Dn Gupta

List of Publications by Year
in descending order

111 papers	1,410 citations	394421 19 h-index	434195 31 g-index
112 all docs	112 docs citations	112 times ranked	478 citing authors

#	Article	IF	Citations
1	Electron acceleration to GeV energy by a radially polarized laser. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 368, 402-407.	2.1	128
2	Combined effect of ponderomotive and relativistic self-focusing on laser beam propagation in a plasma. Applied Physics B: Lasers and Optics, 2013, 111, 1-6.	2.2	72
3	Plasma density ramp for relativistic self-focusing of an intense laser. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 1155.	2.1	65
4	Electron acceleration to high energy by using two chirped lasers. Laser and Particle Beams, 2007, 25, 31-36.	1.0	55
5	Electron acceleration by a circularly polarized laser pulse in the presence of an obliquely incident magnetic field in vacuum. Physics of Plasmas, 2005, 12, 053103.	1.9	49
6	Combined role of frequency variation and magnetic field on laser electron acceleration. Physics of Plasmas, 2006, 13, 013105.	1.9	43
7	Additional focusing of a high-intensity laser beam in a plasma with a density ramp and a magnetic field. Applied Physics Letters, 2007, 91, .	3.3	38
8	Enhanced electron trapping by a static longitudinal magnetic field in laser wakefield acceleration. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 2684-2687.	2.1	37
9	Frequency chirping for resonance-enhanced electron energy during laser acceleration. Physics of Plasmas, 2006, 13, 044507.	1.9	34
10	Generation of second-harmonic radiations of a self-focusing laser from a plasma with density-transition. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3134-3137.	2.1	34
11	Laser wakefield acceleration of electrons from a density-modulated plasma. Laser and Particle Beams, 2014, 32, 449-454.	1.0	29
12	Electron plasma wave excitation by a q-Gaussian laser beam and subsequent electron acceleration. Physics of Plasmas, 2020, 27, .	1.9	27
13	Optical Second-Harmonic Generation of Terahertz Field from n-type InSb Semiconductors. Plasmonics, 2021, 16, 419-424.	3.4	27
14	Enhanced thermal self-focusing of a Gaussian laser beam in a collisionless plasma. Physics of Plasmas, 2011, 18, 124501.	1.9	26
15	Relativistic second-harmonic generation of a laser from underdense plasmas. Physics of Plasmas, 2005, 12, 013101-013101-4.	1.9	25
16	Combined effect of tight-focusing and frequency-chirping on laser acceleration of an electron in vacuum. Journal of Applied Physics, 2009, 105, .	2.5	21
17	Laser-driven plasma beat-wave propagation in a density-modulated plasma. Physical Review E, 2011, 84, 056403.	2.1	21
18	Resonant third-harmonic generation of a short-pulse laser from electron-hole plasmas. Physics of Plasmas, 2012, 19, 013101.	1.9	21

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19	Energy exchange during stimulated Raman scattering of a relativistic laser in a plasma. Journal of Applied Physics, 2006, 100, 103101.	2.5	20
20	Optimization and control of electron beams from laser wakefield accelerations using asymmetric laser pulses. Physics of Plasmas, 2017, 24, .	1.9	20
21	Effect of q-parameter on relativistic self-focusing of q-Gaussian laser beam in plasma. Optik, 2018, 158, 574-579.	2.9	20
22	Transient Self-Focusing of an Intense Short Pulse Laser in Magnetized Plasma. Physica Scripta, 2002, 66, 262-264.	2.5	19
23	Terahertz radiation generation by a super-Gaussian laser pulse in a magnetized plasma. Optik, 2021, 227, 165824.	2.9	19
24	Energetic electron beam generation by laser-plasma interaction and its application for neutron production. Journal of Applied Physics, 2007, 101, 114908.	2.5	18
25	Self-focusing of a high-intensity laser in a collisional plasma under weak relativistic-ponderomotive nonlinearity. Physics of Plasmas, 2013, 20, 123103.	1.9	18
26	Realistic laser focusing effect on electron acceleration in the presence of a pulsed magnetic field. Applied Physics Letters, 2007, 91, .	3.3	17
27	High-Field Coherent Terahertz Radiation Generation From Chirped Laser Pulse Interaction With Plasmas. IEEE Transactions on Plasma Science, 2020, 48, 3727-3734.	1.3	17
28	Quasi-monoenergetic GeV electrons from the interaction of two laser pulses with a gas. Laser and Particle Beams, 2008, 26, 597-604.	1.0	14
29	Electron Acceleration by a Radially Polarized Laser Pulse in an Ion Channel. IEEE Transactions on Plasma Science, 2017, 45, 2841-2847.	1.3	14
30	Exponential density transition based self-focusing of Gaussian laser beam in collisional plasma. Optik, 2018, 158, 1034-1039.	2.9	14
31	Enhanced focusing of laser beams in semiconductor plasmas. Journal of Applied Physics, 2007, 101, 043109.	2.5	13
32	Electron energy enhancement by a circularly polarized laser pulse in vacuum. Laser and Particle Beams, 2009, 27, 635-642.	1.0	13
33	Onset of stimulated Raman scattering of a laser in a plasma in the presence of hot drifting electrons. Physics of Plasmas, 2015, 22, 052101.	1.9	13
34	Pulse-length Effect on Laser Wakefield Acceleration of Electrons by Skewed Laser Pulses. IEEE Transactions on Plasma Science, 2021, 49, 1152-1158.	1.3	13
35	Electron acceleration by a self-diverging intense laser pulse. Physical Review E, 2004, 69, 046406.	2.1	12
36	Electron acceleration by a short laser beam in the presence of a long-wavelength electromagnetic wave. Journal of Applied Physics, 2007, 102, .	2.5	12

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37	Relativistic Third-Harmonic Generation of a Laser in a Self-Sustained Magnetized Plasma Channel. IEEE Journal of Quantum Electronics, 2014, 50, 491-496.	1.9	12
38	Laser pulse distortion in a plasma of the weakly relativistic regime. Laser Physics Letters, 2014, 11, 056003.	1.4	12
39	Efficient second- and third-harmonic radiation generation from relativistic laser-plasma interactions. Physics of Plasmas, 2015, 22, .	1.9	12
40	Proton acceleration from overdense plasma target interacting with shaped laser pulses in the presence of preplasmas. Plasma Physics and Controlled Fusion, 2019, 61, 085001.	2.1	12
41	Nonlinear saturation of laser driven plasma beat wave by oscillating two-stream instability. Physics of Plasmas, 2004, 11, 5250-5255.	1.9	11
42	Enhanced betatron oscillations in laser wakefield acceleration by off-axis laser alignment to a capillary plasma waveguide. Plasma Physics and Controlled Fusion, 2015, 57, 075002.	2.1	11
43	Relativistic effect on stimulated Raman scattering of a laser in plasma. Physica Scripta, 2006, 73, 284-287.	2.5	10
44	Pulse width effects on Raman backward laser amplification. Journal Physics D: Applied Physics, 2007, 40, 5155-5160.	2.8	10
45	Large-scale magnetic field generation by asymmetric laser-pulse interactions with a plasma in low-intensity regime. Journal of Applied Physics, 2016, 119, .	2.5	10
46	Terahertz radiation emission from plasma beat-wave interactions with a relativistic electron beam. Optics Communications, 2017, 401, 71-74.	2.1	10
47	Terahertz radiation generation from short-pulse laser interaction with electron-hole plasmas. Europhysics Letters, 2021, 133, 14001.	2.0	10
48	Electron bunch charge enhancement in laser wakefield acceleration using a flattened Gaussian laser pulse. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 414, 127631.	2.1	10
49	Electron Acceleration by a Relativistic Electron Plasma Wave in Inverse-Free-Electron Laser Mechanism. IEEE Transactions on Plasma Science, 2018, 46, 2521-2527.	1.3	9
50	Electronâ€“Ion Recombination Effect on Electron Acceleration by an Intense Laser Pulse. IEEE Transactions on Plasma Science, 2019, 47, 4891-4897.	1.3	9
51	Investigation of electron beam parameters in laser wakefield acceleration using skewed laser pulse and external magnetic field. Current Applied Physics, 2021, 25, 82-89.	2.4	9
52	Optimization of electron bunch quality using a chirped laser pulse in laser wakefield acceleration. Physical Review Accelerators and Beams, 2021, 24, .	1.6	9
53	Parametric up-conversion of a trivelpieceâ€“gould mode in a beamâ€“plasma system. Laser and Particle Beams, 2004, 22, 89-94.	1.0	8
54	Electron acceleration and electron-positron pair production by laser in tunnel ionized inhomogeneous plasma. Physics of Plasmas, 2005, 12, 093110.	1.9	8

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55	Characteristics of quasi-unipolar electromagnetic pulses formed in the interaction of high-power laser pulses with nanoscale targets. Quantum Electronics, 2019, 49, 788-795.	1.0	8
56	Improvement of electron beam quality in laser wakefield acceleration by a circularly-polarized laser pulse. Plasma Physics and Controlled Fusion, 2021, 63, 075007.	2.1	8
57	Coherent terahertz radiation generation by a flattened Gaussian laser beam at a plasmaâ€“vacuum interface. Applied Physics B: Lasers and Optics, 2022, 128, 1.	2.2	8
58	Propagation of High Power Short Pulse Laser in a Tunnel Ionizing Inhomogeneous Gas. Physica Scripta, 2003, 67, 246-249.	2.5	7
59	Comment on â€œElectron acceleration by a chirped Gaussian laser pulse in vacuumâ€•[Phys. Plasmas 13, 123108 (2006)]. Physics of Plasmas, 2007, 14, 044701.	1.9	7
60	Effect of laser-induced double-step ionization of a gas on vacuum electron acceleration. Applied Physics Letters, 2009, 94, 021502.	3.3	7
61	Parametric instabilities in strongly correlated plasma. Physics of Plasmas, 2016, 23, 102704.	1.9	7
62	Temporally asymmetric laser pulse for magnetic-field generation in plasmas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1437-1441.	2.1	7
63	Generation of intense coherent electromagnetic radiation during the interaction of a multi-terawatt laser pulse with a nanowire target*. Quantum Electronics, 2021, 51, 323-332.	1.0	7
64	Simulation for generation of 15fs laser pulses by Raman backscatter in plasmas. Applied Physics Letters, 2007, 91, 101501.	3.3	6
65	Laser pulse propagation in inhomogeneous magnetoplasma channels and wakefield acceleration. Physics of Plasmas, 2014, 21, 023108.	1.9	6
66	Suppression of stimulated Brillouin instability of a beat-wave of two lasers in multiple-ion-species plasmas. Physics of Plasmas, 2016, 23, 012110.	1.9	6
67	Space-Charge Field Assisted Electron Acceleration by Plasma Wave in Magnetic Plasma Channel. IEEE Transactions on Plasma Science, 2016, 44, 2867-2873.	1.3	6
68	Electron acceleration by a radially polarized laser pulse in the presence of an intense pulsed magnetic field. Laser Physics, 2019, 29, 015301.	1.2	6
69	Optimization of laser parameters for proton acceleration using double laser pulses in TNSA mechanism. Laser and Particle Beams, 2020, 38, 73-78.	1.0	6
70	Scaling up and parametric characterization of two-color air plasma terahertz source. Laser Physics, 2020, 30, 036002.	1.2	6
71	Enhanced Broadband Terahertz Radiation from Two-Colour Laser Pulse Interaction with Thin Dielectric Solid Target in Air. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 747-760.	2.2	6
72	The effect of laser pulse parameters and initial phase on the acceleration of electrons in a vacuum. Physica Scripta, 2008, 77, 045401.	2.5	5

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73	Efficient high-harmonic radiations by chirped laser-pulse interactions with electrons in the presence of a magnetic field. Journal of Applied Physics, 2009, 105, .	2.5	5
74	Cyclotron resonance effects on electron acceleration by two lasers of different wavelengths. Laser and Particle Beams, 2012, 30, 275-280.	1.0	5
75	Oscillating two-stream instability in strongly coupled plasma. Laser and Particle Beams, 2018, 36, 376-383.	1.0	5
76	Effect of a tightly focused chirped Gaussian laser pulse on electron acceleration in helical undulator. Physics of Plasmas, 2020, 27, 043105.	1.9	5
77	Oscillating Two Stream Instability of a Laser in a Two Ion Species Plasma. Physica Scripta, 2004, 69, 130-134.	2.5	4
78	Laser-pulse shape effects on magnetic field generation in underdense plasmas. Indian Journal of Physics, 2018, 92, 919-925.	1.8	4
79	Whistler mode localization and turbulence implicating particle acceleration in radiation belts. Physics of Plasmas, 2018, 25, .	1.9	4
80	Optical field-ionization of a neutral gas with inhomogeneous density for electron acceleration by a high-intensity laser. Physics of Plasmas, 2012, 19, 023103.	1.9	3
81	Mode-coupling assisted electron accelerations by a plasma wave. Current Applied Physics, 2015, 15, 174-179.	2.4	3
82	Relativistic electron-beam assisted growth of oscillating two-stream instability of a plasma wave. Physics of Plasmas, 2017, 24, .	1.9	3
83	Laser-absorption effect on pulse-compression under Ohmic and weak-relativistic ponderomotive nonlinearity in plasmas. Laser Physics Letters, 2018, 15, 016001.	1.4	3
84	Electron energy optimization by plasma density ramp in laser wakefield acceleration in bubble regime. Laser and Particle Beams, 2018, 36, 195-202.	1.0	3
85	Numerical Investigation on Self-Focusing during Laser Electron Acceleration in a Magnetized Plasma. Journal of the Korean Physical Society, 2007, 50, 1406.	0.7	3
86	Plasma based optical guiding of an amplitude-modulated electromagnetic beam. Proceedings of SPIE, 2015, , .	0.8	2
87	Amplitude saturation effect of a laser-driven plasma beat-wave on electron accelerations. Journal of Plasma Physics, 2015, 81, .	2.1	2
88	Laser-pulse compression in a collisional plasma under weak-relativistic ponderomotive nonlinearity. Physics of Plasmas, 2016, 23, .	1.9	2
89	Simulation of laser-driven plasma beat-wave propagation in collisional weakly relativistic plasmas. Europhysics Letters, 2016, 116, 35001.	2.0	2
90	Plasma bubble evolution in laser wakefield acceleration in a petawatt regime. Laser Physics Letters, 2020, 17, 076001.	1.4	2

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91	Laser Electron Acceleration: Role of an Additional Long-Wavelength Electromagnetic Wave and a Magnetic Field. Journal of the Korean Physical Society, 2009, 54, 376-380.	0.7	2
92	Influence of electromagnetic oscillating two-stream instability on the evolution of laser-driven plasma beat-wave. Physics of Plasmas, 2007, 14, 013101.	1.9	1
93	Transient self-focusing of an intense laser pulse in magnetized plasmas under non-paraxial approximation. Laser and Particle Beams, 2013, 31, 307-312.	1.0	1
94	Modulation instabilities and group velocity dispersion in partially stripped magnetoplasma channels. Plasma Physics and Controlled Fusion, 2014, 56, 075011.	2.1	1
95	Dephasing length optimization by controlling plasma density in laser wakefield accelerators. , 2016, , .		1
96	Evolution of laser pulse shape in a parabolic plasma channel. Laser Physics, 2017, 27, 015401.	1.2	1
97	Short-pulse laser propagation in a tunnel ionizing plasma and subsequent electron acceleration. AIP Conference Proceedings, 2021, , .	0.4	1
98	Second-Harmonic Generation of a Short-Laser Pulse From a Gas-Jet Immersed in a Magnetic Field. IEEE Transactions on Plasma Science, 2022, 50, 17-22.	1.3	1
99	Self-compression of a high-intensity laser pulse in a double-ionizing gas. Physics of Plasmas, 2022, 29, 012109.	1.9	1
100	Optical second-and third harmonic radiation generation in a laser-produced plasma. Laser Physics, 2022, 32, 085001.	1.2	1
101	Frequency blueshift during laser-induced breakdown of dielectrics. , 0, , .		0
102	Electron acceleration by a plasma wave in a density modulated plasma. , 2012, , .		0
103	Double ionization effect in electron accelerations by high-intensity laser pulse interaction with a neutral gas. EPJ Web of Conferences, 2013, 59, 17003.	0.3	0
104	Interaction physics for the stimulated Brillouin scattering of a laser in laser driven fusion. , 2014, , .		0
105	Generation of terahertz and infrared relativistic half-cycle pulses in laser pulse interaction with nanodimensional targets. , 2014, , .		0
106	Optimum trapping condition for laser wakefield acceleration of electrons in an inhomogenious plasma. , 2015, , .		0
107	Asymmetric laser-pulse based magnetic field enhancement in a plasma. , 2015, , .		0
108	Excitation of plasma wave by lasers beating in a collisional and mild-relativistic plasma. Journal of Physics: Conference Series, 2018, 1067, 042014.	0.4	0

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109	Temporal characteristics of relativistic stimulated Brillouin scattering of a laser in plasmas. Laser Physics Letters, 2019, 16, 056005.	1.4	0
110	Scattering of a Monopolar TE-Polarized Electromagnetic Pulse on an Ideally Conducting Cylinder. Journal of Communications Technology and Electronics, 2021, 66, 818-821.	0.5	0
111	Enhanced Pulse-Compression from Tunnel-Ionized Plasma Interactions with a Laser Pulse. , 2020, , .		0