

Stefan Hueller

List of Publications by Year in descending order

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85
papers

1,960
citations

236925

25
h-index

265206

42
g-index

86
all docs

86
docs citations

86
times ranked

1284
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrodynamic simulation of subpicosecond laser interaction with solid-density matter. Physical Review E, 2000, 62, 1202-1214.	2.1	303
2	Uniform multimegabar shock waves in solids driven by laser-generated thermal radiation. Physical Review Letters, 1994, 72, 3186-3189.	7.8	128
3	Femtosecond laser-guided electric discharge in air. Physical Review E, 2001, 64, 057401.	2.1	119
4	Experimental Evidence of Short Light Pulse Amplification Using Strong-Coupling Stimulated Brillouin Scattering in the Pump Depletion Regime. Physical Review Letters, 2010, 104, 025001.	7.8	91
5	Laser Smoothing and Imprint Reduction with a Foam Layer in the Multikilojoule Regime. Physical Review Letters, 2009, 102, 195005.	7.8	73
6	MULTI-fs "A computer code for laser-plasma interaction in the femtosecond regime. Computer Physics Communications, 2012, 183, 637-655.	7.5	70
7	Preheating study by reflectivity measurements in laser-driven shocks. Physics of Plasmas, 1998, 5, 2410-2420.	1.9	52
8	First Observation of Ion Acoustic Waves Produced by the Langmuir Decay Instability. Physical Review Letters, 2000, 84, 2869-2872.	7.8	52
9	Harmonic decomposition to describe the nonlinear evolution of stimulated Brillouin scattering. Physics of Plasmas, 2006, 13, 022703.	1.9	50
10	Evolution of the stimulated Raman scattering instability in two-dimensional particle-in-cell simulations. Physics of Plasmas, 2010, 17, .	1.9	47
11	Channel Formation in Long Laser Pulse Interaction with a Helium Gas Jet. Physical Review Letters, 1997, 79, 2979-2982.	7.8	44
12	Probing Hot and Dense Laser-Induced Plasmas with Ultrafast XUV Pulses. Physical Review Letters, 2005, 95, 025001.	7.8	38
13	Experimental Investigation of the Collective Raman Scattering of Multiple Laser Beams in Inhomogeneous Plasmas. Physical Review Letters, 2016, 117, 235002.	7.8	38
14	Effect of the speckle self-focusing on the stationary stimulated Brillouin scattering reflectivity from a randomized laser beam in an inhomogeneous plasma. Physics of Plasmas, 1997, 4, 4369-4381.	1.9	35
15	Optimal control of laser plasma instabilities using Spike Trains of Uneven Duration and Delay (STUD) Tj ETQq1 1 0.784314 rgBT /Overbo 0.3 34	0.3	34
16	Nonlinear Propagation of a Randomized Laser Beam through an Expanding Plasma. Physical Review Letters, 2001, 87, 255003.	7.8	33
17	Driven Spatially Autoresonant Stimulated Raman Scattering in the Kinetic Regime. Physical Review Letters, 2012, 108, 145003.	7.8	33
18	Effects of Spatial and Temporal Smoothing on Stimulated Brillouin Scattering in the Independent-Hot-Spot Model Limit. Physical Review Letters, 2000, 85, 4526-4529.	7.8	30

#	ARTICLE	IF	CITATIONS
19	Enhanced Spatiotemporal Laser-Beam Smoothing in Gas-Jet Plasmas. <i>Physical Review Letters</i> , 2003, 90, 075002.	7.8	30
20	Electron Kinetic Effects in the Nonlinear Evolution of a Driven Ion-Acoustic Wave. <i>Physical Review Letters</i> , 2005, 94, 055003.	7.8	30
21	Laser-Beam Smoothing Induced by Stimulated Brillouin Scattering in an Inhomogeneous Plasma. <i>Physical Review Letters</i> , 2006, 97, 205001.	7.8	30
22	Stimulated Brillouin and Raman scattering from a randomized laser beam in large inhomogeneous collisional plasmas. II. Model description and comparison with experiments. <i>Physics of Plasmas</i> , 2001, 8, 1636-1649.	1.9	28
23	Nonstationary stimulated Brillouin backscattering. <i>Physics of Fluids B</i> , 1991, 3, 3339-3352.	1.7	27
24	Stimulated Brillouin scattering off nonlinear ion acoustic waves. <i>Physics of Fluids B</i> , 1991, 3, 3317-3330.	1.7	27
25	Numerical simulation of filamentation and its interplay with SBS in underdense plasmas. <i>Physica Scripta</i> , 1996, T63, 151-157.	2.5	26
26	Interaction of two neighboring laser beams taking into account the effects of plasma hydrodynamics. <i>Physics of Plasmas</i> , 1997, 4, 2670-2680.	1.9	23
27	High-order harmonic radiation from solid layers irradiated by subpicosecond laser pulses. <i>Physical Review A</i> , 1993, 48, 3906-3909.	2.5	22
28	Spatially autoresonant stimulated Raman scattering in inhomogeneous plasmas in the kinetic regime. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	22
29	Crossed beam energy transfer: Assessment of the paraxial complex geometrical optics approach versus a time-dependent paraxial method to describe experimental results. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	20
30	Impact of Laser Beam Speckle Structure on Crossed Beam Energy Transfer via Beam Deflections and Ponderomotive Self-Focusing. <i>Physical Review Letters</i> , 2017, 118, 055002.	7.8	19
31	Electron and ion kinetic effects in the saturation of a driven ion acoustic wave. <i>Physics of Plasmas</i> , 2005, 12, 112308.	1.9	18
32	Simulations of drastically reduced SBS with laser pulses composed of a Spike Train of Uneven Duration and Delay (STUD pulses). <i>EPJ Web of Conferences</i> , 2013, 59, 05010.	0.3	18
33	SBS reflectivity from spatially smoothed laser beams: Random phase plates versus polarization smoothing. <i>Physics of Plasmas</i> , 1998, 5, 2706-2711.	1.9	17
34	Interaction physics for the shock ignition scheme of inertial confinement fusion targets. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 124034.	2.1	16
35	Crossed beam energy transfer in the presence of laser speckle ponderomotive self-focusing and nonlinear sound waves. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	16
36	Modeling parametric scattering instabilities in large-scale expanding plasmas. <i>European Physical Journal Special Topics</i> , 2006, 133, 247-251.	0.2	15

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37	Stimulated Brillouin scattering reduction induced by self-focusing for a single laser speckle interacting with an expanding plasma. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	15
38	Experimental evidence of the effect of heat flux on Thomson scattering off ion acoustic waves. <i>Physical Review E</i> , 2000, 61, 1949-1953.	2.1	14
39	Spatial and Transient Effects during the Amplification of a Picosecond Pulse Beam by a Nanosecond Pump. <i>Physical Review Letters</i> , 2016, 117, 145001.	7.8	14
40	Laser-plasma interaction experiments in the context of inertial fusion. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, B301-B312.	2.1	13
41	Observation and modelling of stimulated Raman scattering driven by an optically smoothed laser beam in experimental conditions relevant for shock ignition. <i>High Power Laser Science and Engineering</i> , 2021, 9, .	4.6	13
42	Formation of plasma channels in the interaction of a nanosecond laser pulse at moderate intensities with helium gas jets. <i>Physical Review E</i> , 1999, 59, 7110-7120.	2.1	12
43	Modeling of stimulated Brillouin scattering in expanding plasmas. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022031.	0.4	12
44	Strong self-focusing in quasi-stationary laser plasmas. <i>Physics of Plasmas</i> , 2000, 7, 4259.	1.9	11
45	Order statistics and extreme properties of spatially smoothed laser beams in laser-plasma interaction. <i>Laser and Particle Beams</i> , 2010, 28, 463-477.	1.0	11
46	Crossed beam energy transfer between optically smoothed laser beams in inhomogeneous plasmas. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20200038.	3.4	11
47	Order statistics of high-intensity speckles in stimulated Brillouin scattering and plasma-induced laser beam smoothing. <i>New Journal of Physics</i> , 2013, 15, 025003.	2.9	10
48	Experimental investigation of the collective stimulated Brillouin and Raman scattering of multiple laser beams in inertial confinement fusion experiments. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 014024.	2.1	10
49	Resonance Absorption by Nonlinear Electron Plasma Waves. <i>Europhysics Letters</i> , 1991, 14, 661-666.	2.0	9
50	Coherence properties of high-order harmonics: Application to high-density laser-plasma diagnostic. <i>Laser and Particle Beams</i> , 2000, 18, 495-502.	1.0	9
51	Laser-plasma interaction in the context of inertial fusion: experiments and modeling. <i>European Physical Journal D</i> , 2007, 44, 283-288.	1.3	8
52	Basic mechanisms of laser high-order harmonic generation from plasma mirrors. <i>Journal of Modern Optics</i> , 2008, 55, 2711-2721.	1.3	8
53	Overview of on-going LIL experiments. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124017.	2.1	8
54	XUV interferometry using high-order harmonics: Application to plasma diagnostics. <i>Laser and Particle Beams</i> , 2001, 19, 35-40.	1.0	7

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55	Experimental investigation of identical wavelength short light pulses crossing in underdense plasma. Proceedings of SPIE, 2009, , .	0.8	6
56	Polarization modification of a spatially randomized picosecond-pulse beam during its amplification by a nanosecond pump. Physics of Plasmas, 2017, 24, .	1.9	6
57	Studies on laser beam propagation and stimulated scattering in multiple beam experiments. European Physical Journal Special Topics, 2006, 133, 29-33.	0.2	5
58	Fluid modeling of stimulated Raman scattering accounting for trapped particles benchmarked against fully kinetic simulations. Physics of Plasmas, 2020, 27, .	1.9	5
59	On the role of bandwidth in pump and seed light waves for stimulated Raman scattering in inhomogeneous plasmas. Physics of Plasmas, 2022, 29, .	1.9	5
60	Self-consistent plasma profile steepening in presence of laser light with mixed polarization. Physics of Plasmas, 1994, 1, 4061-4075.	1.9	4
61	Laser-plasma interaction physics in multi kilojoule experiments. Journal of Physics: Conference Series, 2010, 244, 022021.	0.4	4
62	Modeling of laser ponderomotive self-focusing in plasma within the paraxial complex geometrical optics approach. Plasma Physics and Controlled Fusion, 2019, 61, 115009.	2.1	4
63	On the non-thermal nature of distributions of electrons accelerated by high intensity lasers at the vacuum-plasma interface. Physics of Plasmas, 2019, 26, 083107.	1.9	4
64	Kinetic effects in stimulated Brillouin scattering. European Physical Journal Special Topics, 2006, 133, 339-342.	0.2	4
65	Pesmeet al.Reply:. Physical Review Letters, 2001, 86, 3687-3687.	7.8	3
66	Extra ion feature of Thomson scattered light in the interaction of a 600 ps laser with helium gas jet. Physics of Plasmas, 2003, 10, 495-501.	1.9	3
67	Optimization of some laser and target features for laser-plasma interaction in the context of fusion. Journal of Physics: Conference Series, 2008, 112, 022041.	0.4	3
68	Extremal Properties for Weakly Correlated Random Variables Arising in Speckle Patterns. Journal of Statistical Physics, 2010, 138, 1010-1044.	1.2	3
69	Laser-plasma interaction physics for shock ignition. EPJ Web of Conferences, 2013, 59, 05006.	0.3	3
70	Enhancement and control of laser wakefields via a backward Raman amplifier. Physics of Plasmas, 2018, 25, .	1.9	3
71	Laser-plasma interaction physics in the context of fusion. Comptes Rendus Physique, 2000, 1, 727-735.	0.1	2
72	Effect of electron collisions on transport coefficients induced by the inverse bremsstrahlung absorption in plasmas. Physics of Plasmas, 2005, 12, 032308.	1.9	2

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73	Laser plasma interaction physics on the LIL facility. EPJ Web of Conferences, 2013, 59, 05003.	0.3	2
74	The dependence of spatial autoresonance in SRS on k_{\perp}^2 . EPJ Web of Conferences, 2013, 59, 05012.	0.3	2
75	Weibull-type speckle distributions as a result of saturation in stimulated scattering processes. Laser and Particle Beams, 2015, 33, 667-678.	1.0	2
76	Simulation of laser-plasma interaction experiments with gas-filled hohlraums on the LIL facility. Journal of Physics: Conference Series, 2016, 688, 012059.	0.4	2
77	Modeling of energy transfer between two crossing smoothed laser beams in a plasma with flow profile. Journal of Physics: Conference Series, 2016, 717, 012096.	0.4	2
78	Frequency chirp effects on stimulated Raman scattering in inhomogeneous plasmas. Physics of Plasmas, 2022, 29, 072709.	1.9	2
79	Exploring Dense Plasma by Laser Compression. A simulation study. Contributions To Plasma Physics, 1993, 33, 553-562.	1.1	1
80	Transient development of SRS and SBS in ps-time scale by using sub-ps Thomson diagnostic. European Physical Journal Special Topics, 2006, 133, 259-263.	0.2	1
81	Time-resolved absorption spectroscopy as a diagnostic of the thermal front zone of laser-illuminated thin plastic foils. Physics of Fluids B, 1992, 4, 1006-1011.	1.7	0
82	Plasma diagnostics using high-order-harmonics generation. , 2006, 5975, 24.		0
83	Probing Dense Plasmas Created from Intense Irradiation of Solid Target in the XUV Domain. AIP Conference Proceedings, 2006, , .	0.4	0
84	Nouvelles perspectives de diagnostics de plasmas denses par génération d'harmoniques d'ordre élevé. European Physical Journal Special Topics, 2001, 11, Pr7-81-Pr7-86.	0.2	0
85	Control of Nonlinear Optical Processes in High Energy Density Plasmas Using Sub-Picosecond, High-Contrast, Temporal Modulations and Spatial Speckle-Pattern Scrambling. , 2017, , .		0