Heinz-Dieter Nuhn

List of Publications by Citations

48 papers	4,230 citations	21 h-index	50 g-index
50 ext. papers	4,769 ext. citations	4.8 avg, IF	3.79 L-index

#	Paper	IF	Citations
48	First lasing and operation of an Ångstrom-wavelength free-electron laser. *Nature Photonics*, **2010**, 4, 641-647	33.9	2216
47	Demonstration of self-seeding in a hard-X-ray free-electron laser. *Nature Photonics*, **2012**, 6, 693-698	33.9	473
46	Measurements and simulations of ultralow emittance and ultrashort electron beams in the linac coherent light source. *Physical Review Letters*, **2009**, 102, 254801	7.4	243
45	Experimental demonstration of femtosecond two-color x-ray free-electron lasers. *Physical Review Letters*, **2013**, 110, 134801	7.4	180
44	Measurements of the linac coherent light source laser heater and its impact on the x-ray free-electron laser performance. *Physical Review Special Topics: Accelerators and Beams*, **2010**, 13,		108
43	Start-to-end simulation of self-amplified spontaneous emission free electron lasers from the gun through the undulator. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2002**, 483, 268-272	1.2	93
42	Polarization control in an X-ray free-electron laser. *Nature Photonics*, **2016**, 10, 468-472	33.9	89
41	Experimental characterization of nonlinear harmonic radiation from a visible self-amplified spontaneous emission free-electron laser at saturation. *Physical Review Letters*, **2002**, 88, 204801	7.4	80
40	Demonstration of single-crystal self-seeded two-color x-ray free-electron lasers. *Physical Review Letters*, **2014**, 113, 254801	7.4	76
39	Research and development toward a 4.5–1.5 Å linac coherent light source (LCLS) at SLAC. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1996**, 375, 274-283	1.2	61
38	Multicolor operation and spectral control in a gain-modulated x-ray free-electron laser. *Physical Review Letters*, **2013**, 111, 134801	7.4	54
37	Photon beamlines and diagnostics at LCLS. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2011**, 635, S6-S11	1.2	46
36	Modeling and multidimensional optimization of a tapered free electron laser. *Physical Review Special Topics: Accelerators and Beams*, **2012**, 15,		44
35	Femtosecond X-ray magnetic circular dichroism absorption spectroscopy at an X-ray free electron laser. *Review of Scientific Instruments*, **2016**, 87, 033110	1.7	42
34	A 2 to 4 nm high power FEL on the SLAC linac. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1993**, 331, 223-227	1.2	41
33	Measurements and modeling of coherent synchrotron radiation and its impact on the Linac Coherent Light Source electron beam. *Physical Review Special Topics: Accelerators and Beams*, **2009**, 12,		40
32	Beam-based alignment for the LCLS FEL undulator. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1999**, 429, 407-413	1.2	34

31	Short wavelength FELs using the SLAC linac. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1994**, 347, 199-205	1.2	34
30	The SLAC soft X-ray high power FEL. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1994**, 341, 326-330	1.2	30
29	Properties of the ultrashort gain length, self-amplified spontaneous emission free-electron laser in the linear regime and saturation. *Physical Review E*, **2003**, 67, 066501	2.4	28
28	Beam shaping to improve the free-electron laser performance at the Linac Coherent Light Source. *Physical Review Accelerators and Beams*, **2016**, 19,	1.8	22
27	Multi-dimensional free-electron laser simulation codes: a comparison study. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2000**, 445, 110-115	1.2	21
26	Circular dichroism measurements at an x-ray free-electron laser with polarization control. *Review of Scientific Instruments*, **2016**, 87, 083113	1.7	21
25	Optimization of the design for the LCLS undulator line. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2001**, 475, 323-327	1.2	16
24	Fundamental and harmonic microbunching in a high-gain self-amplified spontaneous-emission free-electron laser. *Physical Review E*, **2002**, 66, 036503	2.4	14
23	Impact of electron beam quality on nonlinear harmonic generation in high-gain free-electron lasers. *Physical Review Special Topics: Accelerators and Beams*, **2002**, 5,		14
22	Visible-infrared self-amplified spontaneous emission amplifier free electron laser undulator. *Physical Review Special Topics: Accelerators and Beams*, **2001**, 4,		11
21	Characterization of an 800 nm SASE FEL at saturation. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2002**, 483, 24-28	1.2	10
20	Short wavelength FELs on large storage rings. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1992**, 319, 89-96	1.2	10
19	The sensitivity of nonlinear harmonic generation to electron beam quality in free electron lasers. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2002**, 483, 101-106	1.2	9
18	Results of the VISA SASE FEL experiment at 840nm. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2003**, 507, 417-421	1.2	8
17	Parametric study of an X-ray FEL. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1995**, 358, 60-63	1.2	8
16	Optimization of an X-ray SASE-FEL. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2001**, 475, 328-333	1.2	7
15	Linac-based short wavelength fels: The challenges to be overcome to produce the ultimate x-ray sourcethe x-ray laser. *Synchrotron Radiation News*, **2000**, 13, 18-32	0.6	7
14	The effect of wiggler imperfections on nonlinear harmonic generation in free-electron lasers. *IEEE Journal of Quantum Electronics*, **2001**, 37, 790-793	2	7

13	FEL simulations for the LCLS. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1999**, 429, 249-256	1.2	7
12	Measurements of nonlinear harmonic radiation and harmonic microbunching in a visible SASE FEL. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2003**, 507, 445-449	1.2	5
11			5
10	From storage rings to free electron lasers for hard x-rays. *Journal of Physics Condensed Matter*, **2004** , 16, S3413-S3421	1.8	4
9	Initial gain measurements of an 800nm SASE FEL, VISA. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2001**, 475, 339-342	1.2	2
8	Technological challenges to X-ray FELs. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2000**, 445, 149-154	1.2	2
7	Status and initial commissioning of a high gain 800 nm SASE FEL. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2000**, 445, 160-163	1.2	2
6	Start-to-end jitter simulations of the linac coherent light source		2
5	40 FEL designs for the PEP storage ring. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **1992**, 318, 730-735	1.2	2
4	Site-specific interrogation of an ionic chiral fragment during photolysis using an X-ray free-electron laser. *Communications Chemistry*, **2021**, 4,	6.3	2
3	Measurements of nonlinear harmonic radiation and harmonic microbunching in a visible SASE FEL **2003**, 445-449		
2	Results of the VISA SASE FEL experiment at 840 nm **2003**, 417-421		
1	Start-End Simulations for the LCLS X-Ray Free-Electron Laser **2004**, II-93-II-94		