

Luca Palchetti

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9107036/publications.pdf>

Version: 2024-02-01

93
papers

1,024
citations

430874

18
h-index

526287

27
g-index

106
all docs

106
docs citations

106
times ranked

558
citing authors

#	ARTICLE	IF	CITATIONS
1	The Far-Infrared Earth. <i>Reviews of Geophysics</i> , 2008, 46, .	23.0	93
2	Spectrally resolved observations of atmospheric emitted radiance in the H ₂ O rotation band. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	42
3	FORUM: Unique Far-Infrared Satellite Observations to Better Understand How Earth Radiates Energy to Space. <i>Bulletin of the American Meteorological Society</i> , 2020, 101, E2030-E2046.	3.3	40
4	Retrieval of foreign-broadened water vapor continuum coefficients from emitted spectral radiance in the H ₂ O rotational band from 240 to 590 cm ⁻¹ . <i>Optics Express</i> , 2008, 16, 15816.	3.4	39
5	Measurement of the water vapour vertical profile and of the Earth's outgoing far infrared flux. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 2885-2894.	4.9	37
6	Breadboard of a Fourier-transform spectrometer for the Radiation Explorer in the Far Infrared atmospheric mission. <i>Applied Optics</i> , 2005, 44, 2870.	2.1	35
7	Far-Infrared Radiative Properties of Water Vapor and Clouds in Antarctica. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1505-1518.	3.3	32
8	Technical note: First spectral measurement of the Earth's upwelling emission using an uncooled wideband Fourier transform spectrometer. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 5025-5030.	4.9	30
9	Spectral noise due to sampling errors in Fourier-transform spectroscopy. <i>Applied Optics</i> , 2001, 40, 3235.	2.1	27
10	Analysis of Water Vapor Absorption in the Far-Infrared and Submillimeter Regions Using Surface Radiometric Measurements From Extremely Dry Locations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 8134-8160.	3.3	26
11	Design and mathematical modelling of the space-borne far-infrared Fourier transform spectrometer for REFIR experiment. <i>Infrared Physics and Technology</i> , 1999, 40, 367-377.	2.9	25
12	A wide-band nadir-sounding spectroradiometer for the characterization of the Earth's outgoing long-wave radiation. , 2006, 6361, 62.		24
13	Ground-based high spectral resolution observations of the entire terrestrial spectrum under extremely dry conditions. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	24
14	Validation of H ₂ O continuum absorption models in the wave number range 180-600 cm ⁻¹ with atmospheric emitted spectral radiance measured at the Antarctica Dome-C site. <i>Optics Express</i> , 2014, 22, 16784.	3.4	24
15	Design of an efficient broadband far-infrared fourier-transform spectrometer. <i>Applied Optics</i> , 1999, 38, 3945.	2.1	23
16	Remote sensing of cirrus cloud microphysical properties using spectral measurements over the full range of their thermal emission. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 10,804.	3.3	22
17	Optical fiber-polymer guide coupling by a tapered graded index glass guide. <i>IEEE Journal of Quantum Electronics</i> , 1995, 31, 1123-1130.	1.9	21
18	Technical Note: REFIR-PAD level 1 data analysis and performance characterization. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 3817-3826.	4.9	21

#	ARTICLE	IF	CITATIONS
19	Measurements of low amounts of precipitable water vapor by millimeter wave spectroscopy: An intercomparison with radiosonde, Raman lidar, and Fourier transform infrared data. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	20
20	A Fourier transform spectroradiometer for ground-based remote sensing of the atmospheric downwelling long-wave radiance. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 619-635.	3.1	20
21	Analysis of cirrus cloud spectral signatures in the far infrared. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 141, 49-64.	2.3	19
22	Test of far-infrared atmospheric spectroscopy using wide-band balloon-borne measurements of the upwelling radiance. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 1030-1042.	2.3	18
23	Validation of line and continuum spectroscopic parameters with measurements of atmospheric emitted spectral radiance from far to mid infrared wave number range. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012, 113, 1286-1299.	2.3	18
24	Simultaneous retrieval of water vapour, temperature and cirrus clouds properties from measurements of far infrared spectral radiance over the Antarctic Plateau. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 825-837.	3.1	18
25	Effect of beam-splitter emission in Fourier-transform emission spectroscopy. <i>Applied Optics</i> , 1999, 38, 7475.	2.1	17
26	Assessment of Detector Nonlinearity in Fourier Transform Spectroscopy. <i>Applied Spectroscopy</i> , 2002, 56, 271-274.	2.2	16
27	Design and characterisation of black-body sources for infrared wide-band Fourier transform spectroscopy. <i>Infrared Physics and Technology</i> , 2008, 51, 207-215.	2.9	15
28	Water vapor sounding with the far infrared REFIR-PAD spectroradiometer from a high-altitude ground-based station during the ECOWAR campaign. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	15
29	Photobleaching of polydiacetylene waveguides: a characterization of the process and patterning of optical elements. <i>Applied Optics</i> , 1997, 36, 1204.	2.1	14
30	<title>Feasibility of the spaceborne radiation explorer in the far infrared (REFIR)</title>. , 2002, 4485, 202.		14
31	The Geostationary Fourier Imaging Spectrometer (GeoFIS) as part of the Geostationary Tropospheric Pollution Explorer (GeoTroPE) mission: objectives and capabilities. <i>Advances in Space Research</i> , 2004, 34, 688-693.	2.6	14
32	SAFIRE-A (spectroscopy of the atmosphere by far-infrared emissionâ€”airborne): optimized instrument configuration and new assessment of improved performance. <i>Applied Optics</i> , 2004, 43, 2962.	2.1	14
33	Antarctic Ice Cloud Identification and Properties Using Downwelling Spectral Radiance From 100 to 1,400 cm ⁻¹ . <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 4761-4781.	3.3	14
34	Thermal annealing of K ⁺ -Na ⁺ ion-exchanged waveguides. <i>Optics Letters</i> , 1995, 20, 1374.	3.3	13
35	FORUM Earth Explorer 9: Characteristics of Level 2 Products and Synergies with IASI-NG. <i>Remote Sensing</i> , 2020, 12, 1496.	4.0	13
36	Langmuir-Blodgett and Spin Coated Films of Poly-3BCMUs for Waveguide Non Linear Optics. <i>Molecular Crystals and Liquid Crystals</i> , 1993, 235, 191-200.	0.9	12

#	ARTICLE	IF	CITATIONS
37	Ice and mixed-phase cloud statistics on the Antarctic Plateau. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 13811-13833.	4.9	11
38	Cascading of second-order processes in a planar Ti-indiffused LiNbO ₃ waveguide: application to frequency shifting. <i>Optics Communications</i> , 1999, 172, 203-209.	2.1	9
39	Vectorial combination of signals in Fourier transform spectroscopy. <i>Infrared Physics and Technology</i> , 2009, 52, 19-21.	2.9	9
40	Characterization of the Far Infrared Properties and Radiative Forcing of Antarctic Ice and Water Clouds Exploiting the Spectrometer-LiDAR Synergy. <i>Remote Sensing</i> , 2020, 12, 3574.	4.0	9
41	Observations of the downwelling far-infrared atmospheric emission at the Zugspitze observatory. <i>Earth System Science Data</i> , 2021, 13, 4303-4312.	9.9	9
42	REFIR/BB initial observations in the water vapour rotational band: Results from a field campaign. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 103, 524-535.	2.3	8
43	The two-stream $\hat{\tau}$ -Eddington approximation to simulate the far infrared Earth spectrum for the simultaneous atmospheric and cloud retrieval. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 246, 106927.	2.3	8
44	Infrared Balloon Experiment: improved instrumental configuration and assessment of instrument performance. <i>Applied Optics</i> , 2006, 45, 1041.	2.1	7
45	Efficient coupling between annealed K ⁺ /Na ⁺ ion-exchanged channel waveguides and 10/125 single-mode fibers at $\lambda = 1.321 \mu\text{m}$. <i>IEEE Journal of Quantum Electronics</i> , 1998, 34, 179-189.	1.9	6
46	Cosmic-ray spikes localization and correction in FT spectrometer data. <i>Infrared Physics and Technology</i> , 2002, 43, 33-38.	2.9	6
47	Emission Fourier transform spectroscopy for the remote sensing of the atmosphere. <i>Optics and Lasers in Engineering</i> , 2002, 37, 187-202.	3.8	6
48	Wide-band spectrally resolved measurement of the Earth's up-welling radiation with the REFIR-PAD spectroradiometer. , 2006, , .		6
49	Phase-matched gratings for enhanced forward degenerate four-wave mixing. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1995, 12, 58.	2.1	5
50	A guided-wave configuration for two-wave-mixing-based devices containing highly absorbing Au-doped sol-gels. <i>Applied Physics B: Lasers and Optics</i> , 1998, 67, 587-591.	2.2	5
51	One year of downwelling spectral radiance measurements from 100 to 1400 cm^{-1} at Dome Concordia: Results in clear conditions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 10,937.	3.3	5
52	Langmuir-Blodgett films of antibodies as mediators of endothelial cell adhesion on polyurethanes. <i>Journal of Biomaterials Science, Polymer Edition</i> , 1999, 10, 295-304.	3.5	4
53	Frictionless mirror drive for intermediate resolution infrared Fourier transform spectroscopy. <i>Infrared Physics and Technology</i> , 2006, 48, 217-222.	2.9	3
54	Far-infrared spectrally resolved broadband emission of the atmosphere from Morello and Gomitto mountains near Florence. , 2007, , .		3

#	ARTICLE	IF	CITATIONS
55	The Far Infrared FTS for the FORUM Mission. , 2016, , .		3
56	Can downwelling far-infrared radiances over Antarctica be estimated from mid-infrared information?. Atmospheric Chemistry and Physics, 2019, 19, 7927-7937.	4.9	3
57	Comparison of mid-latitude single- and mixed-phase cloud optical depth from co-located infrared spectrometer and backscatter lidar measurements. Atmospheric Measurement Techniques, 2021, 14, 6749-6758.	3.1	3
58	Waveguides in Ti:LiNbO 3 for second-harmonic generation: design and experimental tests. , 1996, , .		2
59	Organic films for guided nonlinear optics. Materials Science and Engineering C, 1998, 5, 167-172.	7.3	2
60	Electro-optic modulation of laser diode light by mode interference in a multilayer waveguide including a 2-docosylamino-5-nitropyridine Langmuirâ€“Blodgett film. Applied Physics Letters, 1998, 72, 873-875.	3.3	2
61	Radiometric performances of the Fourier transform spectrometer for the Radiation Explorer in the Far-Infrared (REFIR) space mission. , 2004, , .		2
62	The infrared Fourier transform spectrometer and the infrared imager instrument concepts for the FORUM mission, ESA's 9th Earth Explorer. , 2020, , .		2
63	Sensitivity studies toward the retrieval of ice crystal habit distributions inside cirrus clouds from upwelling far infrared spectral radiance observations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 282, 108120.	2.3	2
64	Design of a frequency converter based on a nonlinear polymer waveguide. , 0, , .		1
65	Patterning of poly-3BCMU nonlinear waveguides. , 0, , .		1
66	Guided-light two-wave-mixing on a spherical surface. Optics Communications, 2000, 173, 389-395.	2.1	1
67	Infrared Emission Spectroscopy. , 2001, , 171-186.		1
68	Characterization of tropical atmosphere through wide-band emission spectra acquired with a balloon-borne uncooled FTS spectroradiometer. Proceedings of SPIE, 2007, , .	0.8	1
69	A strategy for the measurement of CO<sub>2</sub> distribution in the stratosphere. Atmospheric Measurement Techniques, 2016, 9, 5853-5867.	3.1	1
70	Spectral characterization of the surface longwave radiation over the East Antarctic Plateau. AIP Conference Proceedings, 2017, , .	0.4	1
71	The REFIR-PAD far-infrared Fourier transform spectroradiometer. , 2011, , .		1
72	Two years of spectrally-resolved measurements of the Antarctic downwelling atmospheric radiance within the COMPASS project. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
73	Efficient coupling of a graded index glass guide to a polymer guide by means of a tapered transition. , 0, , .		0
74	<title>Design of a hybrid glass/polymer waveguide device for all-optical frequency conversion</title>. , 1998, 3211, 322.		0
75	Design of a frequency converter based on a hybrid glass/polymer waveguide device. , 1998, , .		0
76	<title>Analysis of different sampling procedures in Fourier-transform spectroscopy</title>. , 2002, , .		0
77	Radiation Explorer in the Far Infrared BreadBoard (REFIR/BB) for the atmospheric emission measurement in the 100- to 1100-cm-1spectral range. , 2003, 4881, 448.		0
78	The Earth's outgoing longwave radiation spectrum as seen by REFIR. , 2005, 5978, 428.		0
79	SAFIRE-A (spectroscopy of the atmosphere by using far-infrared emission-airborne): Assessment of measurement capabilities and future developments. Advances in Space Research, 2005, 36, 888-893.	2.6	0
80	Impact of new water vapor continuum coefficients in the far infrared on atmospheric fluxes and cooling rates. , 2009, , .		0
81	An Intercomparison of Precipitable Water Vapor Measurements Obtained During the ECOWAR Field Campaign. , 2009, , .		0
82	Ground-Based and Balloon-Borne Characterization of the Far Infrared Atmospheric Emission Spectrum. , 2009, , .		0
83	The Broadband Fourier Transform Spectrometer for the REFIR (Radiation Explorer in the Far Infrared) Space Mission. , 2005, , .		0
84	First Wideband Measurement (100-1400 cm ⁻¹) of the Atmospheric Emission Spectrum with an Uncooled FT Instrument (Including the Detector Unit) Operating at Stratospheric Balloon Altitude. , 2007, , .		0
85	Wideband far infrared FTS for the FORUM explorer mission. , 2011, , .		0
86	Ground-Based Measurements of Atmospheric Thermal Emission Using the Radiation Explorer in the Far Infrared Prototype. , 2013, , .		0
87	Characterization of the Radiative Properties of Cirrus Clouds With a Wide-band Fourier Transform Spectroradiometer. , 2013, , .		0
88	Patterning of Polydiacetylene Waveguides by Means of Argon Laser Photobleaching. , 1995, , 433-440.		0
89	Radiometric calibration of the Radiation Explorer in the Far InfraRed prototype. , 2015, , .		0
90	A Fourier Transform Spectroradiometer for the Remote Sensing of the Atmospheric Emission from Ground Bases in Extreme Environments. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
91	Far-IR Spectral Observations of the Earth's Longwave Radiation and Their Role in Climate Studies. , 2016, , .		0
92	Retrieval of Antarctic Cirrus Cloud Micro-Physics from Measurements of Far Infrared Spectral Radiance. , 2016, , .		0
93	Far-Infrared Radiation Mobile Observation System for ground and balloon-borne validation of the FORUM mission. , 2021, , .		0