

Dn Gupta

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

1,410
citations

393982

19
h-index

433756

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. | 0.9 | 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. | 1.1 | 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. | 0.9 | 65 |
| 4 | Electron acceleration to high energy by using two chirped lasers. Laser and Particle Beams, 2007, 25, 31-36. | 0.4 | 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. | 0.7 | 49 |
| 6 | Combined role of frequency variation and magnetic field on laser electron acceleration. Physics of Plasmas, 2006, 13, 013105. | 0.7 | 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, . | 1.5 | 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. | 0.9 | 37 |
| 9 | Frequency chirping for resonance-enhanced electron energy during laser acceleration. Physics of Plasmas, 2006, 13, 044507. | 0.7 | 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. | 0.9 | 34 |
| 11 | Laser wakefield acceleration of electrons from a density-modulated plasma. Laser and Particle Beams, 2014, 32, 449-454. | 0.4 | 29 |
| 12 | Electron plasma wave excitation by a q-Gaussian laser beam and subsequent electron acceleration. Physics of Plasmas, 2020, 27, . | 0.7 | 27 |
| 13 | Optical Second-Harmonic Generation of Terahertz Field from n-type InSb Semiconductors. Plasmonics, 2021, 16, 419-424. | 1.8 | 27 |
| 14 | Enhanced thermal self-focusing of a Gaussian laser beam in a collisionless plasma. Physics of Plasmas, 2011, 18, 124501. | 0.7 | 26 |
| 15 | Relativistic second-harmonic generation of a laser from underdense plasmas. Physics of Plasmas, 2005, 12, 013101-013101-4. | 0.7 | 25 |
| 16 | Combined effect of tight-focusing and frequency-chirping on laser acceleration of an electron in vacuum. Journal of Applied Physics, 2009, 105, . | 1.1 | 21 |
| 17 | Laser-driven plasma beat-wave propagation in a density-modulated plasma. Physical Review E, 2011, 84, 056403. | 0.8 | 21 |
| 18 | Resonant third-harmonic generation of a short-pulse laser from electron-hole plasmas. Physics of Plasmas, 2012, 19, 013101. | 0.7 | 21 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Energy exchange during stimulated Raman scattering of a relativistic laser in a plasma. Journal of Applied Physics, 2006, 100, 103101. | 1.1 | 20 |
| 20 | Optimization and control of electron beams from laser wakefield accelerations using asymmetric laser pulses. Physics of Plasmas, 2017, 24, . | 0.7 | 20 |
| 21 | Effect of q-parameter on relativistic self-focusing of q-Gaussian laser beam in plasma. Optik, 2018, 158, 574-579. | 1.4 | 20 |
| 22 | Transient Self-Focusing of an Intense Short Pulse Laser in Magnetized Plasma. Physica Scripta, 2002, 66, 262-264. | 1.2 | 19 |
| 23 | Terahertz radiation generation by a super-Gaussian laser pulse in a magnetized plasma. Optik, 2021, 227, 165824. | 1.4 | 19 |
| 24 | Energetic electron beam generation by laser-plasma interaction and its application for neutron production. Journal of Applied Physics, 2007, 101, 114908. | 1.1 | 18 |
| 25 | Self-focusing of a high-intensity laser in a collisional plasma under weak relativistic-ponderomotive nonlinearity. Physics of Plasmas, 2013, 20, 123103. | 0.7 | 18 |
| 26 | Realistic laser focusing effect on electron acceleration in the presence of a pulsed magnetic field. Applied Physics Letters, 2007, 91, . | 1.5 | 17 |
| 27 | High-Field Coherent Terahertz Radiation Generation From Chirped Laser Pulse Interaction With Plasmas. IEEE Transactions on Plasma Science, 2020, 48, 3727-3734. | 0.6 | 17 |
| 28 | Quasi-monoenergetic GeV electrons from the interaction of two laser pulses with a gas. Laser and Particle Beams, 2008, 26, 597-604. | 0.4 | 14 |
| 29 | Electron Acceleration by a Radially Polarized Laser Pulse in an Ion Channel. IEEE Transactions on Plasma Science, 2017, 45, 2841-2847. | 0.6 | 14 |
| 30 | Exponential density transition based self-focusing of Gaussian laser beam in collisional plasma. Optik, 2018, 158, 1034-1039. | 1.4 | 14 |
| 31 | Enhanced focusing of laser beams in semiconductor plasmas. Journal of Applied Physics, 2007, 101, 043109. | 1.1 | 13 |
| 32 | Electron energy enhancement by a circularly polarized laser pulse in vacuum. Laser and Particle Beams, 2009, 27, 635-642. | 0.4 | 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. | 0.7 | 13 |
| 34 | Pulse-length Effect on Laser Wakefield Acceleration of Electrons by Skewed Laser Pulses. IEEE Transactions on Plasma Science, 2021, 49, 1152-1158. | 0.6 | 13 |
| 35 | Electron acceleration by a self-diverging intense laser pulse. Physical Review E, 2004, 69, 046406. | 0.8 | 12 |
| 36 | Electron acceleration by a short laser beam in the presence of a long-wavelength electromagnetic wave. Journal of Applied Physics, 2007, 102, . | 1.1 | 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. | 1.0 | 12 |
| 38 | Laser pulse distortion in a plasma of the weakly relativistic regime. Laser Physics Letters, 2014, 11, 056003. | 0.6 | 12 |
| 39 | Efficient second- and third-harmonic radiation generation from relativistic laser-plasma interactions. Physics of Plasmas, 2015, 22, . | 0.7 | 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. | 0.9 | 12 |
| 41 | Nonlinear saturation of laser driven plasma beat wave by oscillating two-stream instability. Physics of Plasmas, 2004, 11, 5250-5255. | 0.7 | 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. | 0.9 | 11 |
| 43 | Relativistic effect on stimulated Raman scattering of a laser in plasma. Physica Scripta, 2006, 73, 284-287. | 1.2 | 10 |
| 44 | Pulse width effects on Raman backward laser amplification. Journal Physics D: Applied Physics, 2007, 40, 5155-5160. | 1.3 | 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, . | 1.1 | 10 |
| 46 | Terahertz radiation emission from plasma beat-wave interactions with a relativistic electron beam. Optics Communications, 2017, 401, 71-74. | 1.0 | 10 |
| 47 | Terahertz radiation generation from short-pulse laser interaction with electron-hole plasmas. Europhysics Letters, 2021, 133, 14001. | 0.7 | 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. | 0.9 | 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. | 0.6 | 9 |
| 50 | Electron-Ion Recombination Effect on Electron Acceleration by an Intense Laser Pulse. IEEE Transactions on Plasma Science, 2019, 47, 4891-4897. | 0.6 | 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. | 1.1 | 9 |
| 52 | Optimization of electron bunch quality using a chirped laser pulse in laser wakefield acceleration. Physical Review Accelerators and Beams, 2021, 24, . | 0.6 | 9 |
| 53 | Parametric up-conversion of a trivelpiece-gould mode in a beam-plasma system. Laser and Particle Beams, 2004, 22, 89-94. | 0.4 | 8 |
| 54 | Electron acceleration and electron-positron pair production by laser in tunnel ionized inhomogeneous plasma. Physics of Plasmas, 2005, 12, 093110. | 0.7 | 8 |

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|----|---|-----|-----------|
| 55 | Characteristics of quasi-unipolar electromagnetic pulses formed in the interaction of high-power laser pulses with nanoscale targets. <i>Quantum Electronics</i> , 2019, 49, 788-795. | 0.3 | 8 |
| 56 | Improvement of electron beam quality in laser wakefield acceleration by a circularly-polarized laser pulse. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 075007. | 0.9 | 8 |
| 57 | Coherent terahertz radiation generation by a flattened Gaussian laser beam at a plasma-vacuum interface. <i>Applied Physics B: Lasers and Optics</i> , 2022, 128, 1. | 1.1 | 8 |
| 58 | Propagation of High Power Short Pulse Laser in a Tunnel Ionizing Inhomogeneous Gas. <i>Physica Scripta</i> , 2003, 67, 246-249. | 1.2 | 7 |
| 59 | Comment on "Electron acceleration by a chirped Gaussian laser pulse in vacuum" [<i>Phys. Plasmas</i> 13, 123108 (2006)]. <i>Physics of Plasmas</i> , 2007, 14, 044701. | 0.7 | 7 |
| 60 | Effect of laser-induced double-step ionization of a gas on vacuum electron acceleration. <i>Applied Physics Letters</i> , 2009, 94, 021502. | 1.5 | 7 |
| 61 | Parametric instabilities in strongly correlated plasma. <i>Physics of Plasmas</i> , 2016, 23, 102704. | 0.7 | 7 |
| 62 | Temporally asymmetric laser pulse for magnetic-field generation in plasmas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 1437-1441. | 0.9 | 7 |
| 63 | Generation of intense coherent electromagnetic radiation during the interaction of a multi-terawatt laser pulse with a nanowire target*. <i>Quantum Electronics</i> , 2021, 51, 323-332. | 0.3 | 7 |
| 64 | Simulation for generation of 15fs laser pulses by Raman backscatter in plasmas. <i>Applied Physics Letters</i> , 2007, 91, 101501. | 1.5 | 6 |
| 65 | Laser pulse propagation in inhomogeneous magnetoplasma channels and wakefield acceleration. <i>Physics of Plasmas</i> , 2014, 21, 023108. | 0.7 | 6 |
| 66 | Suppression of stimulated Brillouin instability of a beat-wave of two lasers in multiple-ion-species plasmas. <i>Physics of Plasmas</i> , 2016, 23, 012110. | 0.7 | 6 |
| 67 | Space-Charge Field Assisted Electron Acceleration by Plasma Wave in Magnetic Plasma Channel. <i>IEEE Transactions on Plasma Science</i> , 2016, 44, 2867-2873. | 0.6 | 6 |
| 68 | Electron acceleration by a radially polarized laser pulse in the presence of an intense pulsed magnetic field. <i>Laser Physics</i> , 2019, 29, 015301. | 0.6 | 6 |
| 69 | Optimization of laser parameters for proton acceleration using double laser pulses in TNSA mechanism. <i>Laser and Particle Beams</i> , 2020, 38, 73-78. | 0.4 | 6 |
| 70 | Scaling up and parametric characterization of two-color air plasma terahertz source. <i>Laser Physics</i> , 2020, 30, 036002. | 0.6 | 6 |
| 71 | Enhanced Broadband Terahertz Radiation from Two-Colour Laser Pulse Interaction with Thin Dielectric Solid Target in Air. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2021, 42, 747-760. | 1.2 | 6 |
| 72 | The effect of laser pulse parameters and initial phase on the acceleration of electrons in a vacuum. <i>Physica Scripta</i> , 2008, 77, 045401. | 1.2 | 5 |

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|----|---|-----|-----------|
| 73 | Efficient high-harmonic radiations by chirped laser-pulse interactions with electrons in the presence of a magnetic field. <i>Journal of Applied Physics</i> , 2009, 105, . | 1.1 | 5 |
| 74 | Cyclotron resonance effects on electron acceleration by two lasers of different wavelengths. <i>Laser and Particle Beams</i> , 2012, 30, 275-280. | 0.4 | 5 |
| 75 | Oscillating two-stream instability in strongly coupled plasma. <i>Laser and Particle Beams</i> , 2018, 36, 376-383. | 0.4 | 5 |
| 76 | Effect of a tightly focused chirped Gaussian laser pulse on electron acceleration in helical undulator. <i>Physics of Plasmas</i> , 2020, 27, 043105. | 0.7 | 5 |
| 77 | Oscillating Two Stream Instability of a Laser in a Two Ion Species Plasma. <i>Physica Scripta</i> , 2004, 69, 130-134. | 1.2 | 4 |
| 78 | Laser-pulse shape effects on magnetic field generation in underdense plasmas. <i>Indian Journal of Physics</i> , 2018, 92, 919-925. | 0.9 | 4 |
| 79 | Whistler mode localization and turbulence implicating particle acceleration in radiation belts. <i>Physics of Plasmas</i> , 2018, 25, . | 0.7 | 4 |
| 80 | Optical field-ionization of a neutral gas with inhomogeneous density for electron acceleration by a high-intensity laser. <i>Physics of Plasmas</i> , 2012, 19, 023103. | 0.7 | 3 |
| 81 | Mode-coupling assisted electron accelerations by a plasma wave. <i>Current Applied Physics</i> , 2015, 15, 174-179. | 1.1 | 3 |
| 82 | Relativistic electron-beam assisted growth of oscillating two-stream instability of a plasma wave. <i>Physics of Plasmas</i> , 2017, 24, . | 0.7 | 3 |
| 83 | Laser-absorption effect on pulse-compression under Ohmic and weak-relativistic ponderomotive nonlinearity in plasmas. <i>Laser Physics Letters</i> , 2018, 15, 016001. | 0.6 | 3 |
| 84 | Electron energy optimization by plasma density ramp in laser wakefield acceleration in bubble regime. <i>Laser and Particle Beams</i> , 2018, 36, 195-202. | 0.4 | 3 |
| 85 | Numerical Investigation on Self-Focusing during Laser Electron Acceleration in a Magnetized Plasma. <i>Journal of the Korean Physical Society</i> , 2007, 50, 1406. | 0.3 | 3 |
| 86 | Plasma based optical guiding of an amplitude-modulated electromagnetic beam. <i>Proceedings of SPIE</i> , 2015, , . | 0.8 | 2 |
| 87 | Amplitude saturation effect of a laser-driven plasma beat-wave on electron accelerations. <i>Journal of Plasma Physics</i> , 2015, 81, . | 0.7 | 2 |
| 88 | Laser-pulse compression in a collisional plasma under weak-relativistic ponderomotive nonlinearity. <i>Physics of Plasmas</i> , 2016, 23, . | 0.7 | 2 |
| 89 | Simulation of laser-driven plasma beat-wave propagation in collisional weakly relativistic plasmas. <i>Europhysics Letters</i> , 2016, 116, 35001. | 0.7 | 2 |
| 90 | Plasma bubble evolution in laser wakefield acceleration in a petawatt regime. <i>Laser Physics Letters</i> , 2020, 17, 076001. | 0.6 | 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. | 0.3 | 2 |
| 92 | Influence of electromagnetic oscillating two-stream instability on the evolution of laser-driven plasma beat-wave. Physics of Plasmas, 2007, 14, 013101. | 0.7 | 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. | 0.4 | 1 |
| 94 | Modulation instabilities and group velocity dispersion in partially stripped magnetoplasma channels. Plasma Physics and Controlled Fusion, 2014, 56, 075011. | 0.9 | 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. | 0.6 | 1 |
| 97 | Short-pulse laser propagation in a tunnel ionizing plasma and subsequent electron acceleration. AIP Conference Proceedings, 2021, , . | 0.3 | 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. | 0.6 | 1 |
| 99 | Self-compression of a high-intensity laser pulse in a double-ionizing gas. Physics of Plasmas, 2022, 29, 012109. | 0.7 | 1 |
| 100 | Optical second-and third harmonic radiation generation in a laser-produced plasma. Laser Physics, 2022, 32, 085001. | 0.6 | 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. | 0.1 | 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 inhomogenous 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. | 0.3 | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 109 | Temporal characteristics of relativistic stimulated Brillouin scattering of a laser in plasmas. Laser Physics Letters, 2019, 16, 056005. | 0.6 | 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. | 0.2 | 0 |
| 111 | Enhanced Pulse-Compression from Tunnel-Ionized Plasma Interactions with a Laser Pulse. , 2020, , . | | 0 |