

Stephen Gibson

List of Publications by Year in descending order

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97
papers

2,641
citations

172207

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97
docs citations

97
times ranked

1761
citing authors

#	ARTICLE	IF	CITATIONS
1	Velocity Map Imaging Spectroscopy of the Dipole-Bound State of CH ₂ CN ⁺ : Implications for the Diffuse Interstellar Bands. Journal of the American Chemical Society, 2021, 143, 18684-18692.	6.6	12
2	Two-photon excitation of two Rydberg levels of O ₂ above 95 Å: Rotational-state dependence of predissociation linewidths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 244, 106841.	1.1	0
3	A direct comparison of high-speed methods for the numerical Abel transform. Review of Scientific Instruments, 2019, 90, 065115.	0.6	74
4	Wigner Near-Threshold Effects in the Photoelectron Angular Distribution of NO ₂ ⁺ . Journal of Physical Chemistry A, 2019, 123, 10418-10425.	1.1	5
5	The dicarbon bonding puzzle viewed with photoelectron imaging. Nature Communications, 2019, 10, 5199.	5.8	19
6	Fourier-transform-spectroscopic photoabsorption cross sections and oscillator strengths for the S ₂ system. Journal of Chemical Physics, 2018, 148, 244302.	1.2	10
7	Predissociation of the S ₂ state of S ₂ : A coupled-channel model. Journal of Chemical Physics, 2018, 148, 244303.	1.2	10
8	Encoding of vinylidene isomerization in its anion photoelectron spectrum. Science, 2017, 358, 336-339.	6.0	55
9	NOO Peroxy Isomer Exposed with Velocity-Map Imaging. Journal of Physical Chemistry Letters, 2017, 8, 4397-4401.	2.1	4
10	A circularisation method to repair deformations and determine the centre of velocity map images. Journal of Chemical Physics, 2017, 147, 013924.	1.2	23
11	Indirect predissociation of highly excited singlet states of N ₂ . EPJ Web of Conferences, 2015, 84, 03004.	0.1	6
12	Remote Sensing of Earth's Limb by TIMED/GUVI: Retrieval of thermospheric composition and temperature. Earth and Space Science, 2015, 2, 1-37.	1.1	103
13	Back to basics, the chemistry of aerosol formation, viewed with velocity-map imaging of photoelectrons. , 2014, , .		0
14	THE HIGH-RESOLUTION EXTREME-ULTRAVIOLET SPECTRUM OF N ₂ BY ELECTRON IMPACT. Astrophysical Journal, Supplement Series, 2014, 211, 28.	3.0	20
15	Isotope selective photodissociation of N ₂ by the interstellar radiation field and cosmic rays. Astronomy and Astrophysics, 2014, 562, A61.	2.1	85
16	¹⁴ N/ ¹⁵ N detectability in Pluto's atmosphere. Icarus, 2013, 226, 1514-1526.	1.1	6
17	Photodissociation of interstellar N ₂ . Astronomy and Astrophysics, 2013, 555, A14.	2.1	79
18	Experimental verification of strong rotational dependence of fluorescence and predissociation yield in the v=1 level of ¹⁴ N ₂ . Journal of Chemical Physics, 2012, 136, 044301.	1.2	11

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19	High-resolution photoelectron spectroscopy of linear \hat{a}^+ -bent polyatomic photodetachment transitions: The electron affinity of CS ₂ . <i>Journal of Chemical Physics</i> , 2012, 137, 144304.	1.2	13
20	Tuning out vibrational levels in molecular electron energy-loss spectra. <i>Physical Review A</i> , 2012, 85, .	1.0	6
21	Ion densities and composition of Titan's upper atmosphere derived from the Cassini Ion Neutral Mass Spectrometer: Analysis methods and comparison of measured ion densities to photochemical model simulations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	67
22	Photodetachment of O ^{\hat{a}^+} from threshold to 1.2 eV electron kinetic energy using velocity-map imaging. <i>Journal of Physics: Conference Series</i> , 2010, 212, 012034.	0.3	7
23	Observation of vibration-dependent electron anisotropy in O_2^+ . <i>Physical Review A</i> , 2010, 82, .	1.0	22
24	Vibronic coupling in the superoxide anion: The vibrational dependence of the photoelectron angular distribution. <i>Journal of Chemical Physics</i> , 2010, 133, 174311.	1.2	30
25	Vibration-dependent angular anisotropy in the photodetachment of O ₂ ^{\hat{a}^+} , viewed with velocity-map imaging. <i>Journal of Physics: Conference Series</i> , 2009, 194, 022054.	0.3	0
26	Approaching the O ^{\hat{a}^+} photodetachment threshold with velocity-map imaging. <i>Journal of Physics: Conference Series</i> , 2009, 194, 022026.	0.3	1
27	Rotationally resolved photodetachment spectrum of OH ^{\hat{a}^+} , exposed with velocity-map imaging. <i>Journal of Physics: Conference Series</i> , 2009, 194, 022060.	0.3	1
28	Sign reversal of the spin-orbit constant for the \hat{a}^+ state of N ₂ . <i>Journal of Chemical Physics</i> , 2008, 129, 164307.	1.2	37
29	Experimental and coupled-channels investigation of the radiative properties of the N ₂ ^{\hat{a}^+} band system. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	13
30	A coupled-channel model of the \hat{a}^+ states of N ₂ : Structure and interactions of the 3s \hat{a}^+ and 3p \hat{a}^+ Rydberg states. <i>Journal of Chemical Physics</i> , 2008, 129, 164306.	1.2	58
31	Structure and predissociation of the 3p \hat{a}^+ Rydberg state of N ₂ : First extreme-ultraviolet and new near-infrared observations, with coupled-channels analysis. <i>Journal of Chemical Physics</i> , 2008, 129, 204303.	1.2	15
32	High-resolution velocity-map-imaging photoelectron spectroscopy of the O ^{\hat{a}^+} photodetachment fine-structure transitions. <i>Physical Review A</i> , 2007, 76, .	1.0	94
33	Source of Nitrogen Isotope Anomaly in HCN in the Atmosphere of Titan. <i>Astrophysical Journal</i> , 2007, 664, L115-L118.	1.6	119
34	Measurements of thermospheric molecular oxygen from the Solar Ultraviolet Spectral Irradiance Monitor. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	17
35	Achieving high signal-to-noise performance for a velocity-map imaging experiment. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2005, 144-147, 251-254.	0.8	2
36	Lifetime and predissociation yield of N ₂ (v=1) revisited: Effects of rotation. <i>Journal of Chemical Physics</i> , 2005, 123, 236101.	1.2	36

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37	Rotational effects in the band oscillator strengths and predissociation linewidths for the lowest $\hat{u}1\hat{\epsilon}^{\prime}\hat{X}^1\Sigma_g^+$ transitions of N ₂ . Journal of Chemical Physics, 2005, 123, 214304.	1.2	43
38	Predissociation mechanism for the lowest $\hat{u}1$ states of N ₂ . Journal of Chemical Physics, 2005, 122, 144302.	1.2	89
39	Lifetime and predissociation yield of $14N_2\hat{\epsilon}^{\prime}\hat{b}^1\Sigma^+(v=1)$. Journal of Chemical Physics, 2004, 120, 8973-8978.	1.2	36
40	Quantum reflection of metastable helium 23S atoms in hollow optical fibres. Optics Communications, 2003, 224, 89-95.	1.0	10
41	Two-photon REMPI spectra from and to in O ₂ . Journal of Molecular Spectroscopy, 2003, 219, 200-216.	0.4	29
42	Rydberg states of O ₂ . Journal of Molecular Spectroscopy, 2003, 219, 217-226.	0.4	3
43	Experimental verification of line- and band-shape asymmetry in the Schumann-Runge system of O ₂ . Journal of Chemical Physics, 2003, 118, 10924-10928.	1.2	3
44	Anomalous isotopic predissociation in the $F\hat{\epsilon}^{\prime}\hat{S}^1\Sigma^+(v=1)$ state of O ₂ . Journal of Chemical Physics, 2002, 116, 3286-3296.	1.2	4
45	COMPARATIVE VERY-HIGH-RESOLUTION VUV SPECTROSCOPY: LASER SPECTROSCOPY OF O ₂ . Surface Review and Letters, 2002, 09, 31-38.	0.5	2
46	New magnetic dipole transition of the oxygen molecule: $B\hat{\epsilon}^{\prime}\hat{\epsilon}^{\prime}\hat{S}^1\Sigma^+(v=0,0) \leftrightarrow X\hat{\epsilon}^{\prime}\hat{S}^1\Sigma^+(v=0,0)$. Journal of Chemical Physics, 2002, 116, 5503-5508.	1.2	3
47	Electron energy-loss spectra of coupled electronic states: Effects of Rydberg-valence interactions in O ₂ . Physical Review A, 2001, 63, .	1.0	22
48	Observation of Completely Destructive Quantum Interference between Interacting Resonances in Molecular Predissociation. Physical Review Letters, 2001, 86, 1478-1481.	2.9	5
49	A new model for the Schumann-Runge bands of O ₂ . Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 2001, 26, 519-526.	0.2	7
50	Assignment of the excess absorption underlying the Schumann-Runge bands of molecular oxygen. Journal of Chemical Physics, 2001, 115, 245-248.	1.2	13
51	Fast 1 kV metal-oxide-semiconductor field-effect transistor switch. Review of Scientific Instruments, 2001, 72, 3718-3720.	0.6	7
52	An ion gating, bunching, and potential re-referencing unit. Review of Scientific Instruments, 2001, 72, 2915-2922.	0.6	6
53	\hat{u}^1 and \hat{u}^3 reversal: The dissociation-limit region of the $B\hat{\epsilon}^{\prime}\hat{u}^1\hat{\epsilon}^{\prime}$ state of O ₂ . Journal of Chemical Physics, 2001, 115, 5836-5842.	1.2	1
54	Identification of the $3p\hat{\epsilon}^{\prime}\hat{\epsilon}^{\prime}\hat{S}^1\Sigma^+$ Rydberg state of O ₂ by (3+1) resonance-enhanced multiphoton-ionization spectroscopy. Journal of Chemical Physics, 2001, 114, 8364-8371.	1.2	6

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55	Relations between Rydberg-valence interactions in the O ₂ molecule. Journal of Chemical Physics, 2000, 113, 2214-2223.	1.2	21
56	Asymmetry sum rule for molecular predissociation. Physical Review A, 2000, 63, .	1.0	1
57	High-Resolution Oscillator Strength Measurements of the CO ₂ $\Sigma^+ \rightarrow \Sigma^+$ Transition. Journal of Chemical Physics, 1999, 110, 11129-11132.	1.6	20
58	The $\Sigma^+ \rightarrow \Sigma^+$ transition of molecular oxygen. Journal of Chemical Physics, 1999, 110, 11129-11132.	1.2	16
59	The O(1D) yield from O ₂ photodissociation near H Lyman- α (121.6 nm). Journal of Chemical Physics, 1999, 110, 1949-1958.	1.2	27
60	Missing Bands in the Multiphoton Excitation of Coupled Molecular States. Physical Review Letters, 1999, 82, 4212-4215.	2.9	11
61	Perturbations in the $3s \Sigma^+, 3p \Sigma^+$ Rydberg states of O ₂ : Bound-bound interactions with the second $1 \Sigma^+$ and $1 \Pi^g$ valence states. Journal of Chemical Physics, 1999, 111, 186-197.	1.2	27
62	The $(X^2 \Sigma^+, 2 \Sigma^+)$ Rydberg states of O ₂ : Spectra, structures, and interactions. Journal of Chemical Physics, 1999, 111, 173-185.	1.2	42
63	Comment on ϵ -Ab initio dynamic dipole polarizabilities for O ₂ , its photoabsorption spectrum in the Schumann-Runge region, and long-range interaction coefficients for its dimer. J. Chem. Phys. 109, 9802 (1998)]. Journal of Chemical Physics, 1999, 111, 11236-11237.	1.2	0
64	Quantum interference in the Schumann-Runge bands of molecular oxygen. Geophysical Research Letters, 1998, 25, 2457-2460.	1.5	12
65	Angular distributions for photodissociation of O ₂ in the Herzberg continuum. Journal of Chemical Physics, 1998, 108, 7229-7243.	1.2	70
66	A comparative high-resolution study of predissociation linewidths in the Schumann-Runge bands of O ₂ . Journal of Chemical Physics, 1998, 109, 3856-3867.	1.2	30
67	High-Resolution Oscillator Strength Measurements for High-Energy Bands of the $X^1 \Sigma^+ (v=0)$ System of Carbon Monoxide. Astrophysical Journal, 1998, 505, 452-458.	1.6	21
68	Non-Lorentzian line shapes for interfering rotational resonances in the predissociation of O ₂ . Physical Review A, 1997, 55, 4164-4167.	1.0	4
69	Electronic transition moments for the Herzberg I bands of O ₂ . Canadian Journal of Physics, 1996, 74, 185-193.	0.4	17
70	Understanding diatomic photodissociation with a coupled-channel Schrödinger equation model. Journal of Electron Spectroscopy and Related Phenomena, 1996, 80, 9-12.	0.8	29
71	Indirect predissociation of the state of O ₂ . Journal of Electron Spectroscopy and Related Phenomena, 1996, 80, 17-20.	0.8	1
72	Narrow-bandwidth VUV laser measurements of fine-structure predissociation linewidths in the Schumann-Runge bands of O ₂ . Journal of Electron Spectroscopy and Related Phenomena, 1996, 80, 29-32.	0.8	3

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73	Observation of the second Σ^+ valence state of O ₂ . Physical Review A, 1996, 54, 3923-3938.	1.0	14
74	Assignment of the $3^1\Sigma^+g$ bands of O ₂ observed in the region 1040–1200 Å.... Journal of Chemical Physics, 1996, 104, 2765-2772.	1.2	27
75	Asymmetric line shapes in the indirect predissociation of the $1^1\Sigma^+u$ Rydberg state of O ₂ . Journal of Chemical Physics, 1995, 102, 6631-6640.	1.2	48
76	Experimental observation of the lowest Σ^+ valence state of O ₂ . Physical Review A, 1995, 52, 2717-2733.	1.0	22
77	Fine structure dependence of predissociation linewidth in the Schumann-Runge bands of molecular oxygen. Journal of Chemical Physics, 1994, 100, 7012-7035.	1.2	60
78	Rotational features in the fluorescence excitation spectrum of O(1D ₂) from vacuum ultraviolet laser photodissociation of O ₂ . Journal of Chemical Physics, 1991, 94, 1060-1068.	1.2	22
79	Comment on "The potential energy function for O ₂ X($3^1\Sigma^+g$) and the transition dipole moment of the Schumann-Runge band near X state dissociation". Journal of Chemical Physics, 1990, 93, 7532-7533.	1.2	5
80	Rotational line strengths in $3^1\Sigma^+g \rightarrow 3^1\Sigma^+g$ electronic transitions. The $3^1\Sigma^+g \rightarrow 3^1\Sigma^+g$ and $3^1\Sigma^+g \rightarrow 3^1\Sigma^+g$ systems of molecular oxygen. Canadian Journal of Physics, 1990, 68, 231-237.	0.4	13
81	Bonding and structure in the hydrides of groups III-VI deduced from photoionization studies. Computational and Theoretical Chemistry, 1989, 202, 363-373.	1.5	2
82	Vacuum-ultraviolet absorption linewidth measurement using high-order anti-Stokes Raman-shifted radiation. Journal of the Optical Society of America B: Optical Physics, 1989, 6, 1200.	0.9	12
83	Resonances in the photodissociation of isotopic molecular oxygen ^I . The longest band. Journal of Quantitative Spectroscopy and Radiative Transfer, 1988, 40, 1-13.	1.1	34
84	Resonances in the photodissociation of isotopic molecular oxygen ^{II} . The second and third bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 1988, 40, 469-477.	1.1	22
85	Rotational variation of predissociation linewidth in the Schumann-Runge bands of ¹⁶ O ₂ . Journal of Quantitative Spectroscopy and Radiative Transfer, 1986, 36, 187-207.	1.1	75
86	Photoionisation of atomic sulphur. Journal of Physics B: Atomic and Molecular Physics, 1986, 19, 2825-2840.	1.6	36
87	Photoionisation of atomic selenium. Journal of Physics B: Atomic and Molecular Physics, 1986, 19, 2841-2845.	1.6	15
88	A photoionization study of SeH and H ₂ Se. Journal of Chemical Physics, 1986, 85, 4815-4824.	1.2	61
89	Photoionization mass spectrometric study and ab initio calculations of ionization and bonding in P ^H compounds; heats of formation, bond energies, and the 3B ₁ -1A ₁ separation in PH ₂ . Journal of Chemical Physics, 1986, 84, 375-384.	1.2	90
90	Decomposition of the photoabsorption continuum underlying the Schumann-Runge bands of ¹⁶ O ₂ ^{II} . Role of the 1 3^1g state and collision-induced absorption. Journal of Quantitative Spectroscopy and Radiative Transfer, 1985, 34, 405-415.	1.1	23

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91	Decomposition of the photoabsorption continuum underlying the Schumann-Runge bands of O^{I} . Role of the state: A new dissociation limit. Journal of Quantitative Spectroscopy and Radiative Transfer, 1985, 33, 627-643.	1.1	31
92	Photoionization of the amidogen radical. Journal of Chemical Physics, 1985, 83, 4319-4328.	1.2	190
93	Photodissociation of $^{16}\text{O}^{18}\text{O}$ in the atmosphere. Journal of Geophysical Research, 1984, 89, 7277-7284.	3.3	36
94	Temperature dependence in the Schumann-Runge photoabsorption continuum of oxygen. Journal of Quantitative Spectroscopy and Radiative Transfer, 1983, 30, 385-393.	1.1	59
95	Transmittance of the atmosphere in the $(8^{\text{--}}0)$ and $(9^{\text{--}}0)$ Schumann-Runge bands of oxygen. Journal of Geophysical Research, 1983, 88, 500-502.	3.3	2
96	The Schumann-Runge continuum of oxygen at wavelengths greater than 175 NM. Journal of Geophysical Research, 1982, 87, 8307-8310.	3.3	11
97	Experimentally determined oscillator strengths and linewidths for the Schumann-Runge band system of molecular oxygen $^{\text{III}}$. The $(7-0)$ to $(19-0)$ bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 1981, 26, 469-481.	1.1	30