George Petrov

List of Publications by Year in descending order

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60 papers	993 citations	361413 20 h-index	454955 30 g-index
61 all docs	61 docs citations	61 times ranked	776 citing authors

#	Article	IF	Citations
1	Modeling of short-pulse laser-metal interactions in the warm dense matter regime using the two-temperature model. Physical Review E, 2021, 103, 033204.	2.1	10
2	Application of Directed Relational Graph to Air Plasma Chemistry During Plasma Relaxation. IEEE Transactions on Plasma Science, 2021, 49, 1732-1738.	1.3	1
3	Thermionic emission of electrons from metal surfaces in the warm dense matter regime. Physics of Plasmas, 2021, 28, 083503.	1.9	2
4	Numerical Modeling of Radiation for the NRL ArF* Laser. , 2021, , .		0
5	Dynamic sheath formation and sub-THz radiation from laserâ€“metal interactions. Physics of Plasmas, 2020, 27, .	1.9	7
6	Broadband terahertz radiation from metal targets irradiated by a short pulse laser. Physics of Plasmas, 2020, 27, .	1.9	5
7	Study of pure and mixed clustered noble gas puffs irradiated with a high intensity (7 Ã— 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
8	Causes of plasma column contraction in surface-wave-driven discharges in argon at atmospheric pressure. Physical Review E, 2018, 97, 013201.	2.1	23
9	Laser-acceleration of quasi mono-energetic and low-divergence Titanium ion beams. , 2018, , .		0
10	Non-equilibrium steady-state kinetics of He-air atmospheric pressure plasmas. Physics of Plasmas, 2017, 24, .	1.9	14
11	Effective NOx remediation from a surrogate flue gas using the US NRL Electra electron beam facility. Physics of Plasmas, 2017, 24, 023501.	1.9	5
12	Bremsstrahlung from the interaction of short laser pulses with dielectrics. Physical Review E, 2017, 95, 053209.	2.1	5
13	Production of radical species by electron beam deposition in an ArF* lasing medium. Journal of Applied Physics, 2017, 122, .	2.5	5
14	Bremsstrahlung Radiation from the Interaction of Short Laser Pulses with Dielectrics. , 2017, , .		0
15	Modeling of an Electron-Beam Pumped ArF Excimer Laser. , 2017, , .		1
16	Investigation of industrial-scale carbon dioxide reduction using pulsed electron beams. Journal of Applied Physics, 2016, 119, .	2.5	9
17	Proton acceleration from high-contrast short pulse lasers interacting with sub-micron thin foils. Journal of Applied Physics, 2016, 119, .	2.5	8
18	Generation of heavy ion beams using femtosecond laser pulses in the target normal sheath acceleration and radiation pressure acceleration regimes. Physics of Plasmas, 2016, 23, .	1.9	35

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19	Influence of Xe and Kr impurities on x-ray yield from debris-free plasma x-ray sources with an Ar supersonic gas jet irradiated by femtosecond near-infrared-wavelength laser pulses. Physical Review E, 2016, 94, 053203.	2.1	3
20	The effects of in-elastic processes on electron temperature in electron beam generated plasmas. , 2014, , .		0
21	Modeling of an electron beam generated Ar-N2 Plasma for plasma processing. , 2014, , .		0
22	Generation of energetic (>15 MeV) neutron beams from proton- and deuteron-driven nuclear reactions using short pulse lasers. Plasma Physics and Controlled Fusion, 2013, 55, 105009.	2.1	11
23	Generation of heavy ion beams using short pulse lasers. , 2013, , .		0
24	Energetic neutron beams generated from femtosecond laser plasma interactions. Applied Physics Letters, 2013, 102, .	3.3	44
25	Dominant deuteron acceleration with a high-intensity laser for isotope production and neutron generation. Applied Physics Letters, 2013, 102, 191117.	3.3	24
26	High contrast ion acceleration at intensities exceeding 1021â€‰Wcmâ”2. Physics of Plasmas, 2013, 20, .	1.9	21
27	Generation of high-energy (>15 MeV) neutrons using short pulse high intensity lasers. Physics of Plasmas, 2012, 19, 093106.	1.9	29
28	Laser-intensity requirements for generating enhanced kilovolt bremsstrahlung emission in intense laser-cluster interactions. Physical Review A, 2012, 85, .	2.5	2
29	Generation of laser-driven light ions suitable for fast ignition of fusion targets. Plasma Physics and Controlled Fusion, 2011, 53, 045013.	2.1	33
30	A generalized implicit algorithm for multi-dimensional particle-in-cell simulations in Cartesian geometry. Physics of Plasmas, 2011, 18, .	1.9	21
31	Comparison of bulk and pitcher-catcher targets for laser-driven neutron production. Physics of Plasmas, 2011, 18, .	1.9	48
32	Neutron production from ultrashort pulse lasers using linear and circular polarization. Physics of Plasmas, 2011, 18, .	1.9	4
33	Production of neutrons up to 18 MeV in high-intensity, short-pulse laser matter interactions. Physics of Plasmas, 2011, 18, .	1.9	80
34	Laser-ion acceleration through controlled surface contamination. Physics of Plasmas, 2011, 18, 040702.	1.9	18
35	Narrow Energy Spread Protons and Ions from High-Intensity, High-Contrast Laser Solid Target Interactions. , 2010, , .		3
36	Neutron production from⁷Li(d,xn) nuclear fusion reactions driven by high-intensity laserâ€“target interactions. Plasma Physics and Controlled Fusion, 2010, 52, 045015.	2.1	39

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37	Modeling M-shell x-ray emissions of xenon in intense laser-produced xenon cluster plasmas. , 2010, , .		0
38	The impact of contaminants on laser-driven light ion acceleration. Physics of Plasmas, 2010, 17, 103111.	1.9	27
39	Neutron production from Li(d, xn) driven by high-intensity laser-target interactions. , 2010, , .		0
40	Generation of GeV ion bunches from high-intensity laser-target interactions. Physics of Plasmas, 2009, 16, 023105.	1.9	22
41	MeV proton beams generated by 3 mJ ultrafast laser pulses at 0.5 kHz. Applied Physics Letters, 2009, 95, .	3.3	20
42	Similarity laws for production of GeV ions from high-intensity laser-target interactions. Physics of Plasmas, 2009, 16, .	1.9	5
43	Laser acceleration of light ions from high-intensity laser-target interactions. Applied Physics B: Lasers and Optics, 2009, 96, 773-779.	2.2	22
44	Interaction of intense ultrashort pulse lasers with clusters. Physics of Plasmas, 2008, 15, 056705.	1.9	20
45	Energy and angular distribution of deuterons from high-intensity laserâ€“target interactions. Plasma Physics and Controlled Fusion, 2008, 50, 015004.	2.1	19
46	Influence of prepulse plasma formation on neutron production from the laserâ€“target interaction. Physics of Plasmas, 2008, 15, 083107.	1.9	7
47	Optimizing the Arâ€“Xe infrared laser on the Naval Research Laboratoryâ€™s Electra generator. Journal of Applied Physics, 2008, 104, .	2.5	14
48	Neutron production from interactions of high-intensity ultrashort pulse laser with a planar deuterated polyethylene target. Physics of Plasmas, 2008, 15, .	1.9	14
49	Nonlinear energy absorption of rare gas clusters in intense laser field. Physics of Plasmas, 2007, 14, 060701.	1.9	20
50	Modeling of clusters by a molecular dynamics model using a fast tree method. European Physical Journal D, 2007, 41, 629-639.	1.3	9
51	Fusion neutron yield from high intensity laser-cluster interaction. Physics of Plasmas, 2006, 13, 064501.	1.9	36
52	Impact of the laser wavelength on the dynamics of Xe cluster plasma produced by an intense ultrashort laser pulse. Physics of Plasmas, 2006, 13, 033106.	1.9	26
53	Dynamics of a Xe cluster plasma produced by an intense ultrashort pulse KrF laser. Physics of Plasmas, 2005, 12, 063103.	1.9	45
54	Modeling of clusters in a strong248â€nmlaser field by a three-dimensional relativistic molecular dynamic model. Physical Review E, 2005, 71, 036411.	2.1	34

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55	Dynamics of intense laser channel formation in an underdense plasma. Physics of Plasmas, 2005, 12, 123102.	1.9	31
56	Inhomogeneous model of an Arâ€“Hg direct current column discharge. Journal of Applied Physics, 2003, 94, 62-75.	2.5	17
57	Electron energy deposition in an electron-beam pumped KrF amplifier: Impact of beam power and energy. Journal of Applied Physics, 2002, 91, 2662-2677.	2.5	34
58	Electron energy deposition in an electron-beam pumped KrF amplifier: Impact of the gas composition. Journal of Applied Physics, 2002, 92, 1200-1206.	2.5	22
59	Model of a two-stage rf plasma reactor for SiC deposition. Journal of Applied Physics, 2001, 90, 619-636.	2.5	36
60	Collisional and transport parameters of cu in the warm dense matter regime calculated using the average atom model. Plasma Physics and Controlled Fusion, 0, , .	2.1	1