

# Mattia Melosso

## List of Publications by Year in descending order

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Version: 2024-02-01

44  
papers

1,340  
citations

706676

14  
h-index

406436

35  
g-index

44  
all docs

44  
docs citations

44  
times ranked

616  
citing authors

#	ARTICLE	IF	CITATIONS
1	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
2	Ab Initio Study of Fine and Hyperfine Interactions in Triplet POH. Molecules, 2022, 27, 302.	1.7	1
3	Synchrotron-based far-infrared spectroscopy of $\text{HCN}$ and $\text{N}_2$ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	1
4	Gas-phase identification of ( <i>Z</i> )-1,2-ethenediol, a key prebiotic intermediate in the formose reaction. Chemical Communications, 2022, 58, 2750-2753.	2.2	14
5	First Laboratory Detection of $\text{N}^{13}\text{CO}^+$ and Semiexperimental Equilibrium Structure of the $\text{NCO}^-$ Anion. Journal of Physical Chemistry A, 2022, 126, 1899-1904.	1.1	0
6	Spectroscopic and Computational Characterization of 2-Aza-1,3-butadiene, a Molecule of Astrochemical Significance. Journal of Physical Chemistry A, 2022, 126, 1881-1888.	1.1	2
7	Precursors of the RNA World in Space: Detection of ( <i>Z</i> )-1,2-ethenediol in the Interstellar Medium, a Key Intermediate in Sugar Formation. Astrophysical Journal Letters, 2022, 929, L11.	3.0	43
8	Spectroscopic Characterization of 3-Aminoisoxazole, a Prebiotic Precursor of Ribonucleotides. Molecules, 2022, 27, 3278.	1.7	2
9	Improved centrifugal and hyperfine analysis of ND <sub>2</sub> H and NH <sub>2</sub> D and its application to the spectral line survey of L1544. Journal of Molecular Spectroscopy, 2021, 377, 111431.	0.4	7
10	High-Resolution Infrared Spectroscopy of DC <sub>3</sub> N in the Stretching Region. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	5
11	Computational molecular spectroscopy. Nature Reviews Methods Primers, 2021, 1, .	11.8	73
12	An improved rovibrational linelist of formaldehyde, $\text{H}_2\text{C}^{12}\text{O}$ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107719.	1.1	21
13	High resolution FTIR study of the $\hat{\nu}_{25}$ , $\hat{\nu}_{26}$ , and $\hat{\nu}_{29}$ fundamental bands of CH <sub>2</sub> D <sup>37</sup> Cl. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107719.	1.1	3
14	Hunting the relatives of benzonitrile: Rotational spectroscopy of dicyanobenzenes. Astronomy and Astrophysics, 2021, 652, A163.	2.1	6
15	The GUAPOS project. Astronomy and Astrophysics, 2021, 653, A129.	2.1	29
16	Fate of the Gas-Phase Reaction Between Oxirane and the CN Radical in Interstellar Conditions. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	4
17	First detection of $\text{C}_2\text{H}_5\text{NCO}$ in the ISM and search of other isocyanates towards the G+0.693-0.027 molecular cloud. Astronomy and Astrophysics, 2021, 654, L1.	2.1	31
18	Hyperfine-Resolved Near-Infrared Spectra of $\text{H}_2^{17}\text{O}$ . Journal of Physical Chemistry A, 2021, 125, 7884-7890.	1.1	11

#	ARTICLE	IF	CITATIONS
19	An improved study of HCO <sup>+</sup> and He system: Interaction potential, collisional relaxation, and pressure broadening. <i>Journal of Chemical Physics</i> , 2021, 155, 234306.	1.2	5
20	The Submillimeter Rotational Spectrum of Ethylene Glycol up to 890 GHz and Application to ALMA Band 10 Spectral Line Data of NGC 6334I. <i>Journal of Physical Chemistry A</i> , 2020, 124, 240-246.	1.1	14
21	Determination of a semi-experimental equilibrium structure of 1-phosphinopropane from millimeter-wave spectroscopy of $\text{CH}_3\text{P}(\text{OH})_2$ and $\text{CD}_3\text{P}(\text{OH})_2$ . <i>Journal of Molecular Structure</i> , 2020, 1203, 127429.	1.8	9
22	First detection of NHD and ND <sub>2</sub> in the interstellar medium. <i>Astronomy and Astrophysics</i> , 2020, 641, A153.	2.1	17
23	Far-infrared laboratory spectroscopy of aminoacetonitrile and first interstellar detection of its vibrationally excited transitions. <i>Astronomy and Astrophysics</i> , 2020, 641, A160.	2.1	23
24	Deuterium hyperfine splittings in the rotational spectrum of NH <sub>2</sub> D as revealed by Lamb-dip spectroscopy. <i>Journal of Molecular Spectroscopy</i> , 2020, 370, 111291.	0.4	14
25	High-resolution millimeter-wave spectroscopy of CH <sub>2</sub> DCl: Paving the way for future astronomical observations of chloromethane isotopologues. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 248, 106982.	1.1	5
26	A Journey from Thermally Tunable Synthesis to Spectroscopy of Phenylmethanimine in Gas Phase and Solution. <i>Chemistry - A European Journal</i> , 2020, 26, 15016-15022.	1.7	7
27	Extensive ro-vibrational analysis of deuterated-cyanoacetylene (DC <sub>3</sub> N) from millimeter-wavelengths to the infrared domain. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 254, 107221.	1.1	3
28	Spectroscopy of a low global warming power refrigerant. Infrared and millimeter-wave spectra of trifluoroethene (HFO-1123) in the ground and some vibrational excited states. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 248, 106980.	1.1	5
29	Rotational spectroscopy of rare iron monoxide isotopologues: A mass-independent analysis. <i>Molecular Physics</i> , 2020, 118, e1774087.	0.8	1
30	DC <sub>3</sub> N observations towards high-mass star-forming regions. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 496, 1990-1999.	1.6	9
31	Rich Collection of n-Propylamine and Isopropylamine Conformers: Rotational Fingerprints and State-of-the-Art Quantum Chemical Investigation. <i>Journal of Physical Chemistry A</i> , 2020, 124, 1372-1381.	1.1	14
32	Submillimeter and Far-infrared Spectroscopy of Monodeuterated Amidogen Radical (NHD): Improved Rest Frequencies for Astrophysical Observations. <i>Astrophysical Journal, Supplement Series</i> , 2020, 247, 59.	3.0	3
33	The rotational spectrum of <sup>15</sup> NH. Isotopic-independent Dunham-type analysis of the amidogen radical. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 3564-3573.	1.3	21
34	Astronomical Search of Vinyl Alcohol Assisted by Submillimeter Spectroscopy. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 1189-1195.	1.2	19
35	The pure rotational spectrum of <sup>15</sup> ND <sub>2</sub> observed by millimetre and submillimetre-wave spectroscopy. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 222-223, 186-189.	1.1	21
36	Rotational and Infrared Spectroscopy of Ethanimine: A Route toward Its Astrophysical and Planetary Detection. <i>Astrophysical Journal</i> , 2018, 855, 123.	1.6	35

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37	Laboratory measurements and astronomical search for cyanomethanimine. <i>Astronomy and Astrophysics</i> , 2018, 609, A121.	2.1	31
38	Accurate Laboratory Measurement of the Complete Fine Structure of the $N\hat{=}^{\hat{=}1\hat{=}^{\hat{=}0}}$ Transition of $^{15}\text{NH}$ . <i>Astrophysical Journal</i> , 2018, 863, 3.	1.6	4
39	Rotational and High-resolution Infrared Spectrum of $\text{HC}_3\text{N}$ : Global Ro-vibrational Analysis and Improved Line Catalog for Astrophysical Observations. <i>Astrophysical Journal, Supplement Series</i> , 2017, 233, 11.	3.0	22
40	Terahertz Spectroscopy and Global Analysis of the Rotational Spectrum of Doubly Deuterated Amidogen Radical $\text{ND}_2$ . <i>Astrophysical Journal, Supplement Series</i> , 2017, 233, 15.	3.0	10
41	Millimeter-wave and Submillimeter-wave Spectra of Aminoacetonitrile in the Three Lowest Vibrational Excited States. <i>Astrophysical Journal, Supplement Series</i> , 2017, 230, 26.	3.0	11
42	Conformational stability of cyclopropanecarboxaldehyde is ruled by vibrational effects. <i>Molecular Physics</i> , 0, , e1955988.	0.8	2
43	Dipolar spin-spin coupling as auxiliary tool for structure determination of small isolated molecules. <i>Physical Chemistry Chemical Physics</i> , 0, , .	1.3	0
44	Molecular Precursors of the RNA-World in Space: New Nitriles in the G+0.693 $\hat{=}^{\hat{=}0.027}$ Molecular Cloud. <i>Frontiers in Astronomy and Space Sciences</i> , 0, 9, .	1.1	12