Kevin B Fournier

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/2932945/publications.pdf

Version: 2024-02-01

147 papers 3,136 citations

147801 31 h-index 206112 48 g-index

151 all docs

151 docs citations

151 times ranked

2154 citing authors

#	Article	IF	CITATIONS
1	Absorption of Short Laser Pulses on Solid Targets in the Ultrarelativistic Regime. Physical Review Letters, 2008, 100, 085004.	7.8	172
2	Hot-Spot Mix in Ignition-Scale Inertial Confinement Fusion Targets. Physical Review Letters, 2013, 111, 045001.	7.8	135
3	Steady state advanced scenarios at ASDEX Upgrade. Plasma Physics and Controlled Fusion, 2002, 44, B69-B83.	2.1	108
4	Ionization Processes and Charge-State Distribution in a Highly Ionized High-ZLaser-Produced Plasma. Physical Review Letters, 2000, 85, 992-995.	7.8	102
5	Charge-State Distribution and Doppler Effect in an Expanding Photoionized Plasma. Physical Review Letters, 2004, 93, 055002.	7.8	84
6	Efficient Multi-keV X-Ray Sources from Ti-Doped Aerogel Targets. Physical Review Letters, 2004, 92, 165005.	7.8	83
7	Temperature determination usingKl±spectra fromM-shell Ti ions. Physical Review E, 2005, 72, 036408.	2.1	70
8	Efficient multi-keV X-ray sources from laser-exploded metallic thin foils. Physics of Plasmas, 2008, 15, .	1.9	66
9	Observations of x-ray spectra from highly charged tungsten ions in tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 1997, 30, 5057-5067.	1.5	62
10	X-Ray Scattering Measurements of Radiative Heating and Cooling Dynamics. Physical Review Letters, 2008, 101, 045003.	7.8	61
11	Absolute x-ray yields from laser-irradiated germanium-doped low-density aerogels. Physics of Plasmas, 2009, 16, .	1.9	59
12	Heating of Thin Foils with a Relativistic-Intensity Short-Pulse Laser. Physical Review Letters, 2002, 89, 265001.	7.8	57
13	Determination of the Charge State Distribution of a Highly Ionized Coronal Au Plasma. Physical Review Letters, 2003, 90, 235001.	7.8	56
14	Benchmark Measurements of the Ionization Balance of Non-Local-Thermodynamic-Equilibrium Gold Plasmas. Physical Review Letters, 2007, 99, 195001.	7.8	56
15	Ionization Balance in Inertial Confinement Fusion Hohlraums. Physical Review Letters, 2001, 87, 045002.	7.8	55
16	X-ray and VUV observations of brightness profiles from Alcator C-Mod plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 2191-2208.	1.5	52
17	Plasma-based beam combiner for very high fluence and energy. Nature Physics, 2018, 14, 80-84.	16.7	50
18	Multi-keV x-ray source development experiments on the National Ignition Facility. Physics of Plasmas, 2010, 17, .	1.9	48

#	Article	IF	Citations
19	First Application of the Fexviil(17.10 A)/I(17.05 A) Line Ratio to Constrain the Plasma Density of a Cosmic Xâ∈Ray Source. Astrophysical Journal, 2001, 560, 992-996.	4.5	47
20	X-ray observations of 2l-nl' transitions and configuration-interaction effects from Kr, Mo, Nb and Zr in near neon-like charge states from tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 5435-5462.	1.5	44
21	The abundance of ammonia in Comet P/Halley derived from ultraviolet spectrophotometry of NH by ASTRON and IUE. Astrophysical Journal, 1993, 404, 348.	4.5	39
22	Advanced spectroscopic analysis of $0.8\hat{a}\in$ "1.0-MA Moxpinches and the influence of plasma electron beams onL-shell spectra of Mo ions. Physical Review E, 2003, 67, 026409.	2.1	37
23	Efficient laser-induced 6-8 keV x-ray production from iron oxide aerogel and foil-lined cavity targets. Physics of Plasmas, 2012, 19, .	1.9	37
24	Titanium and germanium lined hohlraums and halfraums as multi-keV x-ray radiators. Physics of Plasmas, 2009, 16 , .	1.9	35
25	Accuracy ofK-shell spectra modeling in high-density plasmas. Physical Review E, 2000, 62, 2728-2738.	2.1	34
26	Electron temperature measurements inside the ablating plasma of gas-filled hohlraums at the National Ignition Facility. Physics of Plasmas, 2016, 23, .	1.9	34
27	X-ray spectral measurements and collisional radiative modeling of Ni- to Kr-like Au ions in electron beam ion trap plasmas. Physical Review E, 2003, 68, 036402.	2.1	33
28	Fast-electron-relaxation measurement for laser-solid interaction at relativistic laser intensities. Physical Review E, 2007, 76, 056402.	2.1	33
29	Development of a Big Area BackLighter for high energy density experiments. Review of Scientific Instruments, 2014, 85, 093501.	1.3	33
30	Spectroscopy of heliumlike argon resonance and satellite lines for plasma temperature diagnostics. Physical Review E, 2002, 66, 066404.	2.1	32
31	Titanium dioxide nanofiber-cotton targets for efficient multi-keV x-ray generation. Applied Physics Letters, 2008, 93, .	3.3	32
32	X-ray observations of 2l-nl' transitions inMo30+–Mo33+from tokamak plasmas. Physical Review A, 1995, 51, 3551-3559.	2.5	31
33	Model for computing superconfiguration temperatures in nonlocal-thermodynamic-equilibrium hot plasmas. Physical Review E, 2004, 69, 026403.	2.1	31
34	Updating of ionization data for ionization balance evaluations of atoms and ions for the elements hydrogen to germanium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 3569-3599.	1.5	30
35	The NIF x-ray spectrometer calibration campaign at Omega. Review of Scientific Instruments, 2014, 85, 11D613.	1.3	30
36	Soft-X-ray spectra of highly charged Au ions in an electron-beam ion trap. Canadian Journal of Physics, 2001, 79, 153-162.	1.1	29

#	Article	IF	CITATIONS
37	Hot-electron influence onL-shell spectra of multicharged Kr ions generated in clusters irradiated by femtosecond laser pulses. Physical Review E, 2002, 66, 046412.	2.1	28
38	Supersonic propagation of ionization waves in an underdense, laser-produced plasma. Physics of Plasmas, 2005, 12, 063104.	1.9	28
39	A computational study of x-ray emission from laser-irradiated Ge-doped foams. Physics of Plasmas, 2010, 17, 073111.	1.9	28
40	The Fe xxii I (11.92)/I (11.77) Density Diagnostic Applied to the Chandra High Energy Transmission Grating Spectrum of EX Hydrae. Astrophysical Journal, 2003, 588, L101-L104.	4.5	27
41	Demonstration of a 13-keV Kr <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -shell x-ray source at the National Ignition Facility. Physical Review E, 2013, 88, 033104.	2.1	25
42	Bright x-ray sources from laser irradiation of foams with high concentration of Ti. Physics of Plasmas, 2014, 21, 023102.	1.9	25
43	Soft-X-ray spectra of highly charged Os, Bi, Th, and U ions in an electron beam ion trap. Canadian Journal of Physics, 2005, 83, 829-840.	1.1	24
44	Numerical studies of transient and capillary x-ray lasers and their applications., 2003, 5197, 221.		23
45	Effects of plasma composition on backscatter, hot electron production, and propagation in underdense plasmas. Physics of Plasmas, 2004, 11, 2709-2715.	1.9	23
46	High-power laser interaction with low-density C–Cu foams. Physics of Plasmas, 2015, 22, .	1.9	23
47	Dielectronic recombination and excitation autoionization rate coefficients for potassiumlikeMo23+to fluorinelikeMo33+. Physical Review A, 1996, 54, 3870-3884.	2.5	22
48	X-ray area backlighter development at the National Ignition Facility (invited). Review of Scientific Instruments, 2014, 85, 11D502.	1.3	22
49	Influence of optical thickness and hot electrons on Rydberg spectra of Ne-like and F-like copper ions. Physical Review E, 2003, 67, 016402.	2.1	21
50	Characterization of heat-wave propagation through laser-driven Ti-doped underdense plasma. High Energy Density Physics, 2010, 6, 89-94.	1.5	21
51	Bright x-ray stainless steel K-shell source development at the National Ignition Facility. Physics of Plasmas, 2015, 22, .	1.9	21
52	X-ray observations of 2l-nl $\hat{a}\in^2$ transitions from Zr, Nb, Mo, and Pd in near-neonlike charge states. Physical Review A, 1996, 53, 3953-3962.	2.5	20
53	Intrinsic molybdenum impurity density and radiative power losses with their scalings in ohmically and ICRF heated Alcator C-Mod and FTU tokamak plasmas. Plasma Physics and Controlled Fusion, 1999, 41, 45-63.	2.1	20
54	Integrated impurity diagnostic package for magnetic fusion experiments. Review of Scientific Instruments, 2003, 74, 1982-1987.	1.3	20

#	Article	IF	Citations
55	Soft x-ray emission of galliumlike rare-earth atoms produced by high-temperature low-density tokamak and high-density laser plasmas. Physical Review A, 1994, 50, 2248-2256.	2.5	19
56	Evidence for a temperature law in non-LTE hot plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 4891-4904.	1.5	19
57	The Rydberg series of helium-like Cl, Ar and S and their high-nsatellites in tokamak plasmas. New Journal of Physics, 1999, 1, 19-19.	2.9	18
58	X-ray spectroscopy with elliptical crystals and face-on framing cameras. Review of Scientific Instruments, 2004, 75, 3762-3764.	1.3	17
59	Axial and temporal gradients in Mo wire array Z pinches. Physics of Plasmas, 2005, 12, 032701.	1.9	17
60	A computational study of x-ray emission from high-Z x-ray sources on the National Ignition Facility laser. High Energy Density Physics, 2011, 7, 263-270.	1.5	17
61	Integrated x-ray reflectivity measurements of elliptically curved pentaerythritol crystals. Review of Scientific Instruments, 2012, 83, 10E122.	1.3	17
62	A plasma amplifier to combine multiple beams at NIF. Physics of Plasmas, 2018, 25, .	1.9	17
63	Experimental and simulated argon spectra in the 2.3-3.4 nm region from tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 127-142.	1.5	16
64	Resolution of the long-standing overprediction of the resonance to intercombination line-intensity ratio in mid-Zneonlike ions. Physical Review A, 2005, 71, .	2.5	16
65	Measurement of2lâ^'nl′x-ray transitions fromâ‰^1Î⅓mKr clusters irradiated by high-intensity femtosecond laser pulses. Physical Review E, 2005, 71, 016408.	2.1	16
66	Updating of atomic data needed for ionization balance evaluations of krypton and molybdenum. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 4457-4489.	1.5	16
67	A test cassette for x-ray-exposure experiments at the National Ignition Facility. Review of Scientific Instruments, 2010, 81, 075113.	1.3	16
68	Time-resolved plasma spectroscopy of thin foils heated by a relativistic-intensity short-pulse laser. Physical Review E, 2002, 66, 066412.	2.1	15
69	Experimental and simulated M-shell nickel spectra in the 14.4–18.0 nm region from magnetic fusion devices. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 13-40.	1.5	15
70	Simulation study of 3–5 keV x-ray conversion efficiency from Ar K-shell vs. Ag L-shell targets on the National Ignition Facility laser. Physics of Plasmas, 2015, 22, 053110.	1.9	15
71	Collisional-radiative modeling of theL-shell emission ofMo30+toMo33+emitted from a high-temperature–low-density tokamak plasma. Physical Review E, 1996, 53, 1084-1093.	2.1	14
72	Temperature and impurity transport studies of heated tokamak plasmas by means of a collisional-radiative model of x-ray emission fromMo30+toMo39+. Physical Review E, 2000, 61, 5701-5709.	2.1	14

#	Article	IF	Citations
73	Experimental and simulated VUV spectra from the JET tokamak and the reversed field pinch RFX. Plasma Physics and Controlled Fusion, 2002, 44, 33-50.	2.1	14
74	Identification and precise measurements of the wavelengths of high-ntransitions in N-, O-, and F-like Zn ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 3787-3796.	1.5	14
75	Dielectronic recombination rates in H-likeAr17+to Ne-likeAr8+. Physical Review A, 1997, 56, 4715-4732.	2.5	13
76	Multi-keV x-ray conversion from prepulsed foil experiments. , 2004, , .		13
77	An overview of EBIT data needed for experiments on laser-producedplasmas. Canadian Journal of Physics, 2008, 86, 259-266.	1.1	13
78	Soft-x-ray spectra of highly charged Kr ions in an electron beam ion trap. Physical Review E, 2002, 65, 056401.	2.1	12
79	Observations of high-n transitions in the spectra of near-neon-like copper ions from laser-produced plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 3347-3364.	1.5	12
80	Source geometric considerations for OMEGA Dante measurements. Review of Scientific Instruments, 2012, 83, 10E117.	1.3	12
81	The effects of microstructure on propagation of laser-driven radiative heat waves in under-dense high-Z plasma. Physics of Plasmas, 2018, 25, .	1.9	12
82	Image-plate sensitivity to x rays at 2 to 60 keV. Review of Scientific Instruments, 2019, 90, 013506.	1.3	12
83	Analysis of high-ndielectronic Rydberg satellites in the spectra ofNa-likeZnXX andMg-likeZnXIX. Physical Review E, 2004, 70, 016406.	2.1	11
84	Experimental and simulated neon spectra in the 10-nm wavelength region from tokamak and reversed field pinch plasmas. Physical Review E, 1999, 60, 4760-4769.	2.1	10
85	Electronâ€Density–dependent Extremeâ€Ultraviolet Intensity Ratios from Lâ€Shell Iron Ions in the Frascati Tokamak Upgrade. Astrophysical Journal, 2001, 561, 1144-1153.	4.5	10
86	Observations of the vacuum ultraviolet and x-ray brightness profiles of Fe, Ni, and Ge in magnetically confined fusion plasmas. Physical Review E, 2001, 64, 036406.	2.1	10
87	Measuring the ionization balance of gold in a low-density plasma ofimportance to inertial confinement fusion. Canadian Journal of Physics, 2008, 86, 251-258.	1.1	10
88	Atomic Layer Deposition-Derived Ultra-Low-Density Composite Bulk Materials with Deterministic Density and Composition. ACS Applied Materials & Earny; Interfaces, 2013, 5, 13129-13134.	8.0	10
89	n=5 ton=5 soft-x-ray emission of uranium in a high-temperature low-density tokamak plasma. Physical Review A, 1994, 50, 3727-3733.	2.5	9
90	Electron temperature and density dependence of E1 and E2 lines in the spectra of cobaltlike to potassium like ions. Physical Review A, 1996, 53, 709-716.	2.5	9

#	Article	IF	Citations
91	Observations of the ultraviolet and x-ray brightness profiles and cooling rates of Kr and Ar in magnetically confined fusion plasmas. Physical Review E, 2000, 61, 3042-3052.	2.1	9
92	X-ray transport and radiation response assessment (XTRRA) experiments at the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11D421.	1.3	9
93	Demonstration of a long pulse X-ray source at the National Ignition Facility. Physics of Plasmas, 2017, 24, .	1.9	9
94	Resonant excitation channels in the 3d10-3d94sand 3d10-3d94ptransitions of nickel-likeMo14+andZr12+. Physical Review A, 1996, 53, 3110-3116.	2.5	8
95	Efficient multi-keV x-ray sources from Ti-doped aerogel targets. , 2004, , .		8
96	Analysis of radially resolved spectra and potential for lasing in Mo wire array Z pinches. Physics of Plasmas, 2005, 12, 094502.	1.9	8
97	Measurement of M-Shell Iron Ionization Balance in a Tokamak Plasma. Astrophysical Journal, 2001, 550, L117-L120.	4.5	8
98	Simulation study of enhancing laser driven multi-keV line-radiation through application of external magnetic fields. Physics of Plasmas, 2016, 23, 101204.	1.9	7
99	Laboratory observation and modeling of extreme ultraviolet spectra of highly ionized calcium. Astronomy and Astrophysics, 2000, 142, 95-106.	2.1	7
100	A laserâ€induced fluorescence diagnostic for divertors. Review of Scientific Instruments, 1995, 66, 600-602.	1.3	6
101	How to beat the low resolution of multilayer mirror spectra (invited). Review of Scientific Instruments, 1997, 68, 1002-1008.	1.3	6
102	Tabletop transient collisional excitation x-ray lasers. , 1999, 3776, 2.		6
103	Applications of advanced theoretical x-rayL-shell spectroscopy to various plasma and collision experiments. Review of Scientific Instruments, 2003, 74, 1943-1946.	1.3	6
104	Fe L-Shell Density Diagnostics in Theory and Practice., 2005,,.		6
105	A geophysical shock and air blast simulator at the National Ignition Facility. Review of Scientific Instruments, 2014, 85, 095119.	1.3	6
106	Demonstration of x-ray fluorescence imaging of a high-energy-density plasma. Review of Scientific Instruments, 2014, 85, 11E602.	1.3	6
107	Imaging at an x-ray absorption edge using free electron laser pulses for interface dynamics in high energy density systems. Review of Scientific Instruments, 2017, 88, 053501.	1.3	6
108	Efficient multi-keV x-ray sources from Ti-doped aerogel targets. AIP Conference Proceedings, 2004, , .	0.4	5

#	Article	IF	CITATIONS
109	Core Atomic Physics Studies in Alcator C-Mod. Fusion Science and Technology, 2007, 51, 451-459.	1.1	5
110	Supersonic heat wave propagation in laser-produced underdense plasma for efficient x-ray generation. Journal of Physics: Conference Series, 2008, 112, 022076.	0.4	5
111	Spatially resolved density and ionization measurements of shocked foams using x-ray fluorescence. Journal of Applied Physics, 2016, 120, 125901.	2.5	5
112	X-ray observations of Ne-like Xe and satellites from C-Mod tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 055701.	1.5	5
113	Observation of O ν visible transitions in a tokamak divertor plasma. Physical Review E, 1995, 51, 5139-5142.	2.1	4
114	Excitation autoionization rates from ground and excited levels in Li-likeAr15+to S-likeAr2+. Physical Review A, 1998, 57, 2651-2671.	2.5	4
115	A non-LTE analysis of high energy density Kr plasmas on Z and NIF. Physics of Plasmas, 2016, 23, 101208.	1.9	4
116	Electron cyclotron emission diagnostic of high temperature electron cyclotron resonance heated plasmas on Frascati tokamak upgrade. Review of Scientific Instruments, 1999, 70, 1007-1010.	1.3	3
117	Using high resolution x-ray spectroscopy of laser and EBIT plasma sources to test atomic models. AIP Conference Proceedings, 2000, , .	0.4	3
118	Absolute x-ray yields from laser-irradiated Ge-doped aerogel targets. , 2005, , .		3
119	Scaled experiments of explosions in cavities. Journal of Applied Physics, 2016, 119, 184903.	2.5	3
120	Applications and results of X-ray spectroscopy in implosion experiments on the National Ignition Facility. AIP Conference Proceedings, 2017, , .	0.4	3
121	Absolute X-ray yields from laser-irradiated, Ge-doped aerogel targets. European Physical Journal Special Topics, 2006, 133, 449-451.	0.2	3
122	Production of high fluence laser beams using ion wave plasma optics. Applied Physics Letters, 2022, 120, 200501.	3.3	3
123	Population Inversion and Gain Calculations for 4p54d–4p55p and 4p55s–4p55p Kr-like transitions in Y IV, Zr V, Nb VI and Mo VII. Physica Scripta, 1999, 60, 236-241.	2.5	2
124	Modeling of Capillary Discharge Plasma for X-ray lasers, XUV Lithography and other Applications. AIP Conference Proceedings, 2002, , .	0.4	2
125	X-ray spectromicroscopy of clusters heated by fs laser radiation. AIP Conference Proceedings, 2003, , .	0.4	2
126	The Fe XXII I(11.92 Ã)/I(11.77 Ã) Density Diagnostic. International Astronomical Union Colloquium, 2004, 190, 124-127.	0.1	2

#	Article	IF	Citations
127	Experiments on the Scaling of Ionization Balance vs. Electron and Radiation Temperature in Non-LTE Gold Plasmas. AIP Conference Proceedings, 2004, , .	0.4	2
128	Nuclear weapons effects testing of solar cells using the National Ignition Facility (NIF)., 2010,,.		2
129	Radiochromic film measurement of spatial uniformity for a laser generated x-ray environment. Review of Scientific Instruments, 2012, 83, 10E137.	1.3	2
130	The x-ray source application test cassette for radiation exposures at the OMEGA laser. Review of Scientific Instruments, 2012, 83, 10E136.	1.3	2
131	Fabrication and Metrology Challenges in Making Thin, Hollow, Silver Spherical Halfraum Targets for EPEC Experiments on the National Ignition Facility. Fusion Science and Technology, 2013, 63, 242-246.	1.1	2
132	Study of pure and mixed clustered noble gas puffs irradiated with a high intensity (7 \tilde{A} — 1019 W/cm2) sub-ps laser beam and achievement of a strong X-ray flash in a laser-generated debris-free X-ray source. Laser and Particle Beams, 2019, 37, 276-287.	1.0	2
133	Direct measurement of the impurity radial flux in the FTU plasma core. Plasma Physics and Controlled Fusion, 1997, 39, 1501-1508.	2.1	1
134	Estimates of population inversion for deep-UV transitions in Kr-like Y, Zr, Nb, and Mo in a high-current reflex discharge. , 1999, , .		1
135	Measurement of Population Inversion for FUV Transitions in Kr-like Y IV in a High-Current Reflex Discharge. Physica Scripta, 2000, 62, 301-306.	2.5	1
136	A Langmuir probe diagnostic for time-of-flight measurements of transient plasmas produced by high-energy laser ablation. Review of Scientific Instruments, 2012, 83, 10D725.	1.3	1
137	Scaled experiments on cavity confined explosions in limestone and poly(methyl methacrylate). Journal of Applied Physics, 2019, 126, 125901.	2.5	1
138	Characterization of a high-gain Ne-like Fe transient x-ray laser. , 1999, , .		0
139	<title>Transient and capillary collisional x-ray lasers</title> ., 2001,,.		O
140	Spectroscopic Analysis of 1MA X-pinch Implosions at the Nevada Terawatt Facility. AIP Conference Proceedings, 2002, , .	0.4	0
141	The Production of Exotic Satellite Structures in Short Pulse Laser Heated Foils. AIP Conference Proceedings, 2002, , .	0.4	O
142	Optical pumping experiments on next-generation light sources. , 2004, , .		0
143	Spectral Line Shapes as a Diagnostic Tool in Magnetic Fusion. AIP Conference Proceedings, 2006, , .	0.4	0
144	Fabrication, Characterization, and Modeling of Comixed Films for NXS Calibration Targets. Fusion Science and Technology, 2016, 70, 358-364.	1.1	0

#	ARTICLE	IF	CITATIONS
145	Time-resolved Measurement of Power Transfer in Plasma Amplifier Experiments on NIF., 2021, , .		0
146	Spectral and imaging characterization of tabletop X-ray lasers. European Physical Journal Special Topics, 2001, 11, Pr2-51-Pr2-54.	0.2	0
147	Fiber Optic Diagnostics for Scaled Explosion Experiments. , 2018, , .		0