Simon M Hooker

List of Publications by Year
in descending order

132 papers	5,047 citations	159585 30 h-index	88630 70 g-index
136 all docs	136 docs citations	136 times ranked	2317 citing authors

#	Article	IF	Citations
1	GeV electron beams from a centimetre-scale accelerator. Nature Physics, 2006, 2, 696-699.	16.7	1,521
2	Laser-driven soft-X-ray undulator source. Nature Physics, 2009, 5, 826-829.	16.7	324
3	Developments in laser-driven plasma accelerators. Nature Photonics, 2013, 7, 775-782.	31.4	265
4	Guiding of High-Intensity Laser Pulses with a Hydrogen-Filled Capillary Discharge Waveguide. Physical Review Letters, 2002, 89, 185003.	7.8	204
5	Generation of Stable, Low-Divergence Electron Beams by Laser-Wakefield Acceleration in a Steady-State-Flow Gas Cell. Physical Review Letters, 2008, 101, 085002.	7.8	192
6	Investigation of a hydrogen plasma waveguide. Physical Review E, 2000, 63, 015401.	2.1	175
7	Simulations of a hydrogen-filled capillary discharge waveguide. Physical Review E, 2001, 65, 016407.	2.1	163
8	GeV-scale electron acceleration in a gas-filled capillary discharge waveguide. New Journal of Physics, 2007, 9, 415-415.	2.9	132
9	GeV electron beams from a centimeter-scale channel guided laser wakefield accelerator. Physics of Plasmas, 2007, 14, 056708.	1.9	118
10	Bright Quasi-Phase-Matched Soft-X-Ray Harmonic Radiation from Argon Ions. Physical Review Letters, 2007, 99, 143901.	7.8	109
11	Transverse Interferometry of a Hydrogen-Filled Capillary Discharge Waveguide. Physical Review Letters, 2007, 98, 025002.	7.8	102
12	All-Optical Steering of Laser-Wakefield-Accelerated Electron Beams. Physical Review Letters, 2010, 105, 215001.	7.8	94
13	Laser-Driven Acceleration of Electrons in a Partially Ionized Plasma Channel. Physical Review Letters, 2008, 100, 105005.	7.8	84
14	Demonstration of a Collisionally Excited Optical-Field-Ionization XUV Laser Driven in a Plasma Waveguide. Physical Review Letters, 2003, 91, 205001.	7.8	74
15	Gas-filled capillary discharge waveguides. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 138.	2.1	67
16	Generation of a train of ultrashort pulses from a compact birefringent crystal array. Applied Optics, 2007, 46, 5142.	2.1	67
17	EuPRAXIA Conceptual Design Report. European Physical Journal: Special Topics, 2020, 229, 3675-4284.	2.6	64
18	Horizon 2020 EuPRAXIA design study. Journal of Physics: Conference Series, 2017, 874, 012029.	0.4	60

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19	Emittance Preservation in an Aberration-Free Active Plasma Lens. Physical Review Letters, 2018, 121, 194801.	7.8	52
20	Laser ablation of polymeric materials at 157 nm. Journal of Applied Physics, 1995, 77, 2343-2350.	2.5	51
21	Hydrodynamic optical-field-ionized plasma channels. Physical Review E, 2018, 97, 053203.	2.1	49
22	First demonstration of guiding of high-intensity laser pulses in a hydrogen-filled capillary discharge waveguide. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4103-4112.	1.5	43
23	Two-Pulse Ionization Injection into Quasilinear Laser Wakefields. Physical Review Letters, 2013, 111, 155004.	7.8	41
24	Guiding of high-intensity picosecond laser pulses in a discharge-ablated capillary waveguide. Journal of the Optical Society of America B: Optical Physics, 2000, 17, 90.	2.1	40
25	Excitation and Control of Plasma Wakefields by Multiple Laser Pulses. Physical Review Letters, 2017, 119, 044802.	7.8	39
26	Laser-wakefield acceleration of electron beams in a low density plasma channel. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	38
27	Low-density hydrodynamic optical-field-ionized plasma channels generated with an axicon lens. Physical Review Accelerators and Beams, 2019, 22, .	1.6	37
28	Multi-pulse laser wakefield acceleration: a new route to efficient, high-repetition-rate plasma accelerators and high flux radiation sources. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 234003.	1.5	36
29	Temporal evolution of longitudinal bunch profile in a laser wakefield accelerator. Physical Review Special Topics: Accelerators and Beams, 2015, 18, .	1.8	35
30	Optical rotation quasi-phase-matching for circularly polarized high harmonic generation. Optics Letters, 2012, 37, 2415.	3.3	31
31	Quasi-phasematching of harmonic generation via multimode beating in waveguides. Optics Express, 2007, 15, 7894.	3.4	29
32	Measurement of the electron-density profile in a discharge-ablated capillary waveguide. Optics Letters, 1999, 24, 993.	3.3	28
33	Progress in vacuum ultraviolet lasers. Progress in Quantum Electronics, 1994, 18, 227-274.	7.0	27
34	Quasi-phase-matching high harmonic generation using trains of pulses produced using an array of birefringent plates. Optics Express, 2012, 20, 6236.	3.4	27
35	Dramatic enhancement of xuv laser output using a multimode gas-filled capillary waveguide. Physical Review A, 2005, 71, .	2.5	26
36	Longitudinal electron bunch profile reconstruction by performing phase retrieval on coherent transition radiation spectra. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	24

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37	Molecular-dynamic calculation of the inverse-bremsstrahlung heating of non-weakly-coupled plasmas. Physical Review E, 2004, 70, 056411.	2.1	23
38	Investigation of GeV-scale electron acceleration in a gas-filled capillary discharge waveguide. New Journal of Physics, 2013, 15, 045024.	2.9	20
39	Direct Observation of Plasma Waves and Dynamics Induced by Laser-Accelerated Electron Beams. Physical Review X, 2019, 9, .	8.9	19
40	Generation and control of ultrafast pulse trains for quasi-phase-matching high-harmonic generation. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 763.	2.1	18
41	Guiding of high-intensity laser pulses in 100-mm-long hydrodynamic optical-field-ionized plasma channels. Physical Review Accelerators and Beams, 2020, 23, .	1.6	18
42	Generation of laser pulse trains for tests of multi-pulse laser wakefield acceleration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 383-385.	1.6	17
43	Meter-scale conditioned hydrodynamic optical-field-ionized plasma channels. Physical Review E, 2020, 102, 053201.	2.1	17
44	Quasi-phase-matched high-harmonic generation in gas-filled hollow-core photonic crystal fiber. Optica, 2019, 6, 442.	9.3	17
45	Effects of a prepulse in the femtosecond-pulse-driven Xe IX laser. Journal of the Optical Society of America B: Optical Physics, 1997, 14, 2735.	2.1	16
46	Simulations of the propagation of high-intensity laser pulses in discharge-ablated capillary waveguides. Journal of the Optical Society of America B: Optical Physics, 2000, 17, 1565.	2.1	16
47	Investigation of the role of plasma channels as waveguides for laser-wakefield accelerators. New Journal of Physics, 2010, 12, 045008.	2.9	15
48	Complete spatial characterization of an optical wavefront using a variable-separation pinhole pair. Optics Letters, 2013, 38, 1173.	3.3	14
49	Simple technique for generating trains of ultrashort pulses. Optics Letters, 2007, 32, 2203.	3.3	13
50	Quasi-phase-matching of high-order-harmonic generation using multimode polarization beating. Physical Review A, 2013, 87, .	2.5	13
51	Quasi-phase-matched high-order harmonic generation using tunable pulse trains. Optics Express, 2014, 22, 7722.	3.4	13
52	Overview of the CLEAR plasma lens experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 909, 379-382.	1.6	13
53	A history of high-power laser research and development in the United Kingdom. High Power Laser Science and Engineering, 2021, 9, .	4.6	13
54	41.8â˜nmXe8+laser driven in a plasma waveguide. Physical Review A, 2004, 70, .	2.5	12

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55	GeV plasma accelerators driven in waveguides. Plasma Physics and Controlled Fusion, 2007, 49, B403-B410.	2.1	12
56	Quasi-phase-matching of high-order-harmonic generation using polarization beating in optical waveguides. Physical Review A, 2012, 85, .	2.5	12
57	General analytic solution for far-field phase and amplitude control, with a phase-only spatial light modulator. Optics Letters, 2014, 39, 2137.	3.3	12
58	Gev-Scale Accelerators Driven by Plasma-Modulated Pulses from Kilohertz Lasers. Physical Review Letters, 2021, 127, 184801.	7.8	12
59	Observation of laser oscillation in nitric oxide at 218 nm. Optics Letters, 1990, 15, 437.	3.3	11
60	Comparison of parallel and perpendicular polarized counterpropagating light for suppressing high harmonic generation. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 2421.	2.1	11
61	Status of the Horizon 2020 EuPRAXIA conceptual design study*. Journal of Physics: Conference Series, 2019, 1350, 012059.	0.4	11
62	Femtosecond-pulse-driven electron-excited extreme-ultraviolet lasers in Be-like ions. Optics Letters, 1995, 20, 1994.	3.3	10
63	Modeling of a square pulsed capillary discharge waveguide for interferometry measurements. Physics of Plasmas, 2007, 14, 023501.	1.9	10
64	Gaussian-Schell analysis of the transverse spatial properties of high-harmonic beams. Scientific Reports, 2016, 6, 30504.	3.3	10
65	Demonstration of kilohertz operation of hydrodynamic optical-field-ionized plasma channels. Physical Review Accelerators and Beams, 2022, 25, .	1.6	10
66	Influence of cavity configuration on the pulse energy of a high-pressure molecular fluorine laser. Applied Physics B, Photophysics and Laser Chemistry, 1992, 55, 54-59.	1.5	9
67	Nonlinear plasma wavelength scalings in a laser wakefield accelerator. Physical Review E, 2020, 101, 023209.	2.1	9
68	Molecular-dynamic calculation of the relaxation of the electron energy distribution function in a plasma. Physical Review E, 2003, 68, 056401.	2.1	8
69	Pseudoresonant laser Wakefield acceleration driven by 10.6-/spl mu/m laser light. IEEE Transactions on Plasma Science, 2005, 33, 3-7.	1.3	8
70	Generation and control of chirped, ultrafast pulse trains. Journal of Optics (United Kingdom), 2010, 12, 015201.	2.2	8
71	Electron bunch profile reconstruction based on phase-constrained iterative algorithm. Physical Review Accelerators and Beams, 2016, 19, .	1.6	8
72	Progress in optical-field-ionization soft X-ray lasers at LOA. Laser and Particle Beams, 2005, 23, .	1.0	7

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73	EuPRAXIA â€“ a compact, cost-efficient particle and radiation source. AIP Conference Proceedings, 2019, , .	0.4	7
74	F/sub 2/ pumped NO: laser oscillation at 218 nm and prospects for new laser transitions in the 160-250 nm region. IEEE Journal of Quantum Electronics, 1990, 26, 1529-1535.	1.9	6
75	Simulations of recombination lasing in Ar7+ driven by optical field ionization in a capillary discharge waveguide. Optics Communications, 2005, 249, 501-513.	2.1	6
76	Simulation of free-electron lasers seeded with broadband radiation. Physical Review Special Topics: Accelerators and Beams, 2011, 14, .	1.8	6
77	A Review of Laser Guiding Experiments. AIP Conference Proceedings, 2004, , .	0.4	5
78	Effects of polarization on inverse Bremsstrahlung heating of a plasma. Physical Review E, 2005, 72, 036402.	2.1	5
79	Inverse free electron lasers and laser wakefield acceleration driven by CO 2 lasers. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 611-622.	3.4	5
80	Laser wakefield simulations towards development of compact particle accelerators. Journal of Physics: Conference Series, 2007, 78, 012021.	0.4	5
81	A compact, low cost Marx bank for generating capillary discharge plasmas. Review of Scientific Instruments, 2016, 87, 093302.	1.3	5
82	Spatially resolved common-path high-order harmonic interferometry. Optics Letters, 2018, 43, 5275.	3.3	5
83	Vacuum ultraviolet gain measurements in optically pumped LiYF 4 :Nd 3+. Applied Physics B: Lasers and Optics, 1997, 64, 293-300.	2.2	4
84	Update on Seeded SM-LWFA and Pseudo-Resonant LWFA Experiments â€” (STELLA-LW). AIP Conference Proceedings, 2006, , .	0.4	4
85	Comparison of Strong-field Ionization Models in the Wavelength-scaling of High Harmonic Generation. Optics Express, 2019, 27, 6925.	3.4	4
86	The absorption of 158 nm radiation in nitric oxide. Applied Physics B, Photophysics and Laser Chemistry, 1990, 51, 127-131.	1.5	3
87	Observation of new laser transitions and saturation effects in optically pumped NO. Applied Physics B, Photophysics and Laser Chemistry, 1992, 54, 119-125.	1.5	3
88	Observation of vacuum ultraviolet laser oscillation in nitric oxide. Applied Optics, 1993, 32, 2062.	2.1	3
89	Inner-shell soft X-ray lasers in Ne-like ions driven by optical field ionization. Optics Communications, 2000, 182, 209-219.	2.1	3
90	Time-resolved plasma temperature measurements in a laser-triggered hydrogen-filled capillary discharge waveguide. Plasma Sources Science and Technology, 2011, 20, 055014.	3.1	3

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91	Optimised XUV holography using spatially shaped high harmonic beams. Optics Express, 2019, 27, 29016.	3.4	3
92	Increasing the brightness of harmonic XUV radiation with spatially-tailored driver beams. Journal of Optics (United Kingdom), 2021, 23, 015502.	2.2	3
93	Determination of the gain coefficient of an NO laser at 218 nm. Journal Physics D: Applied Physics, 1992, 25, 593-596.	2.8	2
94	Stable Laser-Driven Electron Beams from a Steady-State-Flow Gas Cell. , 2009, , .		2
95	Multiple pulse resonantly enhanced laser plasma wakefield acceleration. , 2013, , .		2
96	Eupraxia, A Step Toward A Plasma-Wakefield Based Accelerator With High Beam Quality. Journal of Physics: Conference Series, 2019, 1350, 012068.	0.4	2
97	Laser Wakefield Acceleration Driven by ATF CO2 Laser (STELLA-LW). AIP Conference Proceedings, 2004, , .	0.4	1
98	Application of the Gas-Filled Capillary Discharge Waveguide to Laser-Plasma Acceleration. AIP Conference Proceedings, 2004, , .	0.4	1
99	Progress on Collisionally Pumped Optical-Field-Ionization Soft X-Ray Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 1351-1362.	2.9	1
100	Energy extraction from pulsed amplified stimulated emission lasers operating under conditions of strong saturation. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1057.	2.1	1
101	Performance of capillary discharge guided laser plasma wakefield accelerator. , 2007, , .		1
102	Transverse beam profile measurements of laser accelerated electrons using coherent optical radiation. , 2013, , .		1
103	Laser and Plasma Accelerator Workshop 2013. Plasma Physics and Controlled Fusion, 2014, 56, 080301.	2.1	1
104	Combined visible and near-infrared OPA for wavelength scaling experiments in strong-field physics. , 2017, , .		1
105	Numerical modelling of chromatic effects on axicon-focused beams used to generate HOFI plasma channels. Journal of Physics: Conference Series, 2020, 1596, 012049.	0.4	1
106	Reconstructing nonlinear plasma wakefields using a generalized temporally encoded spectral shifting analysis. Physical Review Accelerators and Beams, 2018, 21, .	1.6	1
107	Electron trapping and reinjection in prepulse-shaped gas targets for laser-plasma accelerators. Physical Review Accelerators and Beams, 2020, 23, .	1.6	1
108	Measurements of transient gain and loss in solid state VUV laser materials. , 0, , .		0

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109	Investigation of a discharge-ablated capillary waveguide for high-intensity laser pulses. , 0, , .		0
110	Simulations of the propagation of high-intensity laser pulses in discharge-ablated capillary waveguides. , 2000, , .		0
111	Inner-shell soft x-ray lasers driven by optical field ionization. , 2000, , .		0
112	Demonstration of lasing at 41.8 nm in Xe8+driven in a plasma waveguide. , 2003, , .		0
113	GeV electron beams from a laser-plasma accelerator. , 2006, , .		0
114	GeV electron beams from a centimeter-scale laser-driven plasma accelerator. , 2007, , .		0
115	First milestone on the path toward a table-top free-electron laser (FEL). , 2010, , .		0
116	Complete spatial characterization of an optical wavefront using a variable-separation pinhole Pair. , 2013, , .		0
117	Polarization-controlled quasi-phase matching for linearly and circularly polarized high harmonic generation. , 2013, , .		0
118	Quasi-phase-matching of high harmonic generation using counter-propagating pulses. EPJ Web of Conferences, 2013, 41, 01013.	0.3	0
119	Polarization-controlled quasi-phase-matching of high harmonic generation. EPJ Web of Conferences, 2013, 41, 01008.	0.3	0
120	Electron acceleration driven in plasma channels at the Astra-Gemini laser facility. , 2013, , .		0
121	Special issue on compact x-ray sources. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 070401.	1.5	0
122	Special issue on compact x-ray sources. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 230301.	1.5	0
123	Blind digital holographic microscopy. , 2017, , .		0
124	Multimode quasi-phase-matching of high-order harmonic generation in gas-filled photonic crystal fibers. , 2017, , .		0
125	Improving the resolution obtained in lensless imaging with spatially shaped high-order harmonics. , 2017, , .		0
126	High harmonic generation in gas-filled photonic crystal fibers. , 2017, , .		0

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127	Lasers collisionnels Ã 41.8 nm en rÃ©gime guidÃ©. European Physical Journal Special Topics, 2005, 127, 33-37.	0.2	0
128	GeV laser-plasma electron acceleration in a cm-scale capillary waveguide. , 2006, , .		0
129	Comparison of Parallel and Perpendicular Polarized Counterpropagating Light for Quasi-Phase-Matching High Harmonic Generation. Springer Series in Chemical Physics, 2009, , 15-17.	0.2	0
130	Chirped Pulse Trains for Quasi-Phase-Matching High Harmonic Generation. , 2009, , .		0
131	X-ray characterization by energy-resolved powder diffraction. Physical Review Accelerators and Beams, 2016, 19, .	1.6	0
132	Quasi-phase-matched high harmonic generation in gas-filled photonic crystal fibers. , 2017, , .		0