

# Joseph Katz

## List of Publications by Year in descending order

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35  
papers

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623734

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677142

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all docs

35  
docs citations

35  
times ranked

593  
citing authors

#	ARTICLE	IF	CITATIONS
1	The magnetic recoil spectrometer for measurements of the absolute neutron spectrum at OMEGA and the NIF. Review of Scientific Instruments, 2013, 84, 043506.	1.3	59
2	Plasma characterization using ultraviolet Thomson scattering from ion-acoustic and electron plasma waves (invited). Review of Scientific Instruments, 2016, 87, 11E401.	1.3	41
3	Impact of the Langdon effect on crossed-beam energy transfer. Nature Physics, 2020, 16, 181-185.	16.7	37
4	A reflective optical transport system for ultraviolet Thomson scattering from electron plasma waves on OMEGA. Review of Scientific Instruments, 2012, 83, 10E349.	1.3	36
5	Observation of Nonlocal Heat Flux Using Thomson Scattering. Physical Review Letters, 2018, 121, 125001.	7.8	36
6	Neutron temporal diagnostic for high-yield deuterium-tritium cryogenic implosions on OMEGA. Review of Scientific Instruments, 2016, 87, 053501.	1.3	33
7	Measurements of Non-Maxwellian Electron Distribution Functions and Their Effect on Laser Heating. Physical Review Letters, 2021, 127, 015001.	7.8	26
8	Measurement of Kinetic-Scale Current Filamentation Dynamics and Associated Magnetic Fields in Interpenetrating Plasmas. Physical Review Letters, 2020, 124, 215001.	7.8	25
9	Experimental Evidence of the Collective Brillouin Scattering of Multiple Laser Beams Sharing Acoustic Waves. Physical Review Letters, 2016, 116, 235002.	7.8	23
10	A Particle X-ray Temporal Diagnostic (PXTD) for studies of kinetic, multi-ion effects, and ion-electron equilibration rates in Inertial Confinement Fusion plasmas at OMEGA (invited). Review of Scientific Instruments, 2016, 87, 11D701.	1.3	22
11	Simulated performance of the optical Thomson scattering diagnostic designed for the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E510.	1.3	19
12	Evolution of the Electron Distribution Function in the Presence of Inverse Bremsstrahlung Heating and Collisional Ionization. Physical Review Letters, 2020, 124, 025001.	7.8	19
13	Supersonic gas-jet characterization with interferometry and Thomson scattering on the OMEGA Laser System. Review of Scientific Instruments, 2018, 89, 10C103.	1.3	18
14	Validation of heat transport modeling using directly driven beryllium spheres. Physics of Plasmas, 2020, 27, .	1.9	15
15	Measurement of apparent ion temperature using the magnetic recoil spectrometer at the OMEGA laser facility. Review of Scientific Instruments, 2018, 89, 10I129.	1.3	12
16	Picosecond Thermodynamics in Underdense Plasmas Measured with Thomson Scattering. Physical Review Letters, 2019, 122, 155001.	7.8	12
17	Investigation of heat transport using directly driven gold spheres. Physics of Plasmas, 2021, 28, .	1.9	11
18	Nonuniform Absorption and Scattered Light in Direct-Drive Implosions Driven by Polarization Smoothing. Physical Review Letters, 2021, 127, 075001.	7.8	11

#	ARTICLE	IF	CITATIONS
19	A pulse-front-tilt-compensated streaked optical spectrometer with high throughput and picosecond time resolution. Review of Scientific Instruments, 2016, 87, 11E535.	1.3	10
20	Mitigation of self-focusing in Thomson scattering experiments. Physics of Plasmas, 2019, 26, .	1.9	10
21	Statistical analysis of non-Maxwellian electron distribution functions measured with angularly resolved Thomson scattering. Physics of Plasmas, 2021, 28, .	1.9	10
22	A reflective image-rotating periscope for spatially resolved Thomson-scattering experiments on OMEGA. Journal of Instrumentation, 2013, 8, C12009-C12009.	1.2	8
23	Implementation of a Faraday rotation diagnostic at the OMEGA laser facility. High Power Laser Science and Engineering, 2018, 6, .	4.6	6
24	Experimental observations of detached bow shock formation in the interaction of a laser-produced plasma with a magnetized obstacle. Physics of Plasmas, 2022, 29, .	1.9	6
25	Beam Spray Thresholds in ICF-Relevant Plasmas. Physical Review Letters, 2022, 129, .	7.8	6
26	A transmitted-beam diagnostic for the wavelength-tunable UV drive beam on OMEGA. Review of Scientific Instruments, 2021, 92, 033526.	1.3	5
27	Cross-beam energy transfer saturation: ion heating and pump depletion. Plasma Physics and Controlled Fusion, 2022, 64, 034003.	2.1	4
28	Unabsorbed light beamlets for diagnosing cross-beam energy transfer. Review of Scientific Instruments, 2018, 89, 10E101.	1.3	3
29	A multi-channel x-ray temporal diagnostic for measurement of time-resolved electron temperature in cryogenic deuterium-tritium implosions at OMEGA. Review of Scientific Instruments, 2021, 92, 023507.	1.3	3
30	Insensitivity of a turbulent laser-plasma dynamo to initial conditions. Matter and Radiation at Extremes, 2022, 7, .	3.9	3
31	Requirements for a 4% Thomson scattering system on megajoule scale laser facilities. Review of Scientific Instruments, 2020, 91, 083508.	1.3	2
32	Using millimeter-sized carbon-deuterium foils for high-precision deuterium-tritium neutron spectrum measurements in direct-drive inertial confinement fusion at the OMEGA laser facility. Review of Scientific Instruments, 2021, 92, 023503.	1.3	2
33	Unabsorbed light beamlets for diagnosing coronal density profiles and absorption nonuniformity in direct-drive implosions on OMEGA. Review of Scientific Instruments, 2021, 92, 043525.	1.3	2
34	Quantitative assessment of fitting errors associated with streak camera noise in Thomson scattering data analysis. Review of Scientific Instruments, 2022, 93, 043503.	1.3	2
35	Novel design for a polarizing DUV spectrometer using a Wollaston prism and its application as a diagnostic for measuring Thomson scattering data in the presence of strong self-emission backgrounds. Review of Scientific Instruments, 2022, 93, 013501.	1.3	0