Eugene Oks

List of Publications by Year
in descending order

132	972	516710	610901
papers	citations	16 h-index	24 g-index

142	142	142	273
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Balmer series H_Î² measurements in a laser-induced hydrogen plasma. Applied Optics, 2003, 42, 5992.	2.1	70
2	A convergent theory of Stark broadening of hydrogen lines in dense plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 1994, 51, 129-138.	2.3	43
3	Plasma Spectroscopy. , 1995, , .		43
4	Comparison of the Stark widths and shifts of the H-alpha line measured in a flash tube plasma with theoretical results. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 283-296.	1.5	39
5	Review of the advanced generalized theory for Stark broadening of hydrogen lines in plasmas with tables. Journal of Quantitative Spectroscopy and Radiative Transfer, 2000, 65, 543-571.	2.3	35
6	A new spectroscopic effect resulting in a narrowing of hydrogen lines in dense plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2000, 65, 405-414.	2.3	25
7	STABLE CONIC-HELICAL ORBITS OF PLANETS AROUND BINARY STARS: ANALYTICAL RESULTS. Astrophysical Journal, 2015, 804, 106.	4.5	25
8	Highly nonlinear, sign-varying shift of hydrogen spectral lines in dense plasmas. Physical Review E, 2000, 62, 2667-2671.	2.1	24
9	Spectroscopic study of anomalous electric fields in peripheral regions of a current sheet plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 5119-5129.	1.5	22
10	Plasma screening within Rydberg atoms in circular states. European Physical Journal D, 2008, 47, 27-31.	1.3	21
11	Generalized Theory of Ion Impact Broadening in Magnetized Plasmas and Its Applications for Tokamaks. Physical Review Letters, 1994, 73, 2059-2062.	7.8	20
12	Are Crossings of Energy Levels and Charge Exchange Really Quantum Phenomena?. Physical Review Letters, 2000, 85, 2084-2087.	7.8	20
13	Reduction of spectral line shifts due to the acceleration of electrons by the ion field in plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 2251-2260.	1.5	20
14	Experimental evidence of Langmuir-wave-caused features in spectral lines of laser-produced plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 99, 439-450.	2.3	19
15	Novel Structure in theHÎ±-Line Profile of Hydrogen in a Dense Helium Plasma. Physical Review Letters, 1995, 75, 4740-4743.	7.8	18
16	Advance in diagnostics for high-temperature plasmas based on the analytical result for the ion dynamical broadening of hydrogen spectral lines. Physical Review E, 1999, 60, R2480-R2483.	2.1	18
17	A purely classical description of crossings of energy levels and spectroscopic signatures of charge exchange. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 3319-3330.	1.5	18
18	New type of shift of hydrogen and hydrogenlike spectral lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 58, 821-826.	2.3	17

#	Article	IF	Citations
19	Using X-ray spectroscopy of relativistic laser plasma interaction to reveal parametric decay instabilities: a modeling tool for astrophysics. Optics Express, 2017, 25, 1958.	3.4	16
20	A generalized theory of stark broadening of hydrogen-like spectral lines in dense plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 1995, 54, 307-315.	2.3	15
21	Spectroscopic signatures of avoided crossings caused by charge exchange in plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 3795-3806.	1.5	14
22	Magnetic stabilization of a Rydberg quasimolecule in circular states. Physical Review A, 2006, 73, .	2.5	14
23	Experimental determination of rate coefficients of charge exchange fromx-dips in laser-produced plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 909-919.	1.5	14
24	Two Flavors of Hydrogen Atoms: A Possible Explanation of Dark Matter. Atoms, 2020, 8, 33.	1.6	14
25	Experimental discovery of charge-exchange-caused dips in spectral lines from laser-produced plasmas. Physical Review E, 2001, 64, 065401.	2.1	13
26	Circular Rydberg states of hydrogenlike systems in collinear electric and magnetic fields of arbitrary strengths: an exact analytical classical solution. European Physical Journal D, 2004, 28, 171-179.	1.3	13
27	Role of higher multipoles in field-induced continuum lowering in plasmas. Physical Review E, 2001, 63, 057401.	2.1	12
28	DES map shows a smoother distribution of matter than expected: a possible explanation. Research in Astronomy and Astrophysics, 2021, 21, 241.	1.7	12
29	Anomalous Electric Fields Inside a Dense Plasma of a Current Sheet. Contributions To Plasma Physics, 1996, 36, 667-678.	1.1	11
30	Extrema in transition energies resulting not in satellites but in dips within spectral lines. Physical Review E, 2000, 62, R3067-R3070.	2.1	11
31	On the Puzzle of the Observed Narrowing of Radio Recombination Lines. Astrophysical Journal, 2004, 609, L25-L28.	4.5	11
32	In-depth study of intra-Stark spectroscopy in the x-ray range in relativistic laserâ€“plasma interactions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 245006.	1.5	11
33	Review of Recent Advances in the Analytical Theory of Stark Broadening of Hydrogenic Spectral Lines in Plasmas: Applications to Laboratory Discharges and Astrophysical Objects. Atoms, 2018, 6, 50.	1.6	11
34	Application of Dirac's generalized Hamiltonian dynamics to atomic and molecular systems. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 165-173.	1.5	10
35	Laser-Induced Optical Breakdown in Methane: Diagnostic Using H-Gamma Line Broadening. International Journal of Spectroscopy, 2010, 2010, 1-4.	1.6	10
36	Review of Langmuir-Wave-Caused Dips and Charge-Exchange-Caused Dips in Spectral Lines from Plasmas and their Applications. Atoms, 2014, 2, 178-194.	1.6	10

#	Article	IF	Citations
37	Analysis of Experimental Cross-Sections of Charge Exchange between Hydrogen Atoms and Protons Yields More Evidence of the Existence of the Second Flavor of Hydrogen Atoms. Foundations, 2021, 1, 265-270.	1.3	10
38	Rydberg electron dynamics in high-frequency elliptically polarized microwave fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 207-221.	1.5	9
39	Analytical solution for the three-dimensional motion of a circumbinary planet around a binary star. New Astronomy, 2020, 74, 101301.	1.8	9
40	Advanced simulations of spectroscopic signatures of charge exchange in laser-produced plasmas. European Physical Journal D, 2002, 20, 269-274.	1.3	8
41	Muonicâ€“electronic negative hydrogen ion: circular states. Canadian Journal of Physics, 2013, 91, 715-721.	1.1	8
42	Influence of magnetic-field-caused modifications of trajectories of plasma electrons on spectral line shapes: Applications to magnetic fusion and white dwarfs. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 171, 15-27.	2.3	8
43	Electric field induced crossings of energy terms of a Rydberg quasi molecule enhancing charge exchange and ionization. Canadian Journal of Physics, 2012, 90, 647-654.	1.1	7
44	FLARE STARSâ€”A FAVORABLE OBJECT FOR STUDYING MECHANISMS OF NONTHERMAL ASTROPHYSICAL PHENOMENA. Astrophysical Journal, 2016, 819, 16.	4.5	7
45	Stark Widths of Hydrogen Spectral Lines in Plasmas: a Highly-Advanced Non-Simulative Semiclassical Theory and Tables. AIP Conference Proceedings, 2006, , .	0.4	6
46	Spectroscopic diagnostics of plasma interaction with an external oscillatory field. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 195001.	1.5	6
47	Charge Exchange Signatures in X-Ray Line Emission Accompanying Plasma-Wall Interaction. Journal of Physics: Conference Series, 2012, 397, 012017.	0.4	6
48	Ionization channel of continuum lowering in plasmas: effects of plasma screening, electric and magnetic fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 245701.	1.5	6
49	Role of Lorentzâ€“Stark broadening of hydrogen spectral lines in magnetized plasmas: Applications to magnetic fusion and solar physics. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 156, 24-35.	2.3	6
50	Spectroscopic diagnostic of Langmuir turbulence in magnetic fusion plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 101004.	1.5	5
51	Two-plasmon decay instabilityâ€™s signature in spectral lines and spectroscopic measurements of charge exchange rate in a femtosecond laser-driven cluster-based plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 221001.	1.5	5
52	Muonicâ€“electronic quasi molecules based on a fully stripped multicharged ion. Canadian Journal of Physics, 2014, 92, 1405-1410.	1.1	5
53	Analytical solutions for diatomic Rydberg quasimolecules in a laser field. European Physical Journal D, 2014, 68, 1.	1.3	5
54	Oscillatory-Precessional Motion of a Rydberg Electron Around a Polar Molecule. Symmetry, 2020, 12, 1275.	2.2	5

#	Article	IF	Citations
55	Classical Description of Resonant Charge Exchange Involving the Second Flavor of Hydrogen Atoms. Atoms, 2021, 9, 41.	1.6	5
56	Signature of externally introduced laser fields in X-ray emission of multicharged ions. High Energy Density Physics, 2009, 5, 139-146.	1.5	4
57	Nonexistence of a â€œlocal suppressionâ€•in the ionization of hydrogen atoms by a low-frequency laser field of arbitrary strength. Canadian Journal of Physics, 2011, 89, 849-855.	1.1	4
58	Refinement of the semiclassical theory of the Stark broadening of hydrogen spectral lines in plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 152, 74-83.	2.3	4
59	Classical analytical solution for Rydberg states of muonicâ€“electronic helium and helium-like ions. Canadian Journal of Physics, 2020, 98, 857-861.	1.1	4
60	Circular binary star and an interstellar interloper: The analytical solution. New Astronomy, 2021, 84, 101500.	1.8	4
61	Ion impacts on moving emitters: A convergent theory of anisotropic broadening in high-temperature plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 1995, 54, 137-142.	2.3	3
62	Dual purpose diagnostics of edge plasmas of Tokamaks based on a novel spectroscopic effect. Review of Scientific Instruments, 1997, 68, 998-1001.	1.3	3
63	Reply to Comment on the proposed reduction of red shifts of the Balmer-Â line in dense plasmas by the dipole ionicÂelectronic shift. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 1459-1462.	1.5	3
64	X-ray Spectroscopy of Hot Dense Plasmas: Experimental Limits, Line Shifts & Field Effects. , 2008, , .		3
65	Benchmarking of alternate theories for Stark broadening against experimental data from DIII-D diagnostics. Plasma Physics Reports, 2009, 35, 112-117.	0.9	3
66	Dips in spectral line profiles and their applications in plasma physics and atomic physics. AIP Conference Proceedings, 2017, , .	0.4	3
67	Estimate of the Stark shift by penetrating ions within the nearest perturber approximation for hydrogenlike spectral lines in plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 245002.	1.5	3
68	X-ray spectroscopy of super-intense laser-produced plasmas for the study of nonlinear processes. Comparison with PIC simulations. Journal of Physics: Conference Series, 2017, 810, 012004.	0.4	3
69	The Possibility of Measuring Nuclear Shapes by Using Spectral Lines of Muonic Ions. Atoms, 2018, 6, 14.	1.6	3
70	Application of the Generalized Hamiltonian Dynamics to Spherical Harmonic Oscillators. Symmetry, 2020, 12, 1130.	2.2	3
71	Analytical results for one-electron Rydberg quasimolecules in a high-frequency laser field. European Physical Journal D, 2020, 74, 1.	1.3	3
72	Broadening of Hydrogenic Spectral Lines in Magnetized Plasmas: Diagnostic Applications. Springer Series on Atomic, Optical, and Plasma Physics, 2012, , 393-431.	0.2	3

#	Article	IF	Citations
73	Exact analytical solution for the ion impact broadening of hydrogen lines in plasmas at high densities or high principal quantum numbers. , 1999, , .		2
74	Enhancement of the spectroscopic method for mapping microwave fields in tokamak plasmas. Review of Scientific Instruments, 1999, 70, 363-367.	1.3	2
75	Application of the Generalized Theory of Stark Broadening to Experimental Highly-Excited Balmer Lines from a Radio-Frequency Discharge. Contributions To Plasma Physics, 2000, 40, 158-161.	1.1	2
76	Comparison of the latest experimental H-alpha results at the Bochumâ€™s gas-liner pinch with the upgraded advanced generalized theory. AIP Conference Proceedings, 2001, , .	0.4	2
77	Reply to â€œComment on â€˜Highly nonlinear, sign-varying shift of hydrogen spectral lines in dense plasmasâ€™ â€• Physical Review E, 2004, 69, .	2.1	2
78	Comment on paper â€œa critical analysis of the advanced generalized theory: Applicability and applicationsâ€•by Alexiou et al.. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 99, 252-254.	2.3	2
79	New Statistical Multiparticle Approach to the Acceleration of Electrons by the Ion Field in Plasmas. International Journal of Spectroscopy, 2010, 2010, 1-4.	1.6	2
80	Review of the phenomenon of dips in spectral lines emitted from plasmas and their applications. Journal of Physics: Conference Series, 2014, 548, 012030.	0.4	2
81	Classical description of charge exchange involving He-like or Li-like ions in Rydberg states in plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 035002.	1.5	2
82	The shape of spectral lines of two-electron Rydberg atoms/ions: analytical solution. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 115001.	1.5	2
83	Latest advances in the semiclassical theory of the Stark broadening of spectral lines in plasmas. Journal of Physics: Conference Series, 2017, 810, 012006.	0.4	2
84	Stark broadening of hydrogen/deuterium spectral lines by a relativistic electron beam: analytical results and possible applications to magnetic fusion edge plasmas. Journal of Physics Communications, 2018, 2, 015030.	1.2	2
85	Allowance for more realistic trajectories of plasma electrons in the Stark broadening of hydrogenlike spectral lines. Journal of Physics Communications, 2018, 2, 035033.	1.2	2
86	X-ray Spectroscopy Based Diagnostic of GigaGauss Magnetic Fields during Relativistic Laser-Plasma Interactions. Atoms, 2018, 6, 60.	1.6	2
87	The role of the Debye screening of circular Rydberg states of hydrogenic systems in collinear electric and magnetic fields of arbitrary strengths. European Physical Journal D, 2020, 74, 1.	1.3	2
88	Alternative way to detect and measure parameters of compact dark matter object as a component of a binary system. New Astronomy, 2021, 84, 101521.	1.8	2
89	Precession of the Orbit of a Planet around Stars Revolving along: Low-Eccentricity Orbits in a Binary System: Analytical Solution. New Astronomy, 2021, 89, 101646.	1.8	2
90	Review of Classical Analytical Results for the Motion of a Rydberg Electron around a Polar Molecule under Magnetic or Electric Fields of Arbitrary Strengths in Axially Symmetric Configurations. Symmetry, 2021, 13, 2171.	2.2	2

#	Article	IF	Citations
91	A new multi-particle model of ion broadening applicable for both high and low densities. AIP Conference Proceedings, 1997, , .	0.4	1
92	Theoretical and experimental advances in spectroscopy of strong and/or dynamic electric fields in plasmas. AIP Conference Proceedings, 1997, , .	0.4	1
93	A new spectroscopic effect depressing the electron impact broadening in dense plasmas. , 1999, , .		1
94	Exact solution for the impact broadening of the hydrogen lines Lyman-beta and Lyman-gamma. , 1999, , .		1
95	A new, highly unusual shift of hydrogen-like spectral lines in dense plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 71, 561-569.	2.3	1
96	Towards the design of tunable X-ray lasers by dressing the plasma with the elliptically polarized radiation of an optical laser. European Physical Journal D, 2004, 28, 253-257.	1.3	1
97	Improved Interpretation of Stark Broadening Data from Detached Divertor Plasmas. AIP Conference Proceedings, 2006, , .	0.4	1
98	Center-of-mass effects for hydrogen atoms in a nonuniform electric field: applications to magnetic fusion, radiofrequency discharges, and flare stars. Journal of Physics Communications, 2018, 2, 045005.	1.2	1
99	Effects of ultraintense magnetic fields due to relativistic laser-plasma interactions on Langmuir-wave-caused dips in x-ray spectral line profiles. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2019, 157, 1-5.	2.9	1
100	Diagnostic of Langmuir Solitons in Plasmas Using Hydrogenic Spectral Lines. Atoms, 2019, 7, 25.	1.6	1
101	Monopole Contribution to the Stark Width of Hydrogenlike Spectral Lines in Plasmas: Analytical Results. Plasma, 2020, 3, 180-186.	1.8	1
102	On profiles of hydrogenic spectral lines under stochastic electric fields of plasma turbulence: Applications to diagnostics of the Langmuir turbulence. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 167, 105815.	2.9	1
103	Circular Rydberg states of helium atoms or helium-like ions in a high-frequency laser field. Open Physics, 2021, 19, 11-17.	1.7	1
104	Analytical results for the motion of a Rydberg electron around a polar molecule: effects of a magnetic field of the arbitrary strength. European Physical Journal D, 2021, 75, 1.	1.3	1
105	Possible Observational Evidence for the Existence of a Parallel Universe. Foundations, 2022, 2, 1-5.	1.3	1
106	A Supersensitive Method for Spectroscopic Diagnostics of Electrostatic Waves in Magnetized Plasmas. Plasma, 2021, 4, 780-788.	1.8	1
107	Improved theory of ion impact broadening in magnetized plasmas and its diagnostic applications. AIP Conference Proceedings, 1995, , .	0.4	0
108	Anomalous broadeningâ€"Anomalous electric fields?. AIP Conference Proceedings, 1995, , .	0.4	0

#	Article	IF	Citations
109	Hydrogen lines with central Stark components as a sensitive magnetic probe. AIP Conference Proceedings, 1997, , .	0.4	0
110	Interpretation of measured Stark broadened profiles of highly excited hydrogen lines emitted from a low-density, low-temperature plasma. , 1999, , .		0
111	Distinctive features of the advanced generalized theory of Stark broadening of hydrogen lines in plasmas. , 1999, , .		0
112	Density Measurements from the Asymmetry of the Lyman Î¶ Line in a Vacuum Spark Lithium Discharge. Contributions To Plasma Physics, 1999, 39, 529-539.	1.1	0
113	The Latest Advances and New Physics Based on the Generalized Theory of Stark Broadening. AIP Conference Proceedings, 2002, , .	0.4	0
114	Use of Quasienergy States for Laser-Aided Diagnostics of Oscillatory Electric Fields in Plasmas. AIP Conference Proceedings, 2006, , .	0.4	0
115	Theories, Experiments, and Simulations of Spectral Line Shapes: Pitfalls in the Network. , 2010, , .		0
116	Relation between Theories, Experiments, and Simulations of Spectral Line Shapes. International Journal of Spectroscopy, 2010, 2010, 1-4.	1.6	0
117	Spectral Line Shapes in Plasmas and Gases. International Journal of Spectroscopy, 2010, 2010, 1-2.	1.6	0
118	Lorentzâ€“Doppler profiles of hydrogen/deuterium lines for magnetic fusion: analytical solution for any angle of observation and any magnetic field strength. Journal of Physics Communications, 2017, 1, 055011.	1.2	0
119	Improving the Method of Measuring the Electron Density via the Asymmetry of Hydrogenic Spectral Lines in Plasmas by Allowing for Penetrating Ions. Atoms, 2018, 6, 21.	1.6	0
120	Mini-Review: Hydrogen Atoms in a High-Frequency Laser Field. Atoms, 2019, 7, 83.	1.6	0
121	Method for Measuring the Laser Field and the Opacity of Spectral Lines in Plasmas. Plasma, 2021, 4, 65-74.	1.8	0
122	Role of a Time Delay in the Gravitational Two-Body Problem. Foundations of Physics, 2021, 51, 1.	1.3	0
123	Classical Dynamics of Rydberg States of Muonic-Electronic Helium and Helium-Like Ions in a Weak Electric Field: Counter-Intuitive Linear Stark Effect. Dynamics, 2021, 1, 1-8.	1.2	0
124	Stark-Lorentz profiles of spectral lines of atoms and polar molecules in magnetized turbulent plasmas: analytical results. European Physical Journal D, 2021, 75, 1.	1.3	0
125	Stark broadening of hydrogenic spectral lines by two-dimensional multimode quasimonochromatic electric fields. European Physical Journal D, 2021, 75, 1.	1.3	0
126	Orbital Dynamics in the Restricted Three Body Problem: Overview of Recent Analytical Advances Obtained by Separating Rapid and Slow Subsystems in Non-Planar Configurations. Dynamics, 2021, 1, 95-124.	1.2	0

#	Article	IF	Citations
127	Classical analytical description of negative hydrogen ions. Canadian Journal of Physics, 2021, 99, 783-787.	1.1	0
128	TEMPORARY REMOVAL: Relativistic Precession of Elliptical Orbits of a Circumbinary Planet can be Cancelled. New Astronomy, 2022, , 101772.	1.8	0
129	Relativistic Effects for a Hydrogen Rydberg Atom in a High-Frequency Laser Field: Analytical Results. Foundations, 2022, 2, 105-113.	1.3	0
130	Peculiar Features of Molecular Hydrogen Ions Formed by Proton Collisions with Hydrogen Atoms of the Second Flavor. Foundations, 2022, 2, 228-233.	1.3	0
131	Distinctive Features of Charge Exchange Involving the Second Flavor of Hydrogen Atomsâ€"The Candidates for Dark Matter. Physics, 2022, 4, 286-293.	1.4	0
132	Review of the Dynamics of Atomic and Molecular Systems of Higher than Geometric Symmetryâ€"Part I: One-Electron Rydberg Quasimolecules. Dynamics, 2022, 2, 73-113.	1.2	0