Eugene Oks

List of Publications by Year
in descending order

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

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

#	Article	IF	Citations
1	TEMPORARY REMOVAL: Relativistic Precession of Elliptical Orbits of a Circumbinary Planet can be Cancelled. New Astronomy, 2022, , 101772.	1.8	0
2	Relativistic Effects for a Hydrogen Rydberg Atom in a High-Frequency Laser Field: Analytical Results. Foundations, 2022, 2, 105-113.	1.3	0
3	Possible Observational Evidence for the Existence of a Parallel Universe. Foundations, 2022, 2, 1-5.	1.3	1
4	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
5	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
6	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
7	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
8	Method for Measuring the Laser Field and the Opacity of Spectral Lines in Plasmas. Plasma, 2021, 4, 65-74.	1.8	0
9	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
10	Role of a Time Delay in the Gravitational Two-Body Problem. Foundations of Physics, 2021, 51, 1.	1.3	0
11	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
12	Circular binary star and an interstellar interloper: The analytical solution. New Astronomy, 2021, 84, 101500.	1.8	4
13	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
14	Stark broadening of hydrogenic spectral lines by two-dimensional multimode quasimonochromatic electric fields. European Physical Journal D, 2021, 75, 1.	1.3	0
15	Classical Description of Resonant Charge Exchange Involving the Second Flavor of Hydrogen Atoms. Atoms, 2021, 9, 41.	1.6	5
16	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
17	Classical analytical description of negative hydrogen ions. Canadian Journal of Physics, 2021, 99, 783-787.	1.1	0
18	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

#	Article	IF	Citations
19	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
20	DES map shows a smoother distribution of matter than expected: a possible explanation. Research in Astronomy and Astrophysics, 2021, 21, 241.	1.7	12
21	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
22	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
23	A Supersensitive Method for Spectroscopic Diagnostics of Electrostatic Waves in Magnetized Plasmas. Plasma, 2021, 4, 780-788.	1.8	1
24	Analytical solution for the three-dimensional motion of a circumbinary planet around a binary star. New Astronomy, 2020, 74, 101301.	1.8	9
25	Application of the Generalized Hamiltonian Dynamics to Spherical Harmonic Oscillators. Symmetry, 2020, 12, 1130.	2.2	3
26	Oscillatory-Precessional Motion of a Rydberg Electron Around a Polar Molecule. Symmetry, 2020, 12, 1275.	2.2	5
27	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
28	Monopole Contribution to the Stark Width of Hydrogenlike Spectral Lines in Plasmas: Analytical Results. Plasma, 2020, 3, 180-186.	1.8	1
29	Analytical results for one-electron Rydberg quasimolecules in a high-frequency laser field. European Physical Journal D, 2020, 74, 1.	1.3	3
30	Two Flavors of Hydrogen Atoms: A Possible Explanation of Dark Matter. Atoms, 2020, 8, 33.	1.6	14
31	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
32	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
33	Mini-Review: Hydrogen Atoms in a High-Frequency Laser Field. Atoms, 2019, 7, 83.	1.6	0
34	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
35	Diagnostic of Langmuir Solitons in Plasmas Using Hydrogenic Spectral Lines. Atoms, 2019, 7, 25.	1.6	1
36	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

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37	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
38	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
39	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
40	X-ray Spectroscopy Based Diagnostic of GigaGauss Magnetic Fields during Relativistic Laser-Plasma Interactions. Atoms, 2018, 6, 60.	1.6	2
41	The Possibility of Measuring Nuclear Shapes by Using Spectral Lines of Muonic Ions. Atoms, 2018, 6, 14.	1.6	3
42	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
43	Dips in spectral line profiles and their applications in plasma physics and atomic physics. AIP Conference Proceedings, 2017, , .	0.4	3
44	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
45	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
46	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
47	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
48	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
49	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
50	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
51	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
52	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
53	FLARE STARSâ€”A FAVORABLE OBJECT FOR STUDYING MECHANISMS OF NONTHERMAL ASTROPHYSICAL PHENOMENA. Astrophysical Journal, 2016, 819, 16.	4.5	7
54	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

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55	STABLE CONIC-HELICAL ORBITS OF PLANETS AROUND BINARY STARS: ANALYTICAL RESULTS. Astrophysical Journal, 2015, 804, 106.	4.5	25
56	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
57	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
58	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
59	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
60	Muonicâ€“electronic quasi molecules based on a fully stripped multicharged ion. Canadian Journal of Physics, 2014, 92, 1405-1410.	1.1	5
61	Analytical solutions for diatomic Rydberg quasimolecules in a laser field. European Physical Journal D, 2014, 68, 1.	1.3	5
62	Muonicâ€“electronic negative hydrogen ion: circular states. Canadian Journal of Physics, 2013, 91, 715-721.	1.1	8
63	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
64	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
65	Charge Exchange Signatures in X-Ray Line Emission Accompanying Plasma-Wall Interaction. Journal of Physics: Conference Series, 2012, 397, 012017.	0.4	6
66	Broadening of Hydrogenic Spectral Lines in Magnetized Plasmas: Diagnostic Applications. Springer Series on Atomic, Optical, and Plasma Physics, 2012, , 393-431.	0.2	3
67	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
68	Spectroscopic diagnostic of Langmuir turbulence in magnetic fusion plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 101004.	1.5	5
69	Theories, Experiments, and Simulations of Spectral Line Shapes: Pitfalls in the Network. , 2010, , .		0
70	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
71	Relation between Theories, Experiments, and Simulations of Spectral Line Shapes. International Journal of Spectroscopy, 2010, 2010, 1-4.	1.6	0
72	Spectral Line Shapes in Plasmas and Gases. International Journal of Spectroscopy, 2010, 2010, 1-2.	1.6	0

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73	Laser-Induced Optical Breakdown in Methane: Diagnostic Using H-Gamma Line Broadening. International Journal of Spectroscopy, 2010, 2010, 1-4.	1.6	10
74	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
75	Signature of externally introduced laser fields in X-ray emission of multicharged ions. High Energy Density Physics, 2009, 5, 139-146.	1.5	4
76	Benchmarking of alternate theories for Stark broadening against experimental data from DIII-D diagnostics. Plasma Physics Reports, 2009, 35, 112-117.	0.9	3
77	Plasma screening within Rydberg atoms in circular states. European Physical Journal D, 2008, 47, 27-31.	1.3	21
78	X-ray Spectroscopy of Hot Dense Plasmas: Experimental Limits, Line Shifts & Field Effects. , 2008, , .		3
79	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
80	Magnetic stabilization of a Rydberg quasimolecule in circular states. Physical Review A, 2006, 73, .	2.5	14
81	Use of Quasienergy States for Laser-Aided Diagnostics of Oscillatory Electric Fields in Plasmas. AIP Conference Proceedings, 2006, , .	0.4	0
82	Improved Interpretation of Stark Broadening Data from Detached Divertor Plasmas. AIP Conference Proceedings, 2006, , .	0.4	1
83	Stark Widths of Hydrogen Spectral Lines in Plasmas: a Highly-Advanced Non-Simulative Semiclassical Theory and Tables. AIP Conference Proceedings, 2006, , .	0.4	6
84	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
85	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
86	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
87	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
88	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
89	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
90	On the Puzzle of the Observed Narrowing of Radio Recombination Lines. Astrophysical Journal, 2004, 609, L25-L28.	4.5	11

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91	Balmer series H_Î² measurements in a laser-induced hydrogen plasma. Applied Optics, 2003, 42, 5992.	2.1	70
92	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
93	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
94	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
95	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
96	The Latest Advances and New Physics Based on the Generalized Theory of Stark Broadening. AIP Conference Proceedings, 2002, , .	0.4	0
97	Advanced simulations of spectroscopic signatures of charge exchange in laser-produced plasmas. European Physical Journal D, 2002, 20, 269-274.	1.3	8
98	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
99	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
100	Experimental discovery of charge-exchange-caused dips in spectral lines from laser-produced plasmas. Physical Review E, 2001, 64, 065401.	2.1	13
101	Role of higher multipoles in field-induced continuum lowering in plasmas. Physical Review E, 2001, 63, 057401.	2.1	12
102	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
103	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
104	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
105	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
106	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
107	Extrema in transition energies resulting not in satellites but in dips within spectral lines. Physical Review E, 2000, 62, R3067-R3070.	2.1	11
108	Highly nonlinear, sign-varying shift of hydrogen spectral lines in dense plasmas. Physical Review E, 2000, 62, 2667-2671.	2.1	24

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109	Are Crossings of Energy Levels and Charge Exchange Really Quantum Phenomena?. Physical Review Letters, 2000, 85, 2084-2087.	7.8	20
110	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
111	Interpretation of measured Stark broadened profiles of highly excited hydrogen lines emitted from a low-density, low-temperature plasma. , 1999, , .		0
112	A new spectroscopic effect depressing the electron impact broadening in dense plasmas. , 1999, , .		1
113	Exact analytical solution for the ion impact broadening of hydrogen lines in plasmas at high densities or high principal quantum numbers. , 1999, , .		2
114	Distinctive features of the advanced generalized theory of Stark broadening of hydrogen lines in plasmas. , 1999, , .		0
115	Enhancement of the spectroscopic method for mapping microwave fields in tokamak plasmas. Review of Scientific Instruments, 1999, 70, 363-367.	1.3	2
116	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
117	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
118	Exact solution for the impact broadening of the hydrogen lines Lyman-beta and Lyman-gamma. , 1999, , .		1
119	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
120	Hydrogen lines with central Stark components as a sensitive magnetic probe. AIP Conference Proceedings, 1997, , .	0.4	0
121	A new multi-particle model of ion broadening applicable for both high and low densities. AIP Conference Proceedings, 1997, , .	0.4	1
122	Theoretical and experimental advances in spectroscopy of strong and/or dynamic electric fields in plasmas. AIP Conference Proceedings, 1997, , .	0.4	1
123	New type of shift of hydrogen and hydrogenlike spectral lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 58, 821-826.	2.3	17
124	Anomalous Electric Fields Inside a Dense Plasma of a Current Sheet. Contributions To Plasma Physics, 1996, 36, 667-678.	1.1	11
125	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
126	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

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127	Improved theory of ion impact broadening in magnetized plasmas and its diagnostic applications. AIP Conference Proceedings, 1995, , .	0.4	0
128	Anomalous broadeningâ€"Anomalous electric fields?. AIP Conference Proceedings, 1995, , .	0.4	0
129	Novel Structure in theHÎ±-Line Profile of Hydrogen in a Dense Helium Plasma. Physical Review Letters, 1995, 75, 4740-4743.	7.8	18
130	Plasma Spectroscopy. , 1995, , .		43
131	Generalized Theory of Ion Impact Broadening in Magnetized Plasmas and Its Applications for Tokamaks. Physical Review Letters, 1994, 73, 2059-2062.	7.8	20
132	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