Xavier Michaut

List of Publications by Year
in descending order

52 papers	1,549 citations	257450 24 h-index	302126 39 g-index
52 all docs	52 docs citations	52 times ranked	1180 citing authors

#	Article	IF	Citations
1	Vacuum-UV Photodesorption from Compact Amorphous Solid Water: Photon Energy Dependence, Isotopic and Temperature Effects. ACS Earth and Space Chemistry, 2022, 6, 100-115.	2.7	6
2	Ro-translational dynamics of confined water: II - Spectroscopic evidence of confinement effects on the far-infrared spectra of water isotopologues in argon and krypton matrices.. Journal of Chemical Physics, 2022, 156, 074305.	3.0	4
3	Ro-translational dynamics of confined water: I - The confined asymmetric rotor model. Journal of Chemical Physics, 2022, 156, 074304.	3.0	4
4	Complex organic molecules in protoplanetary disks: X-ray photodesorption from methanol-containing ices. Astronomy and Astrophysics, 2021, 647, A35.	5.1	11
5	Complex organic molecules in protoplanetary disks: X-ray photodesorption from methanol-containing ices. Astronomy and Astrophysics, 2021, 647, A36.	5.1	8
6	Mechanism of Indirect Photon-Induced Desorption at the Water Ice Surface. Physical Review Letters, 2021, 126, 156001.	7.8	9
7	X-Ray induced desorption and photochemistry in CO ice. Physical Chemistry Chemical Physics, 2021, 23, 15965-15979.	2.8	4
8	Photodesorption of Acetonitrile CH₃CN in UV-irradiated Regions of the Interstellar Medium: Experimental Evidence. Astrophysical Journal, 2021, 922, 213.	4.5	10
9	Desorption of neutrals, cations, and anions from core-excited amorphous solid water. Journal of Chemical Physics, 2020, 152, 054711.	3.0	7
10	Vacuum Ultraviolet Photodesorption and Photofragmentation of Formaldehyde-Containing Ices. ACS Earth and Space Chemistry, 2019, 3, 1135-1150.	2.7	10
11	Spectroscopic Measurements of Methane Solidâ€“Gas Equilibrium Clapeyron Curve between 40 and 77 K. Journal of Physical Chemistry A, 2019, 123, 3518-3534.	2.5	1
12	The water line emission and ortho-to-para ratio in the Orion Bar photon-dominated region. Astronomy and Astrophysics, 2019, 632, A8.	5.1	15
13	XUV photodesorption of carbon cluster ions and ionic photofragments from a mixed methaneâ€“water ice. Physical Chemistry Chemical Physics, 2018, 20, 7457-7469.	2.8	3
14	X-ray photodesorption from water ice in protoplanetary disks and X-ray-dominated regions. Nature Astronomy, 2018, 2, 796-801.	10.1	38
15	Confinement Effects on the Nuclear Spin Isomer Conversion of H₂O. Journal of Physical Chemistry A, 2017, 121, 1571-1576.	2.5	21
16	Nitrile versus isonitrile adsorption at interstellar grains surfaces. Astronomy and Astrophysics, 2017, 598, A18.	5.1	25
17	Nuclear Spin Symmetry Conservation in ¹H₂¹⁶O Investigated by Direct Absorption FTIR Spectroscopy of Water Vapor Cooled Down in Supersonic Expansion. Journal of Physical Chemistry A, 2017, 121, 7455-7468.	2.5	18
18	Spectrally-resolved UV photodesorption of CH₄in pure and layered ices. Astronomy and Astrophysics, 2017, 603, A61.	5.1	35

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19	The efficient photodesorption of nitric oxide (NO) ices. Astronomy and Astrophysics, 2017, 606, L9.	5.1	8
20	Nitrile versus isonitrile adsorption at interstellar grain surfaces. Astronomy and Astrophysics, 2017, 608, A50.	5.1	7
21	UV PHOTODESORPTION OF METHANOL IN PURE AND CO-RICH ICES: DESORPTION RATES OF THE INTACT MOLECULE AND OF THE PHOTOFRAGMENTS. Astrophysical Journal Letters, 2016, 817, L12.	8.3	128
22	Adsorption energies and prefactor determination for CH3OH adsorption on graphite. Journal of Chemical Physics, 2015, 143, 084703.	3.0	34
23	Wavelength resolved UV photodesorption and photochemistry of CO₂ice. Faraday Discussions, 2014, 168, 533.	3.2	50
24	INDIRECT ULTRAVIOLET PHOTODESORPTION FROM CO:N₂BINARY ICES â€" AN EFFICIENT GRAIN-GAS PROCESS. Astrophysical Journal, 2013, 779, 120.	4.5	77
25	Wavelength-dependent UV photodesorption of pure N₂and O₂ices. Astronomy and Astrophysics, 2013, 556, A122.	5.1	75
26	Differential adsorption of complex organic molecule isomers on interstellar ice surfaces. EAS Publications Series, 2012, 58, 349-352.	0.3	0
27	Understanding the relationship between gas and ice : experimental investigations on ortho-para ratios. EAS Publications Series, 2012, 58, 307-314.	0.3	12
28	UV photodesorption of interstellar CO ice analogues: from subsurface excitation to surface desorption. Physical Chemistry Chemical Physics, 2012, 14, 9929.	2.8	74
29	Observation of methane nuclear spin isomers in gas phase at low temperature. Journal of Molecular Spectroscopy, 2012, 279, 37-43.	1.2	5
30	New progress in spectroscopy of ammonia in the infrared <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0018.gif" overflow="scroll"><mml:mn>1.5</mml:mn><mml:mspace width="0.25em" /><mml:mi mathvariant="normal">Î¼</mml:mi><mml:mi mathvariant="normal">m</mml:mi></mml:math> range using evolution of spectra from 300 K down to 122 K. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1084-1091.	2.3	22
31	Adsorption of Organic Isomers on Water Ice Surfaces: A Study of Acetic Acid and Methyl Formate. Journal of Physical Chemistry C, 2011, 115, 12920-12928.	3.1	25
32	Nuclear spin conversion of molecular hydrogen on amorphous solid water in the presence of O₂traces. Physical Chemistry Chemical Physics, 2011, 13, 2172-2178.	2.8	40
33	CO ICE PHOTODESORPTION: A WAVELENGTH-DEPENDENT STUDY. Astrophysical Journal Letters, 2011, 739, L36.	8.3	138
34	Differential adsorption of complex organic molecules isomers at interstellar ice surfaces. Astronomy and Astrophysics, 2011, 532, A12.	5.1	49
35	Nuclear spin conversion of H2O trapped in solid xenon at 4.2K: A new assignment of Î½2 rovibrational lines. Chemical Physics Letters, 2009, 480, 82-85.	2.6	29
36	Time evolution of the Î½2 IR absorption of (o-H2)n:H2O clusters (n=11â€“1), and increase of H2O rotation, in O2 doped solid hydrogen at 4.2K. Chemical Physics Letters, 2008, 454, 61-64.	2.6	18

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37	Observation of nuclear spin species conversion inside the 1593cmâ¯1 structure of H2O trapped in argon matrices: Nitrogen impurities and the H2O:N2 complex. Journal of Molecular Structure, 2008, 873, 181-190.	3.6	24
38	Nuclear spin conversion of water diluted in solid argon at 4.2K: Environment and atmospheric impurities effects. Chemical Physics Letters, 2007, 447, 232-235.	2.6	35
39	Temperature and time effects on the rovibrational structure of fundamentals of H2O trapped in solid argon: hindered rotation and RTC satellite. Vibrational Spectroscopy, 2004, 34, 83-93.	2.2	79
40	Optical diagnostic of temperature in rocket engines by coherent Raman techniques. Comptes Rendus Physique, 2004, 5, 249-258.	0.9	6
41	An experimental investigation of the nonlinear refractive index (n2) of carbon disulfide and toluene by spectral shearing interferometry and z-scan techniques. Chemical Physics Letters, 2003, 369, 318-324.	2.6	124
42	The vibrationâ€“rotation of H2O and its complexation with CO2 in solid argon revisited. Low Temperature Physics, 2003, 29, 852-857.	0.6	17
43	Transient and instantaneous third-order nonlinear optical response of C60and the higher fullerenes C70, C76and C84. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4983-4996.	1.5	37
44	H2 vibrational spectral signatures in binary and ternary mixtures: theoretical model, simulation and application to CARS thermometry in high pressure flames. Comptes Rendus Physique, 2001, 2, 989-1000.	0.1	4
45	Investigations of pure rotational transitions of H2 perturbed by He. II. High-temperature calculations and extrapolations. Journal of Chemical Physics, 2001, 114, 1286-1294.	3.0	5
46	Hydrogen CARS thermometry in H 2 -N 2 mixtures at high pressure and medium temperatures: influence of linewidths models. Applied Physics B: Lasers and Optics, 2000, 70, 447-454.	2.2	25
47	Collisional effects on spectral line shape from the Doppler to the collisional regime: A rigorous test of a unified model. Journal of Chemical Physics, 2000, 112, 158-166.	3.0	45
48	Experimental and theoretical study of line mixing in methane spectra. III. The Q branch of the Raman Î½1 band. Journal of Chemical Physics, 2000, 112, 1335-1343.	3.0	31
49	FITTING LAW FOR THE DENSITY SHIFT OF Q(J) TRANSITIONS OF H2 IN H2â€“X (X: H2, He, N2) MIXTURES. Journal of Quantitative Spectroscopy and Radiative Transfer, 1998, 60, 585-591.	2.3	3
50	Self-focusing in Terbium Gallium Garnet using Z-scan. Optics Communications, 1998, 153, 301-304.	2.1	18
51	Investigations of pure rotational transitions of H2 self-perturbed and perturbed by He. I. Measurement, modeling, and quantum calculations. Journal of Chemical Physics, 1998, 109, 951-961.	3.0	25
52	Collisional broadening and shifting parameters of the RamanQbranch ofH2perturbed byN2determined from speed-dependent line profiles at high temperatures. Physical Review A, 1996, 54, 402-409.	2.5	51