

Flavio Capotondi

List of Publications by Year in descending order

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96
papers

2,301
citations

236833

25
h-index

233338

45
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103
all docs

103
docs citations

103
times ranked

2116
citing authors

#	ARTICLE	IF	CITATIONS
1	Short-wavelength four wave mixing experiments using single and two-color schemes at FERMI. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2022, 257, 146901.	0.8	2
2	Single-shot experiments at the soft X-FEL FERMI using a back-side-illuminated scientific CMOS detector. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 103-110.	1.0	5
3	Observation of Magnetic Helicoidal Dichroism with Extreme Ultraviolet Light Vortices. <i>Physical Review Letters</i> , 2022, 128, 077401.	2.9	20
4	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
5	AC/DC: The FERMI FEL Split and Delay Optical Device for Ultrafast X-ray Science. <i>Photonics</i> , 2022, 9, 314.	0.9	0
6	The COMIX polarimeter: a compact device for XUV polarization analysis. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 969-977.	1.0	1
7	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
8	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
9	Nanoscale Transient Magnetization Gratings Created and Probed by Femtosecond Extreme Ultraviolet Pulses. <i>Nano Letters</i> , 2021, 21, 2905-2911.	4.5	16
10	Effect of Auger recombination on transient optical properties in XUV and soft X-ray irradiated silicon nitride. <i>Scientific Reports</i> , 2021, 11, 5203.	1.6	3
11	All-optical single-shot complete electric field measurement of extreme ultraviolet free electron laser pulses. <i>Optica</i> , 2021, 8, 545.	4.8	12
12	Ultrafast Adsorbate Excitation Probed with Subpicosecond-Resolution X-Ray Absorption Spectroscopy. <i>Physical Review Letters</i> , 2021, 127, 016802.	2.9	11
13	Generation and detection of 50 GHz surface acoustic waves by extreme ultraviolet pulses. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	15
14	Tomography of a seeded free-electron laser focal spot: qualitative and quantitative comparison of two reconstruction methods for spot size characterization. <i>Optics Express</i> , 2021, 29, 36086.	1.7	3
15	Nanoscale Thermoelasticity in Silicon Nitride Membranes: Implications for Thermal Management. <i>ACS Applied Nano Materials</i> , 2021, 4, 10519-10527.	2.4	5
16	Time-Resolved XUV Absorption Spectroscopy and Magnetic Circular Dichroism at the Ni M _{2,3} -Edges. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 325.	1.3	17
17	Time-resolved observation of transient precursor state of CO on Ru(0001) using carbon K-edge spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2677-2684.	1.3	15
18	Ultrafast Demagnetization Dominates Fluence Dependence of Magnetic Scattering at Co $M_{2,3}$ Edges. <i>Physical Review Letters</i> , 2020, 125, 127201.	2.9	15

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19	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
20	Transient magnetic gratings on the nanometer scale. <i>Structural Dynamics</i> , 2020, 7, 054501.	0.9	16
21	Laser-induced ultrafast demagnetization and perpendicular magnetic anisotropy reduction in a Co88Tb12 thin film with stripe domains. <i>Physical Review B</i> , 2020, 102, .	1.1	21
22	Faster chiral versus collinear magnetic order recovery after optical excitation revealed by femtosecond XUV scattering. <i>Nature Communications</i> , 2020, 11, 6304.	5.8	19
23	Pulse-to-pulse wavefront sensing at free-electron lasers using ptychography. <i>Journal of Applied Crystallography</i> , 2020, 53, 949-956.	1.9	14
24	Single-shot Measurement of Extreme Ultraviolet Free Electron Laser Pulses. , 2020, , .		0
25	Exploring the multiparameter nature of EUV-visible wave mixing at the FERMI FEL. <i>Structural Dynamics</i> , 2019, 6, 040901.	0.9	3
26	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
27	Kirkpatrickâ€™s active optics system at FERMI: system performance analysis. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1462-1472.	1.0	13
28	Nanoscale transient gratings excited and probed by extreme ultraviolet femtosecond pulses. <i>Science Advances</i> , 2019, 5, eaaw5805.	4.7	54
29	Nonlinear XUV-optical transient grating spectroscopy at the Si L _{2,3} â€™edge. <i>Applied Physics Letters</i> , 2019, 114, 181101.	1.5	15
30	Time-resolved ionization measurements with intense ultrashort XUV and X-ray free-electron laser pulses. <i>Laser and Particle Beams</i> , 2019, 37, 235-241.	0.4	2
31	Single-shot time-resolved magnetic x-ray absorption at a free-electron laser. <i>Physical Review B</i> , 2019, 99, .	1.1	12
32	Coherent soft X-ray pulses from an echo-enabled harmonic generation free-electron laser. <i>Nature Photonics</i> , 2019, 13, 555-561.	15.6	92
33	In situ single-shot diffractive fluence mapping for X-ray free-electron laser pulses. <i>Nature Communications</i> , 2018, 9, 214.	5.8	18
34	Characterization of ultrafast free-electron laser pulses using extreme-ultraviolet transient gratings. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 32-38.	1.0	12
35	Advances in instrumentation for FEL-based four-wave-mixing experiments. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 907, 132-148.	0.7	18
36	Timing methodologies and studies at the FERMI free-electron laser. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 44-51.	1.0	5

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37	Generation of coherent phonons by coherent extreme ultraviolet radiation in a transient grating experiment. Applied Physics Letters, 2018, 113, .	1.5	28
38	Seeded X-ray free-electron laser generating radiation with laser statistical properties. Nature Communications, 2018, 9, 4498.	5.8	51
39	First Evidence of Purely Extreme-Ultraviolet Four-Wave Mixing. Physical Review Letters, 2018, 120, 263901.	2.9	37
40	Optical constants modelling in silicon nitride membrane transiently excited by EUV radiation. Optics Express, 2018, 26, 11877.	1.7	6
41	Multi-color imaging of magnetic Co/Pt heterostructures. Structural Dynamics, 2017, 4, 014301.	0.9	32
42	Soft x-ray induced femtosecond solid-to-solid phase transition. High Energy Density Physics, 2017, 24, 22-27.	0.4	37
43	Multi-Color Imaging of Magnetic Co/Pt Multilayers. IEEE Transactions on Magnetics, 2017, 53, 1-5.	1.2	4
44	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
45	Probing ultrafast changes of spin and charge density profiles with resonant XUV magnetic reflectivity at the free-electron laser FERMI. Structural Dynamics, 2017, 4, 055101.	0.9	7
46	Notice of Removal: Generation of acoustic waves by an extreme ultra violet free electron laser in a transient grating experiment. , 2017, , .		0
47	Pulse Duration of Seeded Free-Electron Lasers. Physical Review X, 2017, 7, .	2.8	47
48	Element Selective Probe of the Ultra-Fast Magnetic Response to an Element Selective Excitation in Fe-Ni Compounds Using a Two-Color FEL Source. Photonics, 2017, 4, 6.	0.9	9
49	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
50	Four-wave-mixing experiments and beyond: the TIMER/mini-TIMER setups at FERMI. , 2017, , .		4
51	The FERMI seeded-FEL facility: Status and perspectives. AIP Conference Proceedings, 2016, , .	0.3	4
52	Widely tunable two-colour seeded free-electron laser source for resonant-pump resonant-probe magnetic scattering. Nature Communications, 2016, 7, 10343.	5.8	77
53	Imaging Non-Local Magnetization Dynamics. Synchrotron Radiation News, 2016, 29, 26-31.	0.2	0
54	Experimental setups for FEL-based four-wave mixing experiments at FERMI. Journal of Synchrotron Radiation, 2016, 23, 132-140.	1.0	9

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55	Four-wave-mixing experiments with seeded free electron lasers. Faraday Discussions, 2016, 194, 283-303.	1.6	20
56	Nonlinear optics with coherent free electron lasers. Physica Scripta, 2016, T169, 014003.	1.2	5
57	Direct Phasing of Finite Crystals Illuminated with a Free-Electron Laser. Physical Review X, 2015, 5, .	2.8	12
58	Multipurpose end-station for coherent diffraction imaging and scattering at FERMI@Elettra free-electron laser facility. Journal of Synchrotron Radiation, 2015, 22, 544-552.	1.0	29
59	The FERMI free-electron lasers. Journal of Synchrotron Radiation, 2015, 22, 485-491.	1.0	101
60	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
61	FEL-based transient grating spectroscopy. Proceedings of SPIE, 2015, , .	0.8	2
62	Four-wave mixing experiments with extreme ultraviolet transient gratings. Nature, 2015, 520, 205-208.	13.7	184
63	Optically induced Fe magnetization reversal in Fe/MnAs/GaAs(001). Proceedings of SPIE, 2015, , .	0.8	0
64	Role of the ionization potential in nonequilibrium metals driven to absorption saturation. Physical Review E, 2015, 92, 011101.	0.8	6
65	Ultrafast spin-switching of a ferrimagnetic alloy at room temperature traced by resonant magneto-optical Kerr effect using a seeded free electron laser. Review of Scientific Instruments, 2015, 86, 083901.	0.6	18
66	Science Frontiers with X-Ray Free Electron Laser Sources. , 2015, , 761-785.		1
67	Active optics systems at FERMI Free Electron Laser. , 2015, , .		0
68	Control of the Polarization of a Vacuum-Ultraviolet, High-Gain, Free-Electron Laser. Physical Review X, 2014, 4, .	2.8	80
69	Magnetization and Microstructure Dynamics in $\text{Fe}/\text{MnAs}/\text{GaAs}(001)$ Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 172 Td (stretchy="false") Laser Pulse. Physical Review Letters, 2014, 113, 247202.		26
70	Status of the K-B bendable optics at FERMI@Elettra FEL. , 2014, , .		8
71	Towards jitter-free pump-probe measurements at seeded free electron laser facilities. Optics Express, 2014, 22, 12869.	1.7	83
72	Conformation sequence recovery of a non-periodic object from a diffraction-before-destruction experiment. Optics Express, 2014, 22, 8085.	1.7	11

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73	Coherent and transient states studied with extreme ultraviolet and X-ray free electron lasers: present and future prospects. <i>Advances in Physics</i> , 2014, 63, 327-404.	35.9	15
74	Multi-colour pulses from seeded free-electron-lasers: towards the development of non-linear core-level coherent spectroscopies. <i>Faraday Discussions</i> , 2014, 171, 487-503.	1.6	29
75	X-ray holography with a customizable reference. <i>Nature Communications</i> , 2014, 5, 4661.	5.8	22
76	Role of multilayer-like interference effects on the transient optical response of Si3N4 films pumped with free-electron laser pulses. <i>Applied Physics Letters</i> , 2014, 104, 191104.	1.5	19
77	Imaging Ultrafast Demagnetization Dynamics after a Spatially Localized Optical Excitation. <i>Physical Review Letters</i> , 2014, 112, .	2.9	113
78	Polarization measurement of free electron laser pulses in the VUV generated by the variable polarization source FERMI. , 2014, , .		4
79	Microfocusing of the FERMI@Elettra FEL beam with a K&B 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
80	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
81	Status and achievements at FERMI@Elettra: the first double cascade seeded EUV-SXR FEL facility open to users. , 2013, , .		3
82	Mesoscale morphology of airborne core&shell nanoparticle clusters: x-ray laser coherent diffraction imaging. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164033.	0.6	12
83	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
84	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
85	K-B bendable system optimization at FERMI@Elettra FEL: impact of different spatial wavelengths on the spot size. , 2013, , .		4
86	Tunability experiments at the FERMI@Elettra free-electron laser. <i>New Journal of Physics</i> , 2012, 14, 113009.	1.2	81
87	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
88	Multipurpose modular experimental station for the DiProl beamline of Fermi@Elettra free electron laser. <i>Review of Scientific Instruments</i> , 2011, 82, 043711.	0.6	28
89	Scattering mechanisms in undoped In0.75Ga0.25As/In0.75Al0.25As two-dimensional electron gases. <i>Journal of Crystal Growth</i> , 2005, 278, 538-543.	0.7	22
90	Spin susceptibility of two-dimensional hole gases in GaAs/AlGaAs heterostructures. <i>Solid State Communications</i> , 2005, 135, 57-61.	0.9	3

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91	Strain induced effects on the transport properties of metamorphic InAlAs/InGaAs quantum wells. Thin Solid Films, 2005, 484, 400-407.	0.8	75
92	Anticrossings of spin-split Landau levels in an InAs two-dimensional electron gas with spin-orbit coupling. Physical Review B, 2005, 71, .	1.1	27
93	Magneto-resistively Detected Electron Spin Resonance in Low-Density Two-Dimensional Electron Gas in GaAs-AlGaAs Single Quantum Wells. IEEE Nanotechnology Magazine, 2005, 4, 100-105.	1.1	2
94	Two-dimensional electron gas formation in undoped In _{0.75} Ga _{0.25} As/In _{0.75} Al _{0.25} As quantum wells. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 702.	1.6	42
95	Electron-phonon coupling in the two-phonon mode ternary alloy Al _{0.25} In _{0.75} As/Ga _{0.25} In _{0.75} As quantum well. Europhysics Letters, 2004, 67, 1031-1037.	0.7	7
96	Magnetotransport in high-g-factor low-density two-dimensional electron systems confined in In _{0.75} Ga _{0.25} As/In _{0.75} Al _{0.25} As quantum wells. Physical Review B, 2004, 69, .	1.1	34