

Christian Brabetz

List of Publications by Year in descending order

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Version: 2024-02-01

31
papers

690
citations

567281

15
h-index

580821

25
g-index

31
all docs

31
docs citations

31
times ranked

943
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Maximum Proton Energy above 85 MeV from the Relativistic Interaction of Laser Pulses with Micrometer Thick CH_2 Targets. Physical Review Letters, 2016, 116, 205002. | 7.8 | 234 |
| 2 | Laser-driven ion acceleration with hollow laser beams. Physics of Plasmas, 2015, 22, . | 1.9 | 60 |
| 3 | Towards highest peak intensities for ultra-short MeV-range ion bunches. Scientific Reports, 2015, 5, 12459. | 3.3 | 42 |
| 4 | Shaping laser accelerated ions for future applications – The LIGHT collaboration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 740, 94-98. | 1.6 | 37 |
| 5 | Optimization of plasma mirror reflectivity and optical quality using double laser pulses. New Journal of Physics, 2015, 17, 033027. | 2.9 | 34 |
| 6 | Focusing and transport of high-intensity multi-MeV proton bunches from a compact laser-driven source. Physical Review Special Topics: Accelerators and Beams, 2013, 16, . | 1.8 | 31 |
| 7 | Accelerating ions with high-energy short laser pulses from submicrometer thick targets. High Power Laser Science and Engineering, 2016, 4, . | 4.6 | 26 |
| 8 | Enhancement of the laser-driven proton source at PHELIX. High Power Laser Science and Engineering, 2020, 8, . | 4.6 | 25 |
| 9 | Commissioning of a compact laser-based proton beam line for high intensity bunches around 10 MeV. Physical Review Special Topics: Accelerators and Beams, 2014, 17, . | 1.8 | 24 |
| 10 | X-ray phase-contrast imaging for laser-induced shock waves. Europhysics Letters, 2019, 125, 35002. | 2.0 | 24 |
| 11 | Ion acceleration from microstructured targets irradiated by high-intensity picosecond laser pulses. Physical Review E, 2020, 102, 021201. | 2.1 | 23 |
| 12 | Multi-pulse enhanced laser ion acceleration using plasma half cavity targets. Applied Physics Letters, 2012, 101, . | 3.3 | 20 |
| 13 | Studying the Dynamics of Relativistic Laser-Plasma Interaction on Thin Foils by Means of Fourier-Transform Spectral Interferometry. Physical Review Letters, 2017, 118, 255003. | 7.8 | 17 |
| 14 | Quantitative phase contrast imaging of a shock-wave with a laser-plasma based X-ray source. Scientific Reports, 2019, 9, 18805. | 3.3 | 17 |
| 15 | Enhanced laser-energy coupling to dense plasmas driven by recirculating electron currents. New Journal of Physics, 2018, 20, 033021. | 2.9 | 16 |
| 16 | High dynamic range, large temporal domain laser pulse measurement. Applied Physics B: Lasers and Optics, 2019, 125, 1. | 2.2 | 13 |
| 17 | First application studies at the laser-driven LIGHT beamline: Improving proton beam homogeneity and imaging of a solid target. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 173-176. | 1.6 | 12 |
| 18 | Focusing of multi-MeV, subnanosecond proton bunches from a laser-driven source. Physical Review Accelerators and Beams, 2019, 22, . | 1.6 | 9 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Propagation-based imaging phase-contrast enhanced imaging setup for single shot acquisition using laser-generated X-ray sources. <i>Journal of Instrumentation</i> , 2019, 14, C03005-C03005. | 1.2 | 5 |
| 20 | Energy absorption and coupling to electrons in the transition from surface- to volume-dominant intense laser-plasma interaction regimes. <i>New Journal of Physics</i> , 2020, 22, 053044. | 2.9 | 5 |
| 21 | First on-line detection of radioactive fission isotopes produced by laser-accelerated protons. <i>Scientific Reports</i> , 2020, 10, 17183. | 3.3 | 4 |
| 22 | Initial experimental evidence of self-collimation of target-normal-sheath-accelerated proton beam in a stack of conducting foils. <i>Physics of Plasmas</i> , 2013, 20, . | 1.9 | 3 |
| 23 | Chemical-vapor deposited ultra-fast diamond detectors for temporal measurements of ion bunches. <i>Review of Scientific Instruments</i> , 2018, 89, 093304. | 1.3 | 3 |
| 24 | Soft X-ray backlighter source driven by a short-pulse laser for pump-probe characterization of warm dense matter. <i>Review of Scientific Instruments</i> , 2018, 89, 10F122. | 1.3 | 3 |
| 25 | Temporally resolved proton radiography of rapidly varying electric and magnetic fields in laser-driven capacitor coil targets. <i>Proceedings of SPIE</i> , 2017, , . | 0.8 | 2 |
| 26 | Hollow Beam creation with continuous diffractive phase mask at PHELIX. , 2012, , . | | 1 |
| 27 | Plasma cavity enhanced ion acceleration. , 2012, , . | | 0 |
| 28 | Reference-free focal spot optimization of a petawatt laser using adaptive optics. , 2012, , . | | 0 |
| 29 | Far-field characteristics of a petawatt-class laser using plasma mirrors. , 2013, , . | | 0 |
| 30 | Space-charge effect of laser accelerated protons on beam profile and permanent magnet quadrupole focal line. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 981, 164523. | 1.6 | 0 |
| 31 | Reaching the Millijoule-Regime via Ultrafast Optical Parametric Amplification – An Alternative to First Stage Regenerative Amplification Stages?. , 2021, , . | | 0 |