Jonathan Tennyson

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

834 papers	42,432 citations	89 h-index	173 g-index
896 ext. papers	47,310 ext. citations	3.5 avg, IF	7.51 L-index

#	Paper	IF	Citations
834	Low energy inelastic electron scattering from carbon monoxide: II. Excitation of the b3Π, j3Π, B1Π, C1Π and E1Σ Rydberg electronic states. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2022**, 55, 025201	1.3	0
833	A Method for the Variational Calculation of Hyperfine-Resolved Rovibronic Spectra of Diatomic Molecules.. *Journal of Chemical Theory and Computation*, **2022**,	6.4	2
832	Highly accurate HF dimer ab initio potential energy surface.. *Journal of Chemical Physics*, **2022**, 156, 164305	3.9	
831	Analysis of the accuracy of calculations using Duo and Level diatomic nuclear motion programs. *Journal of Molecular Spectroscopy*, **2022**, 111621	1.3	0
830	Partition sums for non-local thermodynamic equilibrium conditions for nine molecules of importance in planetary atmospheres. *Icarus*, **2022**, 378, 114947	3.8	1
829	Cross-sections for heavy atmospheres: H2O self-broadening. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2022**, 283, 108146	2.1	0
828	RAS techniques and instruments **2022**, 1, 1-2		
827	Cross-sections for heavy atmospheres: H2O continuum. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 278, 108013	2.1	2
826	Electron Scattering Cross-Section Calculations for Atomic and Molecular Iodine. *Atoms*, **2021**, 9, 103	2.1	1
825	ExoMol at 10. *Astronomy and Geophysics*, **2021**, 62, 6.16-6.21	0.2	0
824	Targeted Cross-Section Calculations for Plasma Simulations. *Atoms*, **2021**, 9, 85	2.1	0
823	HELIOS-K 2.0 Opacity Calculator and Open-source Opacity Database for Exoplanetary Atmospheres. *Astrophysical Journal, Supplement Series*, **2021**, 253, 30	8	26
822	The efficient calculation of electron impact ionization cross sections with effective core potentials. *Journal of Chemical Physics*, **2021**, 154, 114104	3.9	5
821	Variational analysis of HF dimer tunneling rotational spectra using an ab initio potential energy surface. *Journal of Molecular Spectroscopy*, **2021**, 379, 111481	1.3	1
820	ExoMol molecular line lists XLII. Rovibronic molecular line list for the low-lying states of NO. *Monthly Notices of the Royal Astronomical Society*, **2021**, 504, 5768-5777	4.3	4
819	An improved rovibrational linelist of formaldehyde, H212C16O. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 266, 107563	2.1	7
818	Electric quadrupole transitions in carbon dioxide. *Journal of Chemical Physics*, **2021**, 154, 211104	3.9	3

817	Theoretical rovibronic spectroscopy of the calcium monohydroxide radical (CaOH). *Journal of Chemical Physics*, **2021**, 154, 234302	3.9	1
816	Cross Sections for Electron Collisions with H2O. *Journal of Physical and Chemical Reference Data*, **2021**, 50, 023103	4.3	5
815	Synthesis of ab initio and effective Hamiltonian line lists for ozone. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 269, 107651	2.1	3
814	Original Research by Young Twinkle Students (ORBYTS): ephemeris refinement of transiting exoplanets. *Monthly Notices of the Royal Astronomical Society*, **2021**, 504, 5671-5684	4.3	9
813	A method for calculating temperature-dependent photodissociation cross sections and rates. *Physical Chemistry Chemical Physics*, **2021**, 23, 16390-16400	3.6	6
812	Ionisation of PF: absolute partial electron ionisation cross sections and the formation and reactivity of dication states. *Physical Chemistry Chemical Physics*, **2021**, 23, 11424-11437	3.6	1
811	Low-energy electron impact dissociative recombination and vibrational transitions of N2+. *Journal of Applied Physics*, **2021**, 129, 053303	2.5	2
810	The ExoMolOP database: Cross sections and k-tables for molecules of interest in high-temperature exoplanet atmospheres. *Astronomy and Astrophysics*, **2021**, 646, A21	5.1	24
809	A spectroscopic model for the low-lying electronic states of NO. *Journal of Chemical Physics*, **2021**, 154, 074112	3.9	4
808	An experimentally-accurate and complete room-temperature infrared HCN line-list for the HITRAN database. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 270, 107666	2.1	1
807	Determination of quantum labels based on projections of the total angular momentum on the molecule-fixed axis. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 270, 107716	2.1	1
806	Reduced density matrix sampling: Self-consistent embedding and multiscale electronic structure on current generation quantum computers. *Physical Review Research*, **2021**, 3,	3.9	2
805	A global line list for HDO between 0 and 35000´cm−1 constructed using multiphoton spectra. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 271, 107694	2.1	1
804	Cross Sections and Rate Coefficients for Vibrational Excitation of H2O by Electron Impact. *Atoms*, **2021**, 9, 62	2.1	2
803	The HITRAN2020 molecular spectroscopic database. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 277, 107949	2.1	96
802	The spectrum of ammonia near 0.793 μm. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 273, 107838	2.1	1
801	The absorption spectrum of short-lived isotopic variant of water, H215O: Tentative detection at the Earth's atmosphere. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 276, 107929	2.1	0
800	The update of the line positions and intensities in the line list of carbon dioxide for the HITRAN2020 spectroscopic database. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2021**, 276, 107896	2.1	2

799	ExoMol line lists XLI. High-temperature molecular line lists for the alkali metal hydroxides KOH and NaOH. *Monthly Notices of the Royal Astronomical Society*, **2021**, 502, 1128-1135	4.3	2
798	Why SF6 eats electrons: identifying high electrical strength molecules from their electron collision properties. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2021**, 54, 025202	1.3	0
797	Rovibronic spectroscopy of PN from first principles. *Physical Chemistry Chemical Physics*, **2021**, 23, 22057-22066	3.3	2
796	Calculated electron impact ionisation fragmentation patterns. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2021**, 54, 235203	1.3	0
795	Electron dissociative attachement to ArH+, HD+, N2 + and CO2. *Journal of Physics: Conference Series* , **2020**, 1412, 172005	0.3	
794	A Decade with VAMDC: Results and Ambitions. *Atoms*, **2020**, 8, 76	2.1	22
793	MARVEL Analysis of the Measured High-resolution Rovibronic Spectra of the Calcium Monohydroxide Radical (CaOH). *Astrophysical Journal, Supplement Series*, **2020**, 248, 9	8	5
792	Empirical normal intensity distribution for overtone vibrational spectra of triatomic molecules. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 252, 107084	2.1	6
791	Vibrationally resolved electron impact electronic excitation of BeH. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**, 53, 135202	1.3	
790	Low energy inelastic electron scattering from carbon monoxide: I. excitation of the a3, a′3 and A1 electronic states.. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**,	1.3	2
789	ExoMol line lists XXXVIII. High-temperature molecular line list of silicon dioxide (SiO2). *Monthly Notices of the Royal Astronomical Society*, **2020**, 495, 1927-1933	4.3	5
788	Ions in the Thermosphere of Exoplanets: Observable Constraints Revealed by Innovative Laboratory Experiments. *Astrophysical Journal*, **2020**, 895, 77	4.7	10
787	Molecular cross-sections for high-resolution spectroscopy of super-Earths, warm Neptunes, and hot Jupiters. *Monthly Notices of the Royal Astronomical Society*, **2020**, 495, 224-237	4.3	20
786	ExoMol line lists XXXIX. Ro-vibrational molecular line list for CO2. *Monthly Notices of the Royal Astronomical Society*, **2020**, 496, 5282-5291	4.3	22
785	W2020: A Database of Validated Rovibrational Experimental Transitions and Empirical Energy Levels of H216O. *Journal of Physical and Chemical Reference Data*, **2020**, 49, 033101	4.3	10
784	Empirical Line Lists in the ExoMol Database. *Atoms*, **2020**, 8, 7	2.1	14
783	The high-temperature rotation-vibration spectrum and rotational clustering of silylene (SiH2). *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 246, 106929	2.1	9
782	Use of the complete basis set limit for computing highly accurate ab initio dipole moments. *Journal of Chemical Physics*, **2020**, 152, 024105	3.9	6

781	Empirical rovibrational energy levels of ammonia up to 7500 cm−1. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 251, 107027	2.1	12
780	ExoMol molecular line lists − XXXVII. Spectra of acetylene. *Monthly Notices of the Royal Astronomical Society*, **2020**, 493, 1531-1545	4.3	22
779	Recommended − cross sections for electron collisions with molecules. *European Physical Journal D*, **2020**, 74, 1	1.3	4
778	Benchmark calculations of electron impact electronic excitation of the hydrogen molecule. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**, 53, 145204	1.3	12
777	Vibrationally resolved NO dissociative excitation cross sections by electron impact. *Plasma Sources Science and Technology*, **2020**, 29, 05LT02	3.5	3
776	Electron scattering studies of BF and BF2. *Journal of Physics B: Atomic, Molecular and Optical Physics* , **2020**, 53, 225203	1.3	1
775	A semi-empirical potential energy surface and line list for H₂¹⁶O extending into the near-ultraviolet. *Atmospheric Chemistry and Physics*, **2020**, 20, 10015-10027	6.8	8
774	Atomic and Molecular Scattering Applications in an Apache Airavata Science Gateway **2020**,		1
773	Original Research by Young Twinkle Students (Orbyts): Ephemeris Refinement of Transiting Exoplanets II. *Research Notes of the AAS*, **2020**, 4, 109	0.8	0
772	Analysis of the first overtone bands of isotopologues of CO and SiO in stellar spectra. *Astronomy and Astrophysics*, **2020**, 633, A52	5.1	7
771	Analysis of the TiO isotopologues in stellar optical spectra. *Astronomy and Astrophysics*, **2020**, 642, A77	5.1	4
770	The W2020 Database of Validated Rovibrational Experimental Transitions and Empirical Energy Levels of Water Isotopologues. II. H217O and H218O with an Update to H216O. *Journal of Physical and Chemical Reference Data*, **2020**, 49, 043103	4.3	12
769	Computational treatment of electron and photon collisions with atoms, ions, and molecules: the legacy of Philip G Burke. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**, 53, 192002	1.3	1
768	Electron collisions with CO molecule: potential energy curves of higher lying CO − resonant states. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**, 53, 195202	1.3	2
767	Electron collisions with molecular hydrogen from electronically excited states using the R-matrix method. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2020**, 53, 245203	1.3	3
766	Dissociative electron attachment cross sections for ro-vibrationally excited NO molecule and N − anion formation. *Plasma Sources Science and Technology*, **2020**, 29, 10LT01	3.5	3
765	Identifiable Acetylene Features Predicted for Young Earth-like Exoplanets with Reducing Atmospheres Undergoing Heavy Bombardment. *Astrophysical Journal*, **2020**, 888, 21	4.7	12
764	UKRmol+: A suite for modelling electronic processes in molecules interacting with electrons, positrons and photons using the R-matrix method. *Computer Physics Communications*, **2020**, 249, 107092	4.2	40

763	ExoMol line lists XL. Rovibrational molecular line list for the hydronium ion (H3O+). *Monthly Notices of the Royal Astronomical Society*, **2020**, 497, 2340-2351	4.3	3
762	Electron Scattering Cross Sections for Anthracene and Pyrene. *Journal of Physical Chemistry A*, **2020** , 124, 7088-7100	2.8	3
761	Thirty years of H3+ astronomy. *Reviews of Modern Physics*, **2020**, 92,	40.5	13
760	The 2020 release of the ExoMol database: Molecular line lists for exoplanet and other hot atmospheres. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 255, 107228	2.1	54
759	An update to the MARVEL data set and ExoMol line list for 12C2. *Monthly Notices of the Royal Astronomical Society*, **2020**, 497, 1081-1097	4.3	10
758	The infrared spectrum of PF3 and analysis of rotational energy clustering effect. *Molecular Physics*, **2020**, 118, e1581951	1.7	4
757	Calculated line lists for H216O and H218O with extensive comparisons to theoretical and experimental sources including the HITRAN2016 database. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 241, 106711	2.1	8
756	Erratum to Infrared absorption spectra of hot ammonia[J Quant Spectrosc Radiat Transf 203 (2017) 410-416]. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2020**, 245, 106870	2.1	1
755	Plasma polymerization of cyclopropylamine in a low-pressure cylindrical magnetron reactor: A PIC-MC study of the roles of ions and radicals. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2020**, 38, 033003	2.9	1
754	Fast species ranking for iterative species-oriented skeletal reduction of chemistry sets. *Plasma Sources Science and Technology*, **2020**, 29, 125024	3.5	1
753	ExoMol molecular line lists XXXIII. The spectrum of Titanium Oxide. *Monthly Notices of the Royal Astronomical Society*, **2019**, 488, 2836-2854	4.3	84
752	General mathematical formulation of scattering processes in atom-diatomic collisions in the RmatReact methodology. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180409	3	3
751	Water vapour in the atmosphere of the habitable-zone eight-Earth-mass planet K2-18 b. *Nature Astronomy*, **2019**, 3, 1086-1091	12.1	127
750	Accurate empirical rovibrational energies and transitions of HO. *Physical Chemistry Chemical Physics* , **2019**, 21, 3473-3495	3.6	31
749	A variationally computed room temperature line list for AsH. *Physical Chemistry Chemical Physics*, **2019**, 21, 3264-3277	3.6	7
748	MARVEL analysis of the measured high-resolution spectra of14NH. *Journal of Molecular Spectroscopy*, **2019**, 362, 69-76	1.3	18
747	Spectroscopic line parameters of NO, NO2, and N2O for the HITEMP database. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2019**, 232, 35-53	2.1	32
746	Low temperature scattering with the R-matrix method: argon-argon scattering. *Molecular Physics*, **2019**, 117, 3158-3170	1.7	5

745	Theoretical study of the low-energy electron-collision cross sections of isomers HOOCl, HOClO and HClOO in gas phase. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2019**, 52, 165201	1.3	1
744	ExoMol line lists XXXII. The rovibronic spectrum of MgO. *Monthly Notices of the Royal Astronomical Society*, **2019**, 486, 2351-2365	4.3	14
743	Reduced chemistries with the Quantemol database (QDB). *Plasma Science and Technology*, **2019**, 21, 064006	1.5	3
742	Hydrogen molecular ions: H, H and beyond. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180395	3	4
741	Calculated cross sections for low energy electron collision with OH. *Plasma Sources Science and Technology*, **2019**, 28, 085013	3.5	7
740	ExoMol line list XXXIV. A rovibrational line list for phosphinidene (PH) in its $X, {}^3Sigma ^-$ and $a, {}^1Delta$ electronic states. *Monthly Notices of the Royal Astronomical Society*, **2019**, 488, 2332-2342	4.3	5
739	Angle-Resolved Electron Scattering from H_{2}O near 0°. *Physical Review Letters*, **2019**, 123, 033401	7.4	5
738	Roadmap on photonic, electronic and atomic collision physics: II. Electron and antimatter interactions. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2019**, 52, 171002	1.3	14
737	Quantemol Electron Collisions (QEC): An Enhanced Expert System for Performing Electron Molecule Collision Calculations Using the R-Matrix Method. *Atoms*, **2019**, 7, 97	2.1	15
736	ExoMol molecular line lists XXXVI: X 2 X 2 and A 2 X 2 transitions of SH. *Monthly Notices of the Royal Astronomical Society*, **2019**, 490, 1652-1665	4.3	14
735	Astronomical Spectroscopy. *Advanced Textbooks in Physics*, **2019**,	1	3
734	Electron Collisions with CO Molecule: An R-Matrix Study Using a Large Basis Set. *Springer Proceedings in Physics*, **2019**, 48-59	0.2	1
733	Low-Temperature Scattering with the R-Matrix Method: The Morse Potential. *Springer Proceedings in Physics*, **2019**, 257-273	0.2	2
732	The VoTe Room Temperature H216O Line List up to 25 000 cm. *Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)*, **2019**, 127, 967-973	0.7	3
731	The ExoMol project: An update. *Proceedings of the International Astronomical Union*, **2019**, 15, 287-296	0.1	
730	ExoMol molecular line lists XXXV. A rotation-vibration line list for hot ammonia. *Monthly Notices of the Royal Astronomical Society*, **2019**, 490, 4638-4647	4.3	41
729	Spectroscopy of YO from first principles. *Physical Chemistry Chemical Physics*, **2019**, 21, 22794-22810	3.6	9
728	Cross Sections for Electron Collisions with NO, N2O, and NO2. *Journal of Physical and Chemical Reference Data*, **2019**, 48, 043104	4.3	12

727	R-matrix study for electron scattering of beryllium dihydride for fusion plasma. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2019**, 52, 065204	1.3	2
726	Analysis of gaseous ammonia (NH3) absorption in the visible spectrum of Jupiter - Update. *Icarus*, **2019**, 321, 572-582	3.8	9
725	A global potential energy surface for H3+. *Molecular Physics*, **2019**, 117, 1663-1672	1.7	11
724	Electron-impact excitation of diatomic hydride cations II: OH+ and SH+. *Monthly Notices of the Royal Astronomical Society*, **2018**, 476, 2931-2937	4.3	7
723	Downstream etching of silicon nitride using continuous-wave and pulsed remote plasma sources sustained in Ar/NF3/O2 mixtures. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2018**, 36, 021305	2.9	13
722	Analysis of the red and green optical absorption spectrum of gas phase ammonia. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 209, 224-231	2.1	8
721	Potential energy surface, dipole moment surface and the intensity calculations for the 10 μm, 5 μm and 3 μm bands of ozone. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 210, 127-135	2.1	12
720	Original Research By Young Twinkle Students (ORBYTS): when can students start performing original research?. *Physics Education*, **2018**, 53, 015020	0.8	13
719	High-accuracy water potential energy surface for the calculation of infrared spectra. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2018**, 376,	3	20
718	An experimental water line list at 1950 K in the 6250–8670 cm−1 region. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 205, 213-219	2.1	9
717	High Accuracy ab Initio Calculations of Rotational-Vibrational Levels of the HCN/HNC System. *Journal of Physical Chemistry A*, **2018**, 122, 1326-1343	2.8	7
716	Critical evaluation of measured rotational–vibrational transitions of four sulphur isotopologues of S16O2. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 208, 152-163	2.1	25
715	MARVEL analysis of the measured high-resolution rovibrational spectra of C2H2. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 204, 42-55	2.1	35
714	ExoMol molecular line lists – XXVII. Spectra of C2H4. *Monthly Notices of the Royal Astronomical Society*, **2018**, 478, 3220-3232	4.3	29
713	The ExoMol Atlas of Molecular Opacities. *Atoms*, **2018**, 6, 26	2.1	36
712	Calculated electron impact dissociation cross sections for molecular chlorine (Cl2). *Plasma Sources Science and Technology*, **2018**, 27, 095008	3.5	7
711	EXOCROSS: a general program for generating spectra from molecular line lists. *Astronomy and Astrophysics*, **2018**, 614, A131	5.1	78
710	Marvel analysis of the measured high-resolution rovibrational spectra of H232S. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 218, 178-186	2.1	21

709	ExoMol line lists XXV: a hot line list for silicon sulphide, SiS. *Monthly Notices of the Royal Astronomical Society*, **2018**, 477, 1520-1527	4.3	10
708	Theoretical study of ArH+ dissociative recombination and electron-impact vibrational excitation. *Monthly Notices of the Royal Astronomical Society*, **2018**, 479, 2415-2420	4.3	8
707	TWINKLE: a low earth orbit visible and infrared exoplanet spectroscopy observatory **2018**,		4
706	The ARIEL space mission **2018**,		8
705	Marvel Analysis of the Measured High-resolution Rovibronic Spectra of 90Zr16O. *Astrophysical Journal*, **2018**, 867, 33	4.7	20
704	ExoMol line lists XXXI: spectroscopy of lowest eights electronic states of C2. *Monthly Notices of the Royal Astronomical Society*, **2018**, 480, 3397-3411	4.3	20
703	Low-energy collisions between electrons and BeD+. *Plasma Sources Science and Technology*, **2018**, 27, 025015	3.5	5
702	ExoMol molecular line lists XXVI: spectra of SH and NS. *Monthly Notices of the Royal Astronomical Society*, **2018**, 478, 270-282	4.3	15
701	A chemical survey of exoplanets with ARIEL. *Experimental Astronomy*, **2018**, 46, 135-209	1.3	148
700	A Population Study of Gaseous Exoplanets. *Astronomical Journal*, **2018**, 155, 156	4.9	144
699	Improved potential energy surface and spectral assignments for ammonia in the near-infrared region. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 219, 199-212	2.1	21
698	Synthetic spectra of BeH, BeD and BeT for emission modeling in JET plasmas. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2018**, 51, 185701	1.3	13
697	ExoMol line lists XXIX. The rotation-vibration spectrum of methyl chloride up to 1200 K. *Monthly Notices of the Royal Astronomical Society*, **2018**, 479, 3002-3010	4.3	9
696	ExoMol linelists XXVIII: the rovibronic spectrum of AlH. *Monthly Notices of the Royal Astronomical Society*, **2018**, 479, 1401-1411	4.3	25
695	A new spectroscopically-determined potential energy surface and ab initio dipole moment surface for high accuracy HCN intensity calculations. *Journal of Molecular Spectroscopy*, **2018**, 353, 40-53	1.3	6
694	ExoMol molecular line lists XXX: a complete high-accuracy line list for water. *Monthly Notices of the Royal Astronomical Society*, **2018**, 480, 2597-2608	4.3	145
693	A highly accurate dipole moment surface for the ground electronic state of water vapour for spectra extending into the ultraviolet. *Journal of Chemical Physics*, **2018**, 149, 084307	3.9	17
692	ExoMol line lists XXIV: a new hot line list for silicon monohydride, SiH. *Monthly Notices of the Royal Astronomical Society*, **2018**, 473, 5324-5333	4.3	26

691	Treating linear molecule HCCH in calculations of rotation-vibration spectra. *Journal of Chemical Physics*, **2018**, 149, 014101	3.9	14
690	Molecular Spectroscopy for Exoplanets. *Astrophysics and Space Science Library*, **2018**, 91-132	0.3	
689	Pressure-dependent water absorption cross sections for exoplanets and other atmospheres. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 187, 453-460	2.1	34
688	TIMEDELn: A programme for the detection and parametrization of overlapping resonances using the time-delay method. *Computer Physics Communications*, **2017**, 215, 137-148	4.2	8
687	G PU A ccelerated IN tensities MPI (GAIN-MPI): A new method of computing Einstein-A coefficients. *Computer Physics Communications*, **2017**, 214, 216-224	4.2	15
686	Theoretical resonant electron-impact vibrational excitation, dissociative recombination and dissociative excitation cross sections of ro-vibrationally excited BeH+ ion. *Plasma Physics and Controlled Fusion*, **2017**, 59, 045008	2	12
685	State-to-state chemistry and rotational excitation of CH in photon-dominated regions. *Monthly Notices of the Royal Astronomical Society*, **2017**, 469, 612-620	4.3	22
684	Total internal partition sums for 166 isotopologues of 51 molecules important in planetary atmospheres: Application to HITRAN2016 and beyond. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 203, 70-87	2.1	94
683	MARVEL Analysis of the Measured High-resolution Rovibronic Spectra of 48 Ti 16 O. *Astrophysical Journal, Supplement Series*, **2017**, 228, 15	8	42
682	Calculated cross sections for electron collisions with NF3, NF2and NF with applications to remote plasma sources. *Plasma Sources Science and Technology*, **2017**, 26, 065010	3.5	27
681	Electron$${mathrm{He}}_{2}^{+}$ scattering calculation using the R-matrix method: resonant and bound states of He2. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2017**, 50, 115203	1.3	
680	Insights to scaling remote plasma sources sustained in NF3 mixtures. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 031302	2.9	16
679	Accurate line intensities for water transitions in the infrared: Comparison of theory and experiment. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 203, 88-102	2.1	28
678	High-resolution absorption measurements of NH3 at high temperatures: 2100–5500 cm−1. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 189, 60-65	2.1	9
677	Simulating electric field interactions with polar molecules using spectroscopic databases. *Scientific Reports*, **2017**, 7, 45068	4.9	6
676	Interaction of molecular nitrogen with free-electron-laser radiation. *Physical Chemistry Chemical Physics*, **2017**, 19, 19794-19806	3.6	9
675	Recommended Ideal-Gas Thermochemical Functions for Heavy Water and its Substituent Isotopologues. *Journal of Physical and Chemical Reference Data*, **2017**, 46, 023104	4.3	17
674	Laboratory spectra of hot molecules: Data needs for hot super-Earth exoplanets. *Molecular Astrophysics*, **2017**, 8, 1-18	1.7	55

673	The ExoMol pressure broadening diet: H2 and He line-broadening parameters. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 203, 490-495	2.1	21
672	Room temperature linelists for CO2 asymmetric isotopologues with ab initio computed intensities. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 203, 265-281	2.1	27
671	Infrared absorption spectra of hot ammonia. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 203, 410-416	2.1	10
670	QDB: a new database of plasma chemistries and reactions. *Plasma Sources Science and Technology*, **2017**, 26, 055014	3.5	29
669	Cross Sections for Electron Collisions with Acetylene. *Journal of Physical and Chemical Reference Data*, **2017**, 46, 013106	4.3	13
668	ExoMol molecular line lists XIX: high-accuracy computed hot line lists for H218O and H217O. *Monthly Notices of the Royal Astronomical Society*, **2017**, 466, 1363-1371	4.3	36
667	Room temperature line lists for CO2 symmetric isotopologues with ab initio computed intensities. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2017**, 189, 267-280	2.1	37
666	John Norman Murrell. 2 March 1932 – 25 January 2016. *Biographical Memoirs of Fellows of the Royal Society*, **2017**, 63, 467-486	0.1	0
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