethylsulfoxide. Physical Review Letters, 2012, 109, 094101.	7.8	8
52	High resolution spectroscopy of six SOCl <sub>2</sub> isotopologues from the microwave to the far-infrared. Journal of Chemical Physics, 2016, 144, 084305.	3.0	8
53	Influence of a Weak Hydrogen Bond on Vibrational Coherence Probed by Photon Echoes in DCI Dimer Trapped in Solid Nitrogen. Journal of Physical Chemistry A, 2005, 109, 4873-4880.	2.5	7
54	CH <sub>3</sub> D photomixing spectroscopy up to 2.5 THz: New set of rotational and dipole parameters, first THz self-broadening measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 189, 198-205.	2.3	7

#	ARTICLE	IF	CITATIONS
55	Jet-cooled rovibrational spectroscopy of methoxyphenols using two complementary FTIR and QCL based spectrometers. Journal of Chemical Physics, 2019, 151, 194302.	3.0	7
56	Infrared photon echo experiments on small molecules isolated in condensed phase. Journal of Luminescence, 2001, 94-95, 575-578.	3.1	6
57	Gas phase THz spectroscopy of toxic agent simulant compounds using the AILES synchrotron beamline. , 2010, , .		6
58	Mercury Sulfide Dimorphism in Thioarsenate Glasses. Journal of Physical Chemistry B, 2016, 120, 5278-5290.	2.6	6
59	Conformational landscape and inertial defect of methoxyphenol isomers studied by mm-wave spectroscopy and quantum chemistry calculations. Journal of Chemical Physics, 2019, 150, 104303.	3.0	6
60	High-resolution synchrotron far infrared spectroscopy of thionyl chloride: Analysis of the <math>\nu_2</math> and <math>\nu_3</math> overflows. Journal of Molecular Spectroscopy, 2015, 315, 30-36.	1.2	5
61	Self and N <sub>2</sub> broadening coefficients of H <sub>2</sub> S probed by submillimeter spectroscopy: Comparison with IR measurements and semi-classical calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 247, 106955.	2.3	5
62	Characterization of the Observed Electric Field and Molecular Relaxation Times for Millimeter-Wave Chirped Pulse Instrumentation. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1009-1021.	2.2	5
63	High resolution study of the $\nu_2$ and $\nu_5$ rovibrational fundamental bands of thionyl chloride: Interplay of an evolutionary algorithm and a line-by-line analysis. Journal of Chemical Physics, 2017, 147, 054303.	3.0	5
64	Exploring vibrational coherence of molecular systems with simultaneous excitation of close frequencies using the CLIO-FEL. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 528, 636-640.	1.6	4
65	Gyroscopic destabilisation in polyatomic molecules: Rotational structure of the low-frequency bending vibrational states $\nu_{23}$ and $\nu_{11}$ of dimethylsulfoxide. Journal of Chemical Physics, 2013, 138, 234302.	3.0	4
66	Ionic transport and atomic structure of Ag <sub>2</sub> HgS-GeS <sub>2</sub> glasses. Pure and Applied Chemistry, 2019, 91, 1807-1820.	1.9	4
67	Mercury Thiogermanate Glasses HgS-GeS <sub>2</sub> : Vibrational, Macroscopic, and Electric Properties. Journal of Physical Chemistry B, 2020, 124, 7075-7085.	2.6	4
68	Study of the pseudo-ternary Ag <sub>2</sub> Si-As <sub>2</sub> Si-HgI <sub>2</sub> vitreous system. Journal of Solid State Chemistry, 2013, 199, 264-270.	2.9	3
69	Continuous Monitoring of Formaldehyde Photolysis Products by THz Spectroscopy. IEEE Sensors Journal, 2015, 15, 6141-6146.	4.7	3
70	Influence of complexation and solid environment on the vibrational coherence of DCI. European Physical Journal D, 2005, 36, 41-47.	1.3	2
71	A compact CW-THz spectrometer for applications to gas phase identification and quantification of multiple species. , 2007, , .		2
72	Semi-classical calculations of self-broadening coefficients of OCS and HCN at temperatures between 200K and 298K. Journal of Molecular Spectroscopy, 2016, 329, 35-42.	1.2	2

#	ARTICLE	IF	CITATIONS
73	Molecules probed with a slow chirped-pulse excitation: Analytical model of the free-induction-decay signal. <i>Physical Review A</i> , 2019, 100, .	2.5	2
74	Broadband Super-Resolution Terahertz Time-Domain Spectroscopy Applied to Gas Analysis. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2022, 12, 75-80.	3.1	2
75	Site effects on the electronic relaxation of aromatic molecules in van der Waals solids. <i>Journal of Luminescence</i> , 2001, 94-95, 457-460.	3.1	1
76	THz analysis of mainstream cigarette smoke. , 2006, , .		1
77	Long path length cw-THz spectrometer using a multipass cell. , 2008, , .		1
78	Pollutants monitoring in the sub - THz frequency domain. , 2012, , .		1
79	High resolution far infrared laboratory spectroscopy of transient species: application to the SO radical ( $X^{3\Lambda}$ ). <i>EAS Publications Series</i> , 2012, 58, 279-282.	0.3	1
80	Applications of Spectroscopy in Environmental Monitoring of Gases and Aerosols. <i>Journal of Spectroscopy</i> , 2016, 2016, 1-1.	1.3	1
81	Spoilage of Salmon fillets as observed by THz waves. , 2019, , .		1
82	The first Vietnam School of Earth Observation: Atmospheric Remote Sensing and Molecular Spectroscopy. <i>Vietnam Journal of Earth Sciences</i> , 2019, 41, 138-155.	1.0	1
83	Super resolution of a 400 MHz rotational line doublet with a TDS using a 850 ps long delay line. , 2021, , .		1
84	Super resolution spectroscopy for THz-TDS: Application to Gas spectroscopy. , 2020, , .		1
85	MULTICHARME: a modified Chernin-type multi-pass cell designed for IR and THz long-path absorption measurements in the CHARME atmospheric simulation chamber. <i>Atmospheric Measurement Techniques</i> , 2022, 15, 1201-1215.	3.1	1
86	Millimeter-Wave Spectroscopy of Methylfuran Isomers: Local vs. Global Treatments of the Internal Rotation. <i>Molecules</i> , 2022, 27, 3591.	3.8	1
87	Vibrational coherence of DCI in cryogenic matrices: from van der Waals interaction to weak hydrogen bond. , 2002, , .		0
88	La corr�lation � filtre de gaz dans le domaine submillim�trique. <i>European Physical Journal Special Topics</i> , 2006, 135, 91-92.	0.2	0
89	Frequency measurement in THz domain by using femtosecond laser frequency comb. , 2008, , .		0
90	Frequency metrology of a photomixing source for gas phase spectroscopy. <i>Proceedings of SPIE</i> , 2010, , .	0.8	0

#	ARTICLE	IF	CITATIONS
91	THz synthesizer for high resolution spectroscopy. , 2010, , .		0
92	Frequency metrology of a cw-THz photomixing source. , 2011, , .		0
93	Large tuning range THz synthesiser by means of photomixing. , 2011, , .		0
94	Detection and analysis of OH and SH radicals by using THz photomixing synthesizer. , 2011, , .		0
95	THz spectroscopy of radicals by means of photomixing experiment. , 2013, , .		0
96	Zero-dimensional cryogenic glasses and supercooled liquids in the Se-Cl system. , 2013, , .		0
97	Spatially resolved correlation between glass structure and refractive index modifications resulting from irradiation of chalcogenide glass by femtosecond pulse train. MATEC Web of Conferences, 2013, 8, 04005.	0.2	0
98	Frequency comb for THz metrology and spectroscopy. EPJ Web of Conferences, 2018, 195, 02014.	0.3	0
99	Modelisation of a gas phase polarization induced by a 200 GHz chirped pulse. EPJ Web of Conferences, 2018, 195, 06001.	0.3	0
100	Free Induction Decay signals stimulated by photomixing. , 2019, , .		0
101	Cavity based high resolution THz spectrometer. , 2021, , .		0
102	Exploring vibrational coherence of molecular systems with simultaneous excitation of close frequencies using the CLIO-FEL. , 2004, , 636-640.		0