

# R Fedosejevs

## List of Publications by Year in descending order

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126  
papers

2,725  
citations

159525

30  
h-index

223716

46  
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126  
all docs

126  
docs citations

126  
times ranked

1692  
citing authors

#	ARTICLE	IF	CITATIONS
1	Absorption of femtosecond laser pulses in high-density plasma. <i>Physical Review Letters</i> , 1990, 64, 1250-1253.	2.9	136
2	Absorption of subpicosecond ultraviolet laser pulses in high-density plasma. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1990, 50, 79-99.	1.5	114
3	Self-Steepening of the Density Profile of a CO <sub>2</sub> -Laser-Produced Plasma. <i>Physical Review Letters</i> , 1977, 39, 932-935.	2.9	102
4	Single and multiple shot near-infrared femtosecond laser pulse ablation thresholds of copper. <i>Applied Physics A: Materials Science and Processing</i> , 2005, 81, 729-735.	1.1	98
5	Self-Organization of a Plasma due to 3D Evolution of the Weibel Instability. <i>Physical Review Letters</i> , 2004, 93, 215004.	2.9	97
6	Experimental observation of laser-induced radiation heat waves. <i>Physical Review Letters</i> , 1990, 65, 587-590.	2.9	84
7	Production of porous carbon thin films by pulsed laser deposition. <i>Thin Solid Films</i> , 1999, 350, 49-52.	0.8	65
8	Experimental and theoretical study of absorption of femtosecond laser pulses in interaction with solid copper targets. <i>Physical Review B</i> , 2009, 79, .	1.1	61
9	Subnanosecond pulses from a KrF laser pumped SF <sub>6</sub> /Brillouin amplifier. <i>IEEE Journal of Quantum Electronics</i> , 1985, 21, 1558-1562.	1.0	60
10	Comparative study of laser-induced plasma emission from microjoule picosecond and nanosecond KrF-laser pulses. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2003, 58, 497-510.	1.5	57
11	Direct production of gratings on plastic substrates using 248-nm KrF laser radiation. <i>Applied Optics</i> , 1987, 26, 396.	2.1	55
12	Interaction of 1.3- $\mu$ m laser radiation with thin foil targets. <i>Physical Review A</i> , 1984, 30, 2568-2589.	1.0	54
13	Supercritical Density Profiles of CO <sub>2</sub> -Laser-Irradiated Microballoons. <i>Physical Review Letters</i> , 1979, 43, 1664-1667.	2.9	51
14	Detection and Mapping of Latent Fingerprints by Laser-Induced Breakdown Spectroscopy. <i>Applied Spectroscopy</i> , 2006, 60, 1322-1327.	1.2	47
15	Quasi-monoenergetic electron beams generated from 7 TW laser pulses in N <sub>2</sub> and He gas targets. <i>Laser and Particle Beams</i> , 2008, 26, 147-155.	0.4	46
16	Stimulated Raman Backscatter from a Magnetically Confined Plasma Column. <i>Physical Review Letters</i> , 1982, 49, 371-375.	2.9	43
17	Onset of relativistic self-focusing in high density gas jet targets. <i>Physical Review E</i> , 1997, 56, 4615-4639.	0.8	43
18	Laser-Induced Breakdown Spectroscopy for Microanalysis Using Submillijoule UV Laser Pulses. <i>Applied Spectroscopy</i> , 2002, 56, 689-698.	1.2	43

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19	Phase conjugation and pulse compression of KrF-laser radiation by stimulated Raman scattering. Optics Letters, 1983, 8, 9.	1.7	42
20	Up-conversion of subpicosecond light pulses. IEEE Journal of Quantum Electronics, 1982, 18, 2048-2056.	1.0	40
21	Quasimonoenergetic electron beams from laser wakefield acceleration in pure nitrogen. Applied Physics Letters, 2012, 100, .	1.5	39
22	Gain characteristics of a multiatmosphere UV-preionized CO <sub>2</sub> laser. IEEE Journal of Quantum Electronics, 1975, 11, 767-773.	1.0	35
23	Picosecond XeF amplified laser pulses. Applied Physics Letters, 1977, 30, 146-148.	1.5	35
24	Measurement of KrF-laser plasma x-ray radiation from targets with various atomic numbers. Physical Review A, 1987, 35, 3874-3882.	1.0	35
25	X-ray confinement in a gold cavity heated by 351-nm laser light. Physical Review A, 1991, 44, 8323-8333.	1.0	34
26	Giga-electronvolt electrons due to a transition from laser wakefield acceleration to plasma wakefield acceleration. Physics of Plasmas, 2014, 21, 123113.	0.7	34
27	The evolution of two-dimensional effects in fast-electron transport from high-intensity laser-plasma interactions. Journal Physics D: Applied Physics, 1982, 15, 2463-2468.	1.3	33
28	Stimulated Raman backscattering in the presence of ion-acoustic fluctuations. Physics of Fluids, 1983, 26, 1071.	1.4	33
29	Effect of ambient air pressure on debris redeposition during laser ablation of glass. Journal of Applied Physics, 2005, 98, 113520.	1.1	31
30	Generation of high energy laser-driven electron and proton sources with the 200 TW system VEGA 2 at the Centro de Laseres Pulsados. High Power Laser Science and Engineering, 2019, 7, .	2.0	31
31	Generation of single synchronizable picosecond 1.06 $\mu$ m pulses. Applied Physics Letters, 1977, 30, 164-166.	1.5	30
32	Development of laser-induced breakdown spectroscopy for microanalysis applications. Laser and Particle Beams, 2008, 26, 95-104.	0.4	30
33	Experimental investigation of radiation heat waves driven by laser-induced Planck radiation. Physical Review A, 1992, 45, 3987-3996.	1.0	29
34	Efficient K $\alpha$ x-ray source from submillijoule femtosecond laser pulses operated at kilohertz repetition rate. Review of Scientific Instruments, 2007, 78, 103502.	0.6	27
35	Radiation confinement in x-ray-heated cavities. Physical Review A, 1990, 42, 6188-6191.	1.0	26
36	Density measurements of a high-density pulsed gas jet for laser-plasma interaction studies. Measurement Science and Technology, 1994, 5, 1197-1201.	1.4	26

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37	The electron density structure of the plasma produced on glass microballoons by 10.6 $\mu\text{m}$ radiation. <i>Physics of Fluids</i> , 1981, 24, 537.	1.4	24
38	High-efficiency stimulated Brillouin scattering of KrF laser radiation in SF <sub>6</sub> . <i>Optics Letters</i> , 1984, 9, 405.	1.7	24
39	Laser wakefield generated X-ray probe for femtosecond time-resolved measurements of ionization states of warm dense aluminum. <i>Review of Scientific Instruments</i> , 2013, 84, 123106.	0.6	24
40	Single shot depth sensitivity using femtosecond Laser Induced Breakdown Spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 92, 34-41.	1.5	24
41	Measurements of ionization states in warm dense aluminum with betatron radiation. <i>Physical Review E</i> , 2017, 95, 053208.	0.8	24
42	Towards an in situ, full-power gauge of the focal-volume intensity of petawatt-class lasers. <i>Optics Express</i> , 2019, 27, 30020.	1.7	24
43	Electrically triggered multimodule KrF laser system with narrow linewidth output. <i>Review of Scientific Instruments</i> , 1983, 54, 845-852.	0.6	23
44	Enhanced Relativistic-Electron-Beam Energy Loss in Warm Dense Aluminum. <i>Physical Review Letters</i> , 2015, 114, 095004.	2.9	23
45	Actively mode-locked and Q-controlled Nd:glass laser. <i>Review of Scientific Instruments</i> , 1979, 50, 9-16.	0.6	22
46	Temperature and X-ray intensity scaling in KrF laser plasma interaction. <i>Applied Physics Letters</i> , 1986, 48, 103-105.	1.5	22
47	Particle emission debris from a KrF laser plasma X-ray source. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996, 14, 1973-1980.	0.9	21
48	A continuous kilohertz Cu K $\alpha$ source produced by submillijoule femtosecond laser pulses for phase contrast imaging. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	21
49	Formation of plasma columns in atmospheric pressure gases by picosecond KrF laser pulses. <i>Optics Communications</i> , 1992, 93, 366-377.	1.0	20
50	Synchronizable actively mode-locked Nd:glass laser. <i>Applied Physics Letters</i> , 1976, 29, 193-195.	1.5	19
51	Picosecond gain and saturation measurements of the 353 nm XeF laser line. <i>Applied Physics Letters</i> , 1977, 31, 747-749.	1.5	19
52	Observation of Raman scattering and hard X-rays in short pulse laser interaction with high density hydrogen gas. <i>Optics Communications</i> , 1998, 146, 363-370.	1.0	19
53	High resolution scanning microanalysis on material surfaces using UV femtosecond laser induced breakdown spectroscopy. <i>Optics and Lasers in Engineering</i> , 2015, 68, 1-6.	2.0	18
54	Laser-driven shock-wave studies using optical shadowgraphy. <i>Physical Review A</i> , 1985, 32, 3535-3546.	1.0	17

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55	keV x-ray production using 50 mJ KrF laser produced plasmas at 1 and 100 ps. Journal of Applied Physics, 1993, 74, 3712-3723.	1.1	17
56	Energy Partition in CO <sub>2</sub> -Laser-Irradiated Microballoons. Physical Review Letters, 1981, 47, 515-518.	2.9	16
57	Absolute characterization of laser-induced breakdown spectroscopy detection systems. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 525-535.	1.5	16
58	A dual channel X-ray spectrometer for fast ignition research. Journal of Instrumentation, 2010, 5, P07008-P07008.	0.5	16
59	Experimental study of an SF <sub>6</sub> Brillouin amplifier pumped by KrF laser radiation. Applied Physics Letters, 1984, 45, 340-342.	1.5	15
60	Stimulated Brillouin scattering of KrF laser radiation in dichlorodifluoromethane. IEEE Journal of Quantum Electronics, 1985, 21, 9-11.	1.0	15
61	Ablation parameters in KrF laser/plasma interaction: An experimental study. Physics of Fluids, 1987, 30, 179.	1.4	15
62	Detection of buried layers in silicon devices using LIBS during hole drilling with femtosecond laser pulses. Applied Physics A: Materials Science and Processing, 2013, 111, 791-798.	1.1	15
63	Unidirectional travelling wave operation of a mode-locking Nd:Glass ring laser. Optics Communications, 1977, 21, 327-331.	1.0	14
64	Measurements of gain and absorption saturation in an electron-beam-pumped KrF amplifier. IEEE Journal of Quantum Electronics, 1989, 25, 2161-2168.	1.0	14
65	Guiding and confinement of a laser produced plasma by a curved magnetic field. Applied Physics Letters, 1997, 70, 1953-1955.	1.5	13
66	Generation of 500 MeV to 1 GeV energy electrons from laser wakefield acceleration via ionization induced injection using CO <sub>2</sub> mixed in He. Applied Physics Letters, 2013, 102, .	1.5	13
67	Observations consistent with self-generated magnetic fields in CO <sub>2</sub> laser-produced plasmas. Applied Physics Letters, 1979, 35, 106-108.	1.5	12
68	Experimental study of KrF-laser-high-Z-plasma interaction dominated by radiation transport. Physical Review A, 1986, 34, 4103-4109.	1.0	12
69	Ion expansion characteristics from a KrF-laser-produced plasma. Physical Review A, 1986, 33, 3531-3534.	1.0	12
70	Quantum dot saturable absorber for passive mode locking of Nd:YVO <sub>4</sub> lasers at 1064 nm. Applied Physics B: Lasers and Optics, 2007, 87, 671-675.	1.1	12
71	Melting and damage of aluminum surfaces by 80 ps KrF laser pulses. Optics Communications, 1994, 111, 360-369.	1.0	11
72	Images of femtosecond laser plasma plume expansion into background air. IEEE Transactions on Plasma Science, 2005, 33, 482-483.	0.6	11

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73	Distinctive features of photoionized plasma from short x-ray-pulse interaction with gaseous medium. <i>Physics of Plasmas</i> , 2006, 13, 013101.	0.7	11
74	Mechanism for femtosecond laser pulse patterning of self-assembled monolayers on gold-coated substrates. <i>Journal of Physics: Conference Series</i> , 2007, 59, 428-431.	0.3	11
75	Particle characterization for the evaluation of the $^{181}\text{mTa}$ excitation yield in millijoule laser induced plasmas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 145701.	0.6	11
76	Collimated Propagation of Fast Electron Beams Accelerated by High-Contrast Laser Pulses in Highly Resistive Shocked Carbon. <i>Physical Review Letters</i> , 2017, 118, 205001.	2.9	11
77	Experimental results for high intensity KrF laser/plasma interaction. <i>Laser and Particle Beams</i> , 1986, 4, 329-348.	0.4	10
78	Nanomilling surfaces using near-threshold femtosecond laser pulses. <i>Journal of Physics: Conference Series</i> , 2007, 59, 591-594.	0.3	10
79	Efficient keV x-ray generation from 50 mJ KrF laser plasmas. <i>Applied Physics Letters</i> , 1992, 60, 1818-1820.	1.5	9
80	Experimental study of charge state distribution from KrF and ruby laser-produced plasmas. <i>Physics of Fluids B</i> , 1993, 5, 3357-3368.	1.7	9
81	Kirkpatrick-Baez microscope for hard X-ray imaging of fast ignition experiments. <i>Review of Scientific Instruments</i> , 2013, 84, 023704.	0.6	9
82	Stimulated backscatter from long plasma columns. <i>Optics Communications</i> , 1981, 40, 35-40.	1.0	8
83	Comparative analysis of laser-triggered proton generation from overdense and low-density targets. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 653, 62-65.	0.7	8
84	Femtosecond laser plasma plume characteristics in the nanojoule ablation regime. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	8
85	Internal breakdown in a dielectric target at high laser irradiance. <i>Journal of Applied Physics</i> , 1981, 52, 4186-4188.	1.1	7
86	X-ray generation from 50 mJ, 120 ps KrF laser-produced plasmas. <i>Journal of Applied Physics</i> , 1992, 71, 1153-1162.	1.1	7
87	Electron radiography using hot electron jets from sub-millijoule femtosecond laser pulses. <i>Applied Physics B: Lasers and Optics</i> , 2006, 83, 521-525.	1.1	7
88	Absolute energy distribution of hard x rays produced in the interaction of a kilohertz femtosecond laser with tantalum targets. <i>Review of Scientific Instruments</i> , 2006, 77, 093302.	0.6	7
89	Narrow linewidth gain and saturation measurements of a KrF discharge laser. <i>Journal of Applied Physics</i> , 1983, 54, 5629-5632.	1.1	6
90	Wavelength dependence of gain from 248.2 to 248.4 nm in a KrF discharge laser. <i>Journal Physics D: Applied Physics</i> , 1987, 20, 912-916.	1.3	6

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91	Direct formation of grating structures on silicon using KrF laser radiation. Applied Optics, 1989, 28, 1877.	2.1	6
92	Vaporization of aluminum by 50 ps KrF laser pulses. Journal of Applied Physics, 1996, 80, 509-512.	1.1	6
93	Micro-LIBS. , 2007, , 173-196.		6
94	Subnanosecond microscopic holographic interferometry of plasmas produced by 1 ns CO <sub>2</sub> laser pulses. Applied Physics Letters, 1975, 27, 115-117.	1.5	5
95	On specular reflectivity measurements in high and low-contrast relativistic laser-plasma interactions. Physics of Plasmas, 2015, 22, 013110.	0.7	5
96	Preparation of planar multilayered targets for laser ablation studies. Review of Scientific Instruments, 1986, 57, 2625-2627.	0.6	4
97	Foil calorimeter measurements of soft-X-ray energy emission from KrF-laser-produced plasmas. Journal Physics D: Applied Physics, 1987, 20, 1259-1263.	1.3	4
98	Numerical simulations of charge state distribution from a KrF laser-produced plasma. Physics of Fluids B, 1993, 5, 4115-4122.	1.7	4
99	Ionization-induced blue shift of KrF laser pulses in an underdense plasma. Physical Review E, 1996, 54, 2166-2169.	0.8	4
100	Quantitative emission from femtosecond microplasmas for laser-induced breakdown spectroscopy. Journal of Physics: Conference Series, 2007, 59, 328-332.	0.3	4
101	CO <sub>2</sub> Laser-Plasma Interaction Studies At NRC-Canada. , 1977, , 161-180.		4
102	Simultaneous Brillouin and Raman Scattering in CO <sub>2</sub> Laser-Plasma Interaction. Physica Scripta, 1982, T2B, 498-505.	1.2	3
103	Fiducial monitor for an X-ray streak camera. Review of Scientific Instruments, 1986, 57, 1049-1051.	0.6	3
104	Energy transport in gold coated plastic targets irradiated by a KrF laser. Optics Communications, 1987, 63, 165-170.	1.0	3
105	Ablative generation of surface acoustic waves in aluminum using ultraviolet laser pulses. Journal of Applied Physics, 2002, 92, 564-571.	1.1	3
106	GaAs based semiconductor quantum dot saturable absorber mirror grown by molecular beam epitaxy. , 2006, 6343, 832.		3
107	Single-shot ablation threshold of chromium using UV femtosecond laser pulses. Applied Physics A: Materials Science and Processing, 2014, 117, 1473-1478.	1.1	3
108	Active-passive mode locking of a flashlamp-pumped dye laser. IEEE Journal of Quantum Electronics, 1981, 17, 496-500.	1.0	2

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109	Dynamics of CO <sub>2</sub> laser heated solenoids. Canadian Journal of Physics, 1982, 60, 1247-1256.	0.4	2
110	Simulation of laser-plasma interactions with atomic and radiation effects. Laser and Particle Beams, 1988, 6, 183-197.	0.4	2
111	KrF laser produced plasmas. Laser and Particle Beams, 1989, 7, 393-403.	0.4	2
112	Stimulated scattering from laser produced plasma. Laser and Particle Beams, 1990, 8, 153-171.	0.4	2
113	Energetic electrons produced in the interaction of a kiloHertz femtosecond laser with tantalum targets. Journal of Modern Optics, 2007, 54, 2585-2593.	0.6	2
114	Characterization Of X-Ray Production From Krypton Fluoride Laser-Produced Plasma. , 1988, , .		1
115	Dependence of keV X-ray generation on the temporal and spatial separation of two KrF laser pulses. Journal of Applied Physics, 1994, 76, 5047-5053.	1.1	1
116	Picosecond Interferometric Studies of CO <sub>2</sub> Laser Produced Plasmas. Springer Series in Chemical Physics, 1980, , 64-68.	0.2	1
117	Picosecond Diagnosis of CO <sub>2</sub> Laser Produced Plasmas. Springer Series in Chemical Physics, 1978, , 274-280.	0.2	1
118	High Power KrF Laser System Employing SBS Pulse Compression. Springer Proceedings in Physics, 1988, , 216-224.	0.1	1
119	KrF laser-plasma interaction experiments with ns and ps pulses. Laser and Particle Beams, 1992, 10, 661-675.	0.4	0
120	KeV X-ray generation from picosecond KrF laser-produced plasmas. , 1993, , .		0
121	Single shot charge analyzer for laser-produced plasma studies. Review of Scientific Instruments, 1995, 66, 148-153.	0.6	0
122	Wakefield Acceleration of Quasi-Monoenergetic 200 MeV Electrons in Nitrogen and Helium Gas Targets. , 2007, , .		0
123	Laser-Driven Shock Waves in Plexiglass. , 1986, , 535-539.		0
124	Nonlinear Thomson Scattering: a Tool for Assessing Relativistic Intensities and Beyond. , 2020, , .		0
125	Characterization of Nonlinear, Relativistic Thomson Scattering. , 2020, , .		0
126	Precision measurement of the quantum vacuum with petawatt-class lasers. , 2020, , .		0