

# Tomas Brage

## List of Publications by Year in descending order

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times ranked

1020  
citing authors

#	ARTICLE	IF	CITATIONS
1	Advanced multiconfiguration methods for complex atoms: I. Energies and wave functions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 182004.	1.5	197
2	Hyperfine Induced Transitions as Diagnostics of Isotopic Composition and Densities of Low-Density Plasmas. Astrophysical Journal, 1998, 500, 507-521.	4.5	76
3	Very High Resolution Ultraviolet Spectroscopy of a Chemically Peculiar Star: Results of the $\kappa$ Lupi Pathfinder Project. Astronomical Journal, 1999, 117, 1454-1470.	4.7	72
4	Systematic calculations of correlation in complex ions. Physica Scripta, 1993, T47, 18-28.	2.5	67
5	Plunging configurations and J-dependent lifetimes in Mg-like ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 713-726.	1.5	64
6	Determination of Hyperfine-Induced Transition Rates from Observations of a Planetary Nebula. Physical Review Letters, 2002, 89, 281101.	7.8	60
7	Mercury in the HgMn Stars $\kappa$ Lupi and HR 7775. Astrophysical Journal, 1999, 512, 942-960.	4.5	55
8	Non-variational, spline-Galerkin calculations of resonance positions and widths, and photodetachment and photo-ionization cross sections for H and He. Journal of Physics B: Atomic, Molecular and Optical Physics, 1992, 25, 5289-5314.	1.5	50
9	The abundances of Pt, Au, and Hg in the chemically peculiar HgMn-type stars $\kappa$ CANCRI and $\chi$ LUPI. Astrophysical Journal, 1995, 444, 438.	4.5	47
10	Intercombinations and Allowed Transitions in O IV. Astrophysical Journal, 1996, 464, 1030.	4.5	46
11	Autodetachment of negative ions. Physical Review A, 1991, 44, 72-79.	2.5	44
12	MCDF calculations for the lowest excited states in the Zn-like sequence. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 3147-3158.	1.5	43
13	Candidate for Laser Cooling of a Negative Ion: High-Resolution Photoelectron Imaging of $\text{Th}^+$ . Physical Review Letters, 2019, 123, 203002.	7.8	43
14	A Goddard High Resolution Spectrograph Atlas of Echelle Observations of the [CLC]HgMn/[CLC] Star $\kappa$ Lupi. Astronomical Journal, 1999, 117, 1505-1548.	4.7	41
15	Core polarization in Ca I and Ca II. Physica Scripta, 1993, 48, 533-545.	2.5	40
16	Multiconfiguration Dirac-Hartree-Fock Calculations with Spectroscopic Accuracy: Applications to Astrophysics. Atoms, 2017, 5, 16.	1.6	40
17	Effects of core-valence and core-core correlation on the line strength of the resonance lines in Li I and Na I. Physical Review A, 1994, 49, 2181-2184.	2.5	37
18	Atomic data and theoretical X-ray spectra of Ge-like through V-like W ions. Atomic Data and Nuclear Data Tables, 2014, 100, 577-649.	2.4	37

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19	A NOVEL METHOD TO DETERMINE MAGNETIC FIELDS IN LOW-DENSITY PLASMA FACILITATED THROUGH ACCIDENTAL DEGENERACY OF QUANTUM STATES IN Fe <sup>9+</sup> . <i>Astrophysical Journal</i> , 2015, 807, 69.	4.5	37
20	Systematic Studies of N IV Transitions of Astrophysical Importance. <i>Astrophysical Journal</i> , 1995, 455, 758.	4.5	37
21	ATOMIC-LEVEL PSEUDO-DEGENERACY OF ATOMIC LEVELS GIVING TRANSITIONS INDUCED BY MAGNETIC FIELDS, OF IMPORTANCE FOR DETERMINING THE FIELD STRENGTHS IN THE SOLAR CORONA. <i>Astrophysical Journal</i> , 2016, 826, 219.	4.5	35
22	MF-Dependent Lifetimes due to Hyperfine Induced Interference Effects. <i>Physical Review Letters</i> , 2006, 97, 183001.	7.8	34
23	Experimental and theoretical study of the ground-state $M \rightarrow 1$ transition in Ag-like tungsten. <i>Physical Review A</i> , 2012, 86, .	2.5	34
24	J-Dependent 3s4p3P Lifetimes in Mg-Like Sulphur and Chlorine. <i>Physica Scripta</i> , 1984, 30, 249-254.	2.5	32
25	Hyperfine-dependent lifetimes in Be-like ions. <i>Physical Review A</i> , 2009, 79, .	2.5	32
26	Forbidden-line spectroscopy of the ground-state configuration of Cd-like W. <i>Physical Review A</i> , 2014, 90, .	2.5	32
27	Hinode/EIS Measurements of Active-region Magnetic Fields. <i>Astrophysical Journal</i> , 2020, 904, 87.	4.5	32
28	Core-valence and core-core correlation effects on hyperfine-structure parameters and oscillator strengths in Tl ii and Tl iii. <i>Physical Review A</i> , 1996, 53, 192-200.	2.5	31
29	Direct observation of the initial-state distribution of the first electron transferred to slow highly charged ions interacting with a metal surface. <i>Physical Review A</i> , 2004, 70, .	2.5	31
30	Energy levels and transition rates for helium-like ions with $Z \leq 36$ . <i>Astronomy and Astrophysics</i> , 2016, 592, A141.	5.1	30
31	The O IV and S IV intercombination lines in the ultraviolet spectra of astrophysical sources. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 337, 901-909.	4.4	29
32	Calculations with spectroscopic accuracy for the ground configuration ( $Tj$ ETQq0 0 0 rgBT /Overlock 10 Tf 50 227 Td (xmln forbidden transition in Co-like ions. <i>Physical Review A</i> , 2016, 93, .	2.5	29
33	The Bismuth Abundance in the HgMn Stars $\zeta$ Lupi and HR 7775 and Improved Atomic Data for Selected Transitions of Bi<sup>i</sup>, Bi<sup>ii</sup>, and Bi<sup>iii</sup>. <i>Astrophysical Journal</i> , 2001, 551, 520-535.	4.5	28
34	Theoretical Oscillator Strengths for S rii and Y iii, with Application to Abundances in the HgMn $\zeta$ Lupi Star $\zeta$ Lupi. <i>Astrophysical Journal</i> , 1998, 496, 1051-1057.	4.5	27
35	Theoretical Oscillator Strengths and Hyperfine Structure in Hgii. <i>Astrophysical Journal</i> , 1999, 513, 524-534.	4.5	27
36	A First Spectroscopic Measurement of the Magnetic-field Strength for an Active Region of the Solar Corona. <i>Astrophysical Journal Letters</i> , 2020, 898, L34.	8.3	26

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37	Tungsten spectroscopy in the EUV range observed at a high-temperature superconducting electron-beam ion trap. Physical Review A, 2015, 91, . Breit and QED effects on the $\frac{3}{9} \frac{d}{D}$	2.5	25
38	$\frac{3}{9} \frac{d}{D}$	2.5	25
39	Abundance and Isotopic Anomalies of Thallium in the Atmosphere of the HgMn Star chi LUPI. Astrophysical Journal, 1996, 462, 937.	4.5	24
40	The 1s2s2p <sup>2</sup> 5P-1s2p3 <sup>5</sup> S transition in Be I-like ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 1988, 21, 2563-2569.	1.5	23
41	Core polarization effects on oscillator strengths in neutral zinc. Physica Scripta, 1992, 45, 43-48.	2.5	23
42	Transition Rates of the Intercombination UV0.01 Multiplet in Nii. Astrophysical Journal, 1997, 478, 423-429.	4.5	23
43	3s23p-3s3p2transitions in Sâ€šiv. Monthly Notices of the Royal Astronomical Society, 2002, 333, 885-893.	4.4	22
44	Hyperfine dependent lifetimes in Mg-like ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 095001.	1.5	22
45	Review of highly charged tungsten spectroscopy research using low energy EBITs at the Shanghai EBIT laboratory. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144029.	1.5	22
46	Autoionization studies of the 1s2s2p4P <sup>5/2</sup> levels in Heâ€š, Li i, and Be ii. Physical Review A, 1993, 47, 3718-3723. Comment on â€šTheoretical Confirmation of the Low Experimental $\frac{3}{C}$	2.5	21
47	$\frac{3}{C}$ $\frac{f}{f}$ -Value Ratio in Fe xviiiâ€š. Physical Review Letters, 2017, 119, 189301.	7.8	21
48	Transition probabilities for the UV0.01 multiplet in N III. Astrophysical Journal, 1995, 445, 457.	4.5	21
49	Hyperfine Structure and Isotope Shift in TL II with Astrophysical Applications. Astrophysical Journal, 1996, 462, 943.	4.5	21
50	Ab initio calculations for intercombination and resonance lines in P II. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 174, 111-115.	2.1	20
51	Splineâ€šGalerkin calculations for Rydberg series of calcium. Physica Scripta, 1994, 49, 651-660.	2.5	20
52	Stellar chemical abundances with the GHRS. Physica Scripta, 1996, T65, 110-114.	2.5	20
53	Coronal lines and the importance of deep-coreâ€švalence correlation in Ag-like ions. Physical Review A, 2014, 89, .	2.5	20
54	Unexpected transitions induced by spin-dependent, hyperfine and external magnetic-field interactions. Physica Scripta, 2014, 89, 114002.	2.5	20

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55	Hinode/EIS Coronal Magnetic Field Measurements at the Onset of a C2 Flare. <i>Astrophysical Journal</i> , 2021, 913, 1.	4.5	20
56	Lines of OIV and SIV in the Goddard High-Resolution Spectrograph spectrum of RR Tel: constraints on atomic data. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 303, L41-L46.	4.4	19
57	Hyperfine-state-dependent lifetimes along the Ni-like isoelectronic sequence. <i>Physical Review A</i> , 2008, 77, .	2.5	19
58	Interpretation of Anomalous Ultraviolet Transitions of Fe II Observed in Laboratory Fourier Transform Spectra and Stellar HST and IUE Spectra. <i>Astrophysical Journal</i> , 1995, 446, 361.	4.5	19
59	1s2s2p2p3S5S transition in B ii. <i>Physical Review A</i> , 1987, 35, 3136-3138.	2.5	18
60	MCHF calculations of autoionization widths in two- and three-electron systems. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993, 26, 621-640.	1.5	18
61	Hyperfine-interaction-dependent lifetimes in Zn-like ions. <i>Physical Review A</i> , 2008, 78, .	2.5	18
62	Effect of an external magnetic field on the determination of E1M1 two-photon decay rates in Be-like ions. <i>Physical Review A</i> , 2013, 88, .	2.5	18
63	Accurate multiconfiguration calculations of energy levels, lifetimes, and transition rates for the silicon isoelectronic sequence. <i>Astronomy and Astrophysics</i> , 2016, 585, A26.	5.1	18
64	Proposal of highly accurate tests of Breit and QED effects in the ground state of the F-like isoelectronic sequence. <i>Physical Review A</i> , 2018, 98, .	2.5	18
65	Hfszeeman95â€”A program for computing weak and intermediate magnetic-field- and hyperfine-induced transition rates. <i>Computer Physics Communications</i> , 2020, 253, 107211.	7.5	18
66	Optical transition in the negative magnesium ion. <i>Physical Review A</i> , 1990, 42, 2728-2733.	2.5	16
67	Theoretical investigation of magnetic-field-induced transitions in the negative magnesium ion. <i>Physical Review A</i> , 1990, 42, 2728-2733.	2.5	16
68	Observation of electric-dipole transitions in the laser-cooling candidate Th and its application for cooling antiprotons. <i>Physical Review A</i> , 2021, 103, .	2.5	16
69	Experimental and theoretical investigation of radiative lifetimes in neutral gallium. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1986, 3, 345-351.	1.0	14
70	Lifetimes of 5d96p and 5d86s6p levels in Hg iii. <i>Physical Review A</i> , 1993, 47, 884-889.	2.5	14
71	Spline-Galerkin methods applied to Rydberg series between the 4s2S and 3d2D limits of calcium. <i>Physical Review A</i> , 1994, 50, 2937-2947.	2.5	14
72	A Theoretical Investigation of the Magnetic-field-induced Transition in Fe X, of Importance for Measuring Magnetic Field Strengths in the Solar Corona. <i>Astrophysical Journal</i> , 2021, 913, 135.	4.5	14

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73	The pursuit of heavy elements in the HgMn-type star Chi Lupi: Observations with the GHRS in the COSTAR ERA. <i>Astrophysical Journal</i> , 1994, 435, L67.	4.5	14
74	Autodetachment of the nsnp24P1/2states in negative ions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1992, 25, 4217-4228.	1.5	13
75	Relativistic empirical specification of transition probabilities from measured lifetime and energy level data. <i>Physica Scripta</i> , 1997, 56, 240-244.	2.5	13
76	Energy levels and radiative data for Kr-like $W^{38+}$ from MCDHF and RMBPT calculations. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 135003.	1.5	13
77	Transition energies and probabilities in high-spin states of the boron sequence and an electron affinity for negative beryllium. <i>Physica Scripta</i> , 1992, 45, 436-444.	2.5	12
78	Spline-Galerkin methods for Rydberg series, including Breit-Pauli effects. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994, 27, 5467-5484.	1.5	12
79	Atomic Data Requirements for the Analysis of Chemically Peculiar Spectra. <i>Highlights of Astronomy</i> , 1998, 11, 650-652.	0.0	12
80	Ultraviolet doubly excited Fe II lines in the laboratory and in the A-type star 21 Pegasi. <i>Astrophysical Journal</i> , 1987, 312, 337.	4.5	12
81	Multiconfiguration Dirac-Hartree-Fock calculations for intercombination lines in silicon-like ions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 503-508.	1.5	11
82	ON THE FINE STRUCTURE SPLITTING OF THE $3p^4 3d^4 D_{5/2}$ AND $3p^4 3d^4 D_{7/2}$ LEVELS OF Fe x. <i>Astrophysical Journal</i> , 2016, 833, 185.	4.5	11
83	SUMER Measurement of the Fe x $3p^4 3d^4 D_{5/2,7/2}$ Energy Difference. <i>Astrophysical Journal</i> , 2020, 902, 21.	4.5	11
84	Experimental and theoretical study of core-excited states of Al III. <i>Physica Scripta</i> , 1990, 42, 543-550.	2.5	10
85	Core-excited quintet states in Mg I. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1991, 24, 905-920.	1.5	10
86	Resolving a discrepancy between experimental and theoretical lifetimes in atomic negative ions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2017, 50, 025001.	1.5	10
87	Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. III. <i>Atomic Data for Siix</i> . <i>Astrophysical Journal</i> , 2000, 540, 1114-1118.	4.5	9
88	A review of intercombination lines in beryllium-like ions. <i>Molecular Physics</i> , 2000, 98, 1057-1065.	1.7	9
89	Experimental and theoretical studies of lifetimes and transition probabilities for AuII. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, 483-490.	1.5	9
90	Oscillator strengths and hyperfine structures in Ga II from multiconfiguration Dirac-Hartree-Fock calculations. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, 1813-1824.	1.5	9

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91	A strong visible line in the spectrum of $W^{11+}$ . Physica Scripta, 2016, 91, 105401.	2.5	9
92	Experimental and theoretical study of core-excited states of Mg II. Physica Scripta, 1991, 44, 336-342.	2.5	8
93	Systematic CIV3 and MCDF calculations for the UV0.01 multiplet in O III. Journal of Physics B: Atomic, Molecular and Optical Physics, 1997, 30, 1385-1400.	1.5	8
94	The structure and radiative lifetimes of negative ions homologous to $N^{\hat{~}}$ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 125002.	1.5	8
95	Proposal for observation of transitions induced by external magnetic fields mixing in the lower states: with an example from Fe X. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 095002.	1.5	8
96	Oscillator strengths for transitions in As II. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 1201-1210.	1.5	7
97	Analysis of the competition between forbidden and hyperfine-induced transitions in Ne-like ions. Physical Review A, 2016, 93, .	2.5	7
98	Lifetimes and oscillator strength trends for the $4s2ndD2$ series of Ga I. Physical Review A, 1987, 35, 1113-1118.	2.5	6
99	Relativistic ab initio calculations of oscillator strengths and hyperfine structure constants in Tl II. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 3183-3192.	1.5	6
100	HYPERFINE-DEPENDENT $gf$ -VALUES OF Mn I LINES IN THE 1.49-1.80 $\mu$ m H BAND. Astrophysical Journal, Supplement Series, 2015, 216, 2.	7.7	6
101	Investigation of M1 transitions of the ground-state configuration of In-like tungsten. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 105002.	1.5	6
102	Persistent discrepancy between experimental and theoretical lifetimes for $Ni^{25+}$ . Physical Review A, 2017, 95, .	2.5	6
103	Experimental and theoretical studies of excited states in $Ir^{25+}$ . Physical Review A, 2021, 103, .	2.5	6
104	Multiconfiguration Dirac-Hartree-Fock calculations of Landé $g$ -factors for ions of astrophysical interest: B II, C I <sup>IV</sup> , Al I <sup>II</sup> , Si I <sup>IV</sup> , P II, S II, Cl III, Ar IV, Ca I, Ti II, Zr III, and Sn II. Astronomy and Astrophysics, 2020, 639, A25.	5.1	6
105	Atomic Structure Calculations of Landé $g$ Factors of Astrophysical Interest with Direct Applications for Solar Coronal Magnetometry. Astrophysical Journal, 2021, 923, 186.	4.5	6
106	A program for computing autoionization properties. Computer Physics Communications, 1993, 74, 381-398.	7.5	5
107	Auger decay of Na-like $Si^{3+}(2p53lnl\epsilon^{\text{TM}})$ states formed in slow $Si^{5+} + \hat{~}He$ and Ar ion-atom collisions. Physical Review A, 1995, 51, 4652-4661.	2.5	5
108	Lifetime calculations for the $5s5pP23$ metastable level of Sr88I. Physical Review A, 2007, 75, .	2.5	5



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109	Forbidden and Unexpected atomic transitions. , 2009, , .		5
110	Hyperfine induced intensity redistribution in In hbox{sc II}. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 074012.	1.5	5
111	Magnetic-field-dependent angular distributions and linear polarizations of emissions from the $2p_{3/2} \rightarrow 2s_{1/2}$ transition in Ne-like ions. Physical Review A, 2014, 90, 043407.	2.5	5
112	The M1 ground state fine structure transition in Ag-like Yb. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 185004.	1.5	5
113	A Theoretical and Experimental Study of the Quartet System of B I. Advances in Quantum Chemistry, 1998, 30, 301-310.	0.8	4
114	Lifetimes of the $5d96p$ levels in Hg III. Physical Review A, 1999, 59, 4068-4070.	2.5	4
115	Visible light spectroscopy of Ar $6+$ ions in high Rydberg states produced with a microcapillary target. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 758-761.	1.4	4
116	Yao et al. Reply. Physical Review Letters, 2007, 98, .	7.8	4
117	Some historic and current aspects of plasma diagnostics using atomic spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 144026.	1.5	4
118	J-dependent lifetimes of the $2s2p3p4d$ and $2s2p3d4f$ terms in the boron isoelectronic sequence. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 4233-4247.	1.5	3
119	Systematic studies of highly excited Rydberg states in ions with two valance electrons. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 2815-2826.	1.5	3
120	Effects on intercombination transition rates and branching ratios of the UV0.01 ( $3s23p23P1, 2\hat{a}^{\sim} 3s3p35S2$ ) multiplet in Si I-like ions revisited. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 709-726.	1.5	3
121	Lifetimes of the hyperfine levels of $3d94s3D3$ in high-Z Ni-like ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 145001.	1.5	3
122	Magnetic-field- and hyperfine-induced $2p_{3/2} \rightarrow 2s_{1/2}$ transitions in Be- and Ne-like ions. Physical Review A, 2017, 96, .	2.5	3
123	MCDHF and RCI calculations of energy levels, lifetimes, and transition rates in Si $\hat{C}^{\sim}III$ and Si $\hat{C}^{\sim}IV$ . Astronomy and Astrophysics, 2019, 631, A29.	5.1	3
124	Accidental degeneracy of doubly excited states in Fe II. Journal of Physics B: Atomic and Molecular Physics, 1987, 20, 1153-1160.	1.6	2
125	Accurate transition probabilities from large-scale multiconfiguration calculations - A tribute to Charlotte Froese Fischer. , 2013, , .		2
126	Time-Stretched Spectroscopy by the Quantum Zeno Effect: The Case of Auger Decay. Physical Review Letters, 2018, 121, 233201.	7.8	1



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127	Correlation in the 2s and Rydberg series of F vi. Physical Review A, 1986, 34, 4399-4401.	2.5	0
128	The 13th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas. Atoms, 2020, 8, 43.	1.6	0
129	Magnetically induced transition in the spectrum of Sr iv. Physical Review A, 2021, 103, .	2.5	0
130	Atomic Data Requirements for the Analysis of Chemically Peculiar Spectra. , 1998, , 650-652.		0
131	[Kr] $4d^{10} 4f^2$ the final L <sub>α</sub> quenched configuration for highly charged ions.. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, , 108215.	2.3	0