

Emanuele Pedersoli

List of Publications by Year in descending order

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99
papers

2,419
citations

236833

25
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223716

46
g-index

107
all docs

107
docs citations

107
times ranked

2357
citing authors

#	ARTICLE	IF	CITATIONS
1	Four-wave mixing experiments with extreme ultraviolet transient gratings. <i>Nature</i> , 2015, 520, 205-208.	13.7	184
2	Fractal morphology, imaging and mass spectrometry of single aerosol particles in flight. <i>Nature</i> , 2012, 486, 513-517.	13.7	170
3	Two-colour pump-probe experiments with a twin-pulse-seed extreme ultraviolet free-electron laser. <i>Nature Communications</i> , 2013, 4, 2476.	5.8	156
4	Imaging Ultrafast Demagnetization Dynamics after a Spatially Localized Optical Excitation. <i>Physical Review Letters</i> , 2014, 112, .	2.9	113
5	Unsupervised classification of single-particle X-ray diffraction snapshots by spectral clustering. <i>Optics Express</i> , 2011, 19, 16542.	1.7	91
6	Towards jitter-free pump-probe measurements at seeded free electron laser facilities. <i>Optics Express</i> , 2014, 22, 12869.	1.7	83
7	Tunability experiments at the FERMI@Elettra free-electron laser. <i>New Journal of Physics</i> , 2012, 14, 113009.	1.2	81
8	Control of the Polarization of a Vacuum-Ultraviolet, High-Gain, Free-Electron Laser. <i>Physical Review X</i> , 2014, 4, .	2.8	80
9	Invited Article: Coherent imaging using seeded free-electron laser pulses with variable polarization: First results and research opportunities. <i>Review of Scientific Instruments</i> , 2013, 84, 051301.	0.6	77
10	Widely tunable two-colour seeded free-electron laser source for resonant-pump resonant-probe magnetic scattering. <i>Nature Communications</i> , 2016, 7, 10343.	5.8	77
11	Noise-robust coherent diffractive imaging with a single diffraction pattern. <i>Optics Express</i> , 2012, 20, 16650.	1.7	73
12	Broken Ergodicity in Classically Chaotic Spin Systems. <i>Journal of Statistical Physics</i> , 2004, 116, 1435-1447.	0.5	59
13	Nanoscale transient gratings excited and probed by extreme ultraviolet femtosecond pulses. <i>Science Advances</i> , 2019, 5, eaaw5805.	4.7	54
14	Seeded X-ray free-electron laser generating radiation with laser statistical properties. <i>Nature Communications</i> , 2018, 9, 4498.	5.8	51
15	Microfocusing of the FERMI@Elettra FEL beam with a K α active optics system: Spot size predictions by application of the WISE code. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2013, 710, 131-138.	0.7	50
16	Pulse Duration of Seeded Free-Electron Lasers. <i>Physical Review X</i> , 2017, 7, .	2.8	47
17	Femtosecond dark-field imaging with an X-ray free electron laser. <i>Optics Express</i> , 2012, 20, 13501.	1.7	38
18	Soft x-ray induced femtosecond solid-to-solid phase transition. <i>High Energy Density Physics</i> , 2017, 24, 22-27.	0.4	37

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37	Time-Resolved XUV Absorption Spectroscopy and Magnetic Circular Dichroism at the Ni M _{2,3} -Edges. Applied Sciences (Switzerland), 2021, 11, 325.	1.3	17
38	Transient magnetic gratings on the nanometer scale. Structural Dynamics, 2020, 7, 054501.	0.9	16
39	Nanoscale Transient Magnetization Gratings Created and Probed by Femtosecond Extreme Ultraviolet Pulses. Nano Letters, 2021, 21, 2905-2911.	4.5	16
40	Surface and bulk contribution to Cu(111) quantum efficiency. Applied Physics Letters, 2008, 93, 183505.	1.5	15
41	Nonlinear XUV-optical transient grating spectroscopy at the Si L _{2,3} edge. Applied Physics Letters, 2019, 114, 181101.	1.5	15
42	Time-resolved observation of transient precursor state of CO on Ru(0001) using carbon K-edge spectroscopy. Physical Chemistry Chemical Physics, 2020, 22, 2677-2684.	1.3	15
43	Ultrafast Demagnetization Dominates Fluence Dependence of Magnetic Scattering at Co M Edges. Physical Review Letters, 2020, 125, 127201.	2.9	15
44	Generation and detection of 50 GHz surface acoustic waves by extreme ultraviolet pulses. Applied Physics Letters, 2021, 119, .	1.5	15
45	Pulse-to-pulse wavefront sensing at free-electron lasers using ptychography. Journal of Applied Crystallography, 2020, 53, 949-956.	1.9	14
46	Kirkpatrick-Baez active optics system at FERMI: system performance analysis. Journal of Synchrotron Radiation, 2019, 26, 1462-1472.	1.0	13
47	Single particle imaging with soft x-rays at the Linac Coherent Light Source. , 2011, , .		12
48	Mesoscale morphology of airborne core-shell nanoparticle clusters: x-ray laser coherent diffraction imaging. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164033.	0.6	12
49	Direct Phasing of Finite Crystals Illuminated with a Free-Electron Laser. Physical Review X, 2015, 5, .	2.8	12
50	Characterization of ultrafast free-electron laser pulses using extreme-ultraviolet transient gratings. Journal of Synchrotron Radiation, 2018, 25, 32-38.	1.0	12
51	Single-shot time-resolved magnetic x-ray absorption at a free-electron laser. Physical Review B, 2019, 99, .	1.1	12
52	All-optical single-shot complete electric field measurement of extreme ultraviolet free electron laser pulses. Optica, 2021, 8, 545.	4.8	12
53	Conformation sequence recovery of a non-periodic object from a diffraction-before-destruction experiment. Optics Express, 2014, 22, 8085.	1.7	11
54	Measurements of ultrafast spin-profiles and spin-diffusion properties in the domain wall area at a metal/ferromagnetic film interface. Scientific Reports, 2017, 7, 15064.	1.6	11

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55	Ultrafast Adsorbate Excitation Probed with Subpicosecond-Resolution X-Ray Absorption Spectroscopy. <i>Physical Review Letters</i> , 2021, 127, 016802.	2.9	11
56	Cu(111) and Cu(001) surface electronic states. Comparison between theory and experiment. <i>Surface Science</i> , 2006, 600, 3901-3905.	0.8	10
57	A scheme for lensless X-ray microscopy combining coherent diffraction imaging and differential corner holography. <i>Optics Express</i> , 2012, 20, 25152.	1.7	10
58	Thermoelasticity of Nanoscale Silicon Carbide Membranes Excited by Extreme Ultraviolet Transient Gratings: Implications for Mechanical and Thermal Management. <i>ACS Applied Nano Materials</i> , 2019, 2, 5132-5139.	2.4	10
59	Simultaneous two-color snapshot view on ultrafast charge and spin dynamics in a Fe-Cu-Ni tri-layer. <i>Structural Dynamics</i> , 2020, 7, 054302.	0.9	10
60	Evidence of vectorial photoelectric effect on Copper. <i>Applied Physics Letters</i> , 2005, 87, 081112.	1.5	9
61	Ultrafast Dynamics of Magnetic Domain Structures Probed by Coherent Free-Electron Laser Light. <i>Synchrotron Radiation News</i> , 2013, 26, 27-32.	0.2	9
62	Experimental setups for FEL-based four-wave mixing experiments at FERMI. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 132-140.	1.0	9
63	Element Selective Probe of the Ultra-Fast Magnetic Response to an Element Selective Excitation in Fe-Ni Compounds Using a Two-Color FEL Source. <i>Photonics</i> , 2017, 4, 6.	0.9	9
64	All-Optical Switching on the Nanometer Scale Excited and Probed with Femtosecond Extreme Ultraviolet Pulses. <i>Nano Letters</i> , 2022, 22, 4452-4458.	4.5	9
65	Status of the K-B bendable optics at FERMI@Elettra FEL. , 2014, , .		8
66	Probing ultrafast changes of spin and charge density profiles with resonant XUV magnetic reflectivity at the free-electron laser FERMI. <i>Structural Dynamics</i> , 2017, 4, 055101.	0.9	7
67	Ultrafast time-evolution of chiral Néel magnetic domain walls probed by circular dichroism in x-ray resonant magnetic scattering. <i>Nature Communications</i> , 2022, 13, 1412.	5.8	7
68	Nonlinear harmonics of a seeded free-electron laser as a coherent and ultrafast probe to investigate matter at the water window and beyond. <i>Physical Review A</i> , 2022, 105, .	1.0	7
69	Role of the ionization potential in nonequilibrium metals driven to absorption saturation. <i>Physical Review E</i> , 2015, 92, 011101.	0.8	6
70	Optical constants modelling in silicon nitride membrane transiently excited by EUV radiation. <i>Optics Express</i> , 2018, 26, 11877.	1.7	6
71	Angle resolved photoemission study of image potential states and surface states on Cu(111). <i>Surface Science</i> , 2006, 600, 4290-4293.	0.8	5
72	Nonlinear optics with coherent free electron lasers. <i>Physica Scripta</i> , 2016, T169, 014003.	1.2	5

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73	Timing methodologies and studies at the FERMI free-electron laser. Journal of Synchrotron Radiation, 2018, 25, 44-51.	1.0	5
74	Nanoscale Thermoelasticity in Silicon Nitride Membranes: Implications for Thermal Management. ACS Applied Nano Materials, 2021, 4, 10519-10527.	2.4	5
75	Single-shot experiments at the soft X-FEL FERMI using a back-side-illuminated scientific CMOS detector. Journal of Synchrotron Radiation, 2022, 29, 103-110.	1.0	5
76	Light tuning of the image potential state electron-electron interactions. Surface Science, 2008, 602, 2983-2988.	0.8	4
77	K-B bendable system optimization at FERMI@Elettra FEL: impact of different spatial wavelengths on the spot size. , 2013, , .		4
78	Polarization measurement of free electron laser pulses in the VUV generated by the variable polarization source FERMI. , 2014, , .		4
79	The FERMI seeded-FEL facility: Status and perspectives. AIP Conference Proceedings, 2016, , .	0.3	4
80	Multi-Color Imaging of Magnetic Co/Pt Multilayers. IEEE Transactions on Magnetics, 2017, 53, 1-5.	1.2	4
81	Dynamics of the MnAs $\hat{1}\pm/\hat{1}^2$ -Striped Microstructure and of the Fe Magnetization Reversal in Fe/MnAs/GaAs(001): An Optical-Laser Pumped Free-Electron-Laser Probe Scattering Experiment. Photonics, 2017, 4, 21.	0.9	4
82	Four-wave-mixing experiments and beyond: the TIMER/mini-TIMER setups at FERMI. , 2017, , .		4
83	On the role of athermal electrons in non-linear photoemission from Ag(100). European Physical Journal B, 2006, 53, 121-125.	0.6	3
84	Status and achievements at FERMI@Elettra: the first double cascade seeded EUV-SXR FEL facility open to users. , 2013, , .		3
85	Exploring the multiparameter nature of EUV-visible wave mixing at the FERMI FEL. Structural Dynamics, 2019, 6, 040901.	0.9	3
86	Effect of Auger recombination on transient optical properties in XUV and soft X-ray irradiated silicon nitride. Scientific Reports, 2021, 11, 5203.	1.6	3
87	Tomography of a seeded free-electron laser focal spot: qualitative and quantitative comparison of two reconstruction methods for spot size characterization. Optics Express, 2021, 29, 36086.	1.7	3
88	FEL-based transient grating spectroscopy. Proceedings of SPIE, 2015, , .	0.8	2
89	Time-resolved ionization measurements with intense ultrashort XUV and X-ray free-electron laser pulses. Laser and Particle Beams, 2019, 37, 235-241.	0.4	2
90	Short-wavelength four wave mixing experiments using single and two-color schemes at FERMI. Journal of Electron Spectroscopy and Related Phenomena, 2022, 257, 146901.	0.8	2

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91	Profiling structured beams using injected aerosols. Proceedings of SPIE, 2012, , .	0.8	1
92	Toward the Extreme Ultra Violet Four Wave Mixing Experiments: From Table Top Lasers to Fourth Generation Light Sources. Photonics, 2015, 2, 57-70.	0.9	1
93	The COMIX polarimeter: a compact device for XUV polarization analysis. Journal of Synchrotron Radiation, 2022, 29, 969-977.	1.0	1
94	Optically induced Fe magnetization reversal in Fe/MnAs/GaAs(001). Proceedings of SPIE, 2015, , .	0.8	0
95	Imaging Non-Local Magnetization Dynamics. Synchrotron Radiation News, 2016, 29, 26-31.	0.2	0
96	Notice of Removal: Generation of acoustic waves by an extreme ultra violet free electron laser in a transient grating experiment. , 2017, , .		0
97	Active optics systems at FERMI Free Electron Laser. , 2015, , .		0
98	Single-shot Measurement of Extreme Ultraviolet Free Electron Laser Pulses. , 2020, , .		0
99	AC/DC: The FERMI FEL Split and Delay Optical Device for Ultrafast X-ray Science. Photonics, 2022, 9, 314.	0.9	0