

Rafael Escribano

List of Publications by Year in descending order

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66
papers

1,444
citations

331670

21
h-index

361022

35
g-index

67
all docs

67
docs citations

67
times ranked

1758
citing authors

#	ARTICLE	IF	CITATIONS
1	Ice structures, patterns, and processes: A view across the icefields. <i>Reviews of Modern Physics</i> , 2012, 84, 885-944.	45.6	277
2	The [ITAL]ISO[/ITAL]/SWS Spectrum of IRC +10216: The Vibrational Bands of C[TINF]2[/TINF]H[TINF]2[/TINF] and HCN. <i>Astrophysical Journal</i> , 1999, 526, L41-L44.	4.5	73
3	Crystallization of CO ₂ ice and the absence of amorphous CO ₂ ice in space. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 12899-12904.	7.1	53
4	Spectroscopic constants for the $\hat{1}/2$ infrared band of HNO ₃ . <i>Journal of Molecular Spectroscopy</i> , 1988, 131, 195-200.	1.2	48
5	Experimental Studies of Amorphous and Polycrystalline Ice Films Using FT-RAIRS. <i>Journal of Physical Chemistry B</i> , 2003, 107, 11098-11108.	2.6	46
6	Absorption spectroscopy of SiH ₂ near 640 nm. <i>Journal of Chemical Physics</i> , 1998, 108, 6249-6257.	3.0	43
7	An infrared study of solid glycine in environments of astrophysical relevance. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 12268.	2.8	43
8	First-Principles Infrared Spectrum of Nitric Acid and Nitric Acid Monohydrate Crystals. <i>Journal of Physical Chemistry A</i> , 2004, 108, 10535-10541.	2.5	41
9	Interaction of CH ₄ and H ₂ O in ice mixtures. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 3164.	2.8	38
10	The ground state constants of ketene. <i>Journal of Molecular Spectroscopy</i> , 1992, 156, 501-503.	1.2	35
11	Trapping and adsorption of CO ₂ in amorphous ice: A FTIR study. <i>Icarus</i> , 2008, 197, 599-605.	2.5	34
12	Phases of Solid Methanol. <i>Journal of Physical Chemistry A</i> , 2009, 113, 3321-3329.	2.5	34
13	The $\hat{1}/2$ and $\hat{1}/4$ IR bands of SO ₃ . <i>Journal of Molecular Spectroscopy</i> , 1989, 138, 602-613.	1.2	33
14	AMMONIUM AND FORMATE IONS IN INTERSTELLAR ICE ANALOGS. <i>Astrophysical Journal</i> , 2010, 724, 539-545.	4.5	32
15	SPECTROSCOPIC EFFECTS IN CH ₄ /H ₂ O ICES. <i>Astrophysical Journal</i> , 2009, 703, 2101-2107.	4.5	28
16	A Theoretical Study of the Structure and Spectra of Nitric Acid Hydrates Crystals. <i>Journal of Physical Chemistry B</i> , 2003, 107, 10608-10614.	2.6	27
17	Stability of carbonaceous dust analogues and glycine under UV irradiation and electron bombardment. <i>Faraday Discussions</i> , 2014, 168, 267-285.	3.2	27
18	The $\hat{1}/2$ and $\hat{1}/3$ bands and ground state constants of OClO. <i>Journal of Molecular Spectroscopy</i> , 1992, 155, 25-43.	1.2	26

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19	The structure and vibrational frequencies of crystalline nitric acid. <i>Chemical Physics Letters</i> , 2003, 378, 218-223.	2.6	26
20	INFRARED SPECTRA AND THERMODYNAMIC PROPERTIES OF CO ₂ /METHANOL ICES. <i>Astrophysical Journal</i> , 2009, 690, 486-495.	4.5	25
21	Vibrational spectra of crystalline hydrates of atmospheric relevance: Bands of hydrated protons. <i>Chemical Physics Letters</i> , 2006, 427, 300-304.	2.6	24
22	High-resolution infrared spectrum of the $\hat{\nu}_1$ band of OCIO. <i>Journal of Molecular Spectroscopy</i> , 1991, 148, 346-370.	1.2	23
23	OPTICAL CONSTANTS OF NH ₃ AND NH ₃ :N ₂ AMORPHOUS ICES IN THE NEAR-INFRARED AND MID-INFRARED REGIONS. <i>Astrophysical Journal</i> , 2013, 777, 26.	4.5	23
24	Ices of CO ₂ /H ₂ O Mixtures. Reflection [~] Absorption IR Spectroscopy and Theoretical Calculations. <i>Journal of Physical Chemistry A</i> , 2008, 112, 457-465.	2.5	21
25	Out-of-plane vibrational assignments and potential function of pyrrole and its deuterated derivatives. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1985, 81, 653.	1.1	20
26	The $\hat{\nu}_1$ band of ketene. <i>Journal of Chemical Physics</i> , 1994, 101, 937-949.	3.0	19
27	Room temperature absorption spectroscopy of GeH ₂ near 585 nm. <i>Chemical Physics Letters</i> , 1999, 315, 397-404.	2.6	19
28	Structure and Spectra of HOCl(H ₂ O) _n Clusters, n= 1 [~] 4: A Theoretical Calculation. <i>Journal of Physical Chemistry A</i> , 2000, 104, 600-609.	2.5	18
29	The formation of carbamate ions in interstellar ice analogues. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 3371-3380.	2.8	18
30	The structure and vibrational frequencies of crystalline HCl trihydrate. <i>Journal of Molecular Structure</i> , 2005, 742, 147-152.	3.6	16
31	The Force Field of Bromoform: A Theoretical and Experimental Investigation. <i>The Journal of Physical Chemistry</i> , 1996, 100, 16058-16065.	2.9	15
32	OPTICAL CONSTANTS AND BAND STRENGTHS OF CH ₄ :C ₂ H ₆ ICES IN THE NEAR- AND MID-INFRARED. <i>Astrophysical Journal</i> , 2016, 825, 156.	4.5	15
33	The HCl hexahydrate: RAIR spectra and theoretical investigation. <i>Chemical Physics Letters</i> , 2004, 396, 335-340.	2.6	14
34	HDO INFRARED DETECTION SENSITIVITY AND D/H ISOTOPIC EXCHANGE IN AMORPHOUS AND CRYSTALLINE ICE. <i>Astrophysical Journal</i> , 2011, 738, 133.	4.5	14
35	Solid L- $\hat{\nu}$ -alanine: Spectroscopic properties and theoretical calculations. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012, 113, 1266-1275.	2.3	14
36	Fringe-field effects on the time evolution of pendular states. <i>Physical Review A</i> , 2000, 62, .	2.5	13

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37	Physical and spectroscopic properties of pure C ₂ H ₄ and CH ₄ :C ₂ H ₄ ices. Monthly Notices of the Royal Astronomical Society, 2017, 466, 1894-1902.	4.4	13
38	The low-frequency Raman and IR spectra of nitric acid hydrates. Vibrational Spectroscopy, 2007, 43, 254-259.	2.2	11
39	Predicting the infrared band profiles for CO ₂ cloud particles on Mars. Icarus, 2013, 223, 591-601.	2.5	11
40	On the infrared activation of the breathing mode of methane in ice. Physical Chemistry Chemical Physics, 2014, 16, 16694-16700.	2.8	11
41	The Stimulated Raman Spectrum of Cyanogen. Journal of Molecular Spectroscopy, 1997, 186, 144-154.	1.2	10
42	Investigation of orientation effects in films of nitric acid trihydrate. Physical Chemistry Chemical Physics, 2004, 6, 4047-4055.	2.8	10
43	Perceptions of ecological and aesthetic quality by natural resource professionals and local people. A qualitative exploration in a mountainous landscape (La Rioja, Spain). Landscape Research, 2019, 44, 241-255.	1.6	10
44	Intensities and dipole moment derivatives of the fundamental bands of ³⁵ ClO ₂ and an intensity analysis of the $\hat{1}/21$ band. Journal of Molecular Spectroscopy, 1992, 156, 89-97.	1.2	9
45	Orientation Effects on Nitric Acid Dihydrate Films. Journal of Physical Chemistry B, 2006, 110, 7396-7401.	2.6	9
46	CYANATE ION IN COMPACT AMORPHOUS WATER ICE. Astrophysical Journal, 2012, 759, 90.	4.5	7
47	Visual significance as a factor influencing perceived risks: cost-effectiveness analysis for overhead high-voltage power-line redesign. Impact Assessment and Project Appraisal, 2013, 31, 291-304.	1.8	7
48	The $\hat{1}/219a$ band of fluorobenzene. Journal of Molecular Spectroscopy, 2004, 223, 80-83.	1.2	6
49	Proton transfer and autoionization in HNO ₃ ·HCl·(H ₂ O) _n particles. Physical Chemistry Chemical Physics, 2011, 13, 18145.	2.8	6
50	Theoretical model of the interaction of glycine with hydrogenated amorphous carbon (HAC). Physical Chemistry Chemical Physics, 2015, 17, 28966-28976.	2.8	6
51	On the spectral features of dangling bonds in CH ₄ /H ₂ O amorphous ice mixtures. Physical Chemistry Chemical Physics, 2021, 23, 9532-9538.	2.8	6
52	Infrared spectrum of monoisotopic germyl bromide in the 5 $\hat{1}/4$ m region. Journal of Molecular Spectroscopy, 1991, 146, 83-96.	1.2	4
53	The Stimulated Raman Spectrum of Symmetric ¹³ C Cyanogen, ¹³ C ₂ N ₂ . Journal of Molecular Spectroscopy, 1999, 193, 174-182.	1.2	4
54	Vibrational spectra and physico-chemical properties of astrophysical analogs. Physical Chemistry Chemical Physics, 2017, 19, 26582-26588.	2.8	4

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55	Convergence properties of a perturbative treatment for Coriolis coupling in symmetric top molecules. <i>Journal of Molecular Spectroscopy</i> , 1991, 148, 136-148.	1.2	3
56	On the use of wavelet filtering and correlation techniques in atmospheric condensed phase spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2005, 61, 1759-1766.	3.9	3
57	Density and porosity of amorphous water ice by DFT methods. <i>Chemical Physics Letters</i> , 2020, 745, 137222.	2.6	3
58	The Br—O bond in halogen oxides— Empirical force constants and electronic characteristics. <i>Canadian Journal of Chemistry</i> , 2004, 82, 998-1005.	1.1	2
59	Nineteenth colloquium on high resolution molecular spectroscopy Salamanca 11–16 September 2005. <i>Molecular Physics</i> , 2006, 104, 2579-2580.	1.7	2
60	Comment on “Theoretical investigation of the coexistence of $\hat{1}\pm$ and $\hat{1}^2$ -nitric acid trihydrates (NAT) molecular conformations” [Chem. Phys. 324 (2006) 210]. <i>Chemical Physics</i> , 2006, 331, 186-188.	1.9	2
61	Theoretical Study on Hydrogen-Bond Effects in IR Spectra of High- and Low-Temperature Phases of Nitric Acid Dihydrate. <i>ChemPhysChem</i> , 2009, 10, 3229-3238.	2.1	2
62	Hydration of HNO ₃ –HOCl clusters: Bonding properties. <i>Computational and Theoretical Chemistry</i> , 2014, 1038, 71-77.	2.5	2
63	Prediction of the near-IR spectra of ices by ab initio molecular dynamics. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 9433-9440.	2.8	2
64	$\hat{1}\frac{1}{2}6$ and $\hat{1}\frac{1}{2}8$ infrared bands and force field of disilane. <i>Vibrational Spectroscopy</i> , 1992, 4, 15-23.	2.2	1
65	Spectroscopic investigation of nitric acid monohydrate. <i>Molecular Physics</i> , 2011, 109, 2083-2093.	1.7	1
66	Simulations and spectra of water in CO matrices. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 7280-7287.	2.8	1