

Fabrizio Carbone

List of Publications by Year in descending order

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63
papers

3,199
citations

218592

26
h-index

149623

56
g-index

68
all docs

68
docs citations

68
times ranked

3742
citing authors

#	ARTICLE	IF	CITATIONS
1	Universal Optical Conductance of Graphite. <i>Physical Review Letters</i> , 2008, 100, 117401.	2.9	881
2	Simultaneous observation of the quantization and the interference pattern of a plasmonic near-field. <i>Nature Communications</i> , 2015, 6, 6407.	5.8	225
3	Dynamics of Chemical Bonding Mapped by Energy-Resolved 4D Electron Microscopy. <i>Science</i> , 2009, 325, 181-184.	6.0	170
4	Attosecond coherent control of free-electron wave functions using semi-infinite light fields. <i>Nature Communications</i> , 2018, 9, 2694.	5.8	136
5	Structural Preablation Dynamics of Graphite Observed by Ultrafast Electron Crystallography. <i>Physical Review Letters</i> , 2008, 100, 035501.	2.9	135
6	Ultrafast generation and control of an electron vortex beam via chiral plasmonic near fields. <i>Nature Materials</i> , 2019, 18, 573-579.	13.3	120
7	Laser-Induced Skyrmion Writing and Erasing in an Ultrafast Cryo-Lorentz Transmission Electron Microscope. <i>Physical Review Letters</i> , 2018, 120, 117201.	2.9	115
8	Design and implementation of a fs-resolved transmission electron microscope based on thermionic gun technology. <i>Chemical Physics</i> , 2013, 423, 79-84.	0.9	112
9	Coupling of a high-energy excitation to superconducting quasiparticles in a cuprate from coherent charge fluctuation spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 4539-4544.	3.3	86
10	Direct role of structural dynamics in electron-lattice coupling of superconducting cuprates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20161-20166.	3.3	74
11	meV Resolution in Laser-Assisted Energy-Filtered Transmission Electron Microscopy. <i>ACS Photonics</i> , 2018, 5, 759-764.	3.2	70
12	Filming the formation and fluctuation of skyrmion domains by cryo-Lorentz transmission electron microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 14212-14217.	3.3	68
13	EELS femtosecond resolved in 4D ultrafast electron microscopy. <i>Chemical Physics Letters</i> , 2009, 468, 107-111.	1.2	66
14	Melting of a skyrmion lattice to a skyrmion liquid via a hexatic phase. <i>Nature Nanotechnology</i> , 2020, 15, 761-767.	15.6	63
15	Imaging and controlling plasmonic interference fields at buried interfaces. <i>Nature Communications</i> , 2016, 7, 13156.	5.8	58
16	Holographic imaging of electromagnetic fields via electron-light quantum interference. <i>Science Advances</i> , 2019, 5, eaav8358.	4.7	58
17	A perspective on novel sources of ultrashort electron and X-ray pulses. <i>Chemical Physics</i> , 2012, 392, 1-9.	0.9	51
18	Femtosecond carrier dynamics in bulk graphite and graphene paper. <i>Chemical Physics Letters</i> , 2011, 504, 37-40.	1.2	46

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19	Magnetic Skyrmions and Skyrmion Clusters in the Helical Phase of Cu_2OSeO_3 . Physical Review Letters, 2017, 119, 137201.	2.9	46
20	Electron diffraction by plasmon waves. Physical Review B, 2016, 94, .	1.1	45
21	In Situ Electric Field Skyrmion Creation in Magnetolectric Cu_2OSeO_3 . Nano Letters, 2018, 18, 5167-5171.	4.5	43
22	Design and implementation of a flexible beamline for fs electron diffraction experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 691, 113-122.	0.7	41
23	Order/Disorder Dynamics in a Dodecanethiol-Capped Gold Nanoparticles Supracrystal by Small-Angle Ultrafast Electron Diffraction. Nano Letters, 2016, 16, 2705-2713.	4.5	39
24	Ultrafast structural and electronic dynamics of the metallic phase in a layered manganite. Structural Dynamics, 2014, 1, 014501.	0.9	29
25	Evidence for a Peierls phase-transition in a three-dimensional multiple charge-density waves solid. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5603-5608.	3.3	28
26	Stacking transition in rhombohedral graphite. Frontiers of Physics, 2019, 14, 1.	2.4	28
27	Nanoscale-femtosecond dielectric response of Mott insulators captured by two-color near-field ultrafast electron microscopy. Nature Communications, 2020, 11, 5770.	5.8	27
28	The quantum future of microscopy: Wave function engineering of electrons, ions, and nuclei. Applied Physics Letters, 2020, 116, .	1.5	26
29	Spatio-temporal shaping of a free-electron wave function via coherent light-electron interaction. Rivista Del Nuovo Cimento, 2020, 43, 567-597.	2.0	24
30	Ultrafast electron energy-loss spectroscopy in transmission electron microscopy. MRS Bulletin, 2018, 43, 497-503.	1.7	22
31	The interplay between structure and orbitals in the chemical bonding of graphite. Chemical Physics Letters, 2010, 496, 291-295.	1.2	21
32	The role of the coherence in the cross-correlation analysis of diffraction patterns from two-dimensional dense mono-disperse systems. Scientific Reports, 2015, 5, 16573.	1.6	21
33	Electron-phonon-driven three-dimensional metallicity in an insulating cuprate. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6409-6416.	3.3	18
34	Probing the coupling between a doublon excitation and the charge-density wave in TaS_2 ultrafast optical spectroscopy. Physical Review B, 2016, 94, .	1.1	17
35	Probing the electron-phonon interaction in correlated systems with coherent lattice fluctuation spectroscopy. Physical Review B, 2015, 92, .	1.1	16
36	Real-Time Observation of Phonon-Mediated Interband Scattering in MgB_2 . Physical Review Letters, 2017, 119, 097002.	2.9	16

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37	Coherent generation of symmetry-forbidden phonons by light-induced electron-phonon interactions in magnetite. <i>Physical Review B</i> , 2017, 96, .	1.1	14
38	Clocking the onset of bilayer coherence in a high- T_c cuprate. <i>Physical Review B</i> , 2017, 95, .	1.1	12
39	A versatile setup for ultrafast broadband optical spectroscopy of coherent collective modes in strongly correlated quantum systems. <i>Structural Dynamics</i> , 2016, 3, 064301.	0.9	11
40	Lattice-mediated magnetic order melting in $TbMnO_3$. <i>Physical Review B</i> , 2018, 97, .	1.1	11
41	Modern electron microscopy resolved in space, energy and time. <i>EPJ Applied Physics</i> , 2011, 54, 33503.	0.3	10
42	Quantitative imaging of flux vortices in the type-II superconductor MgB_2 using cryo-Lorentz transmission electron microscopy. <i>Physical Review B</i> , 2013, 88, .	1.1	10
43	Mapping the lattice dynamical anomaly of the order parameters across the Verwey transition in magnetite. <i>New Journal of Physics</i> , 2017, 19, 103013.	1.2	10
44	Quantum Study of Laser-Induced Initial Activation of Graphite-to-Diamond Conversion. <i>Journal of the American Chemical Society</i> , 2010, 132, 12166-12167.	6.6	9
45	Nuclear Excitation by Electron Capture in Excited Ions. <i>Physical Review Letters</i> , 2022, 128, .	2.9	9
46	A proposal for fs-electron microscopy experiments on high-energy excitations in solids. <i>Micron</i> , 2014, 63, 40-46.	1.1	7
47	Ultrafast atomic-scale visualization of acoustic phonons generated by optically excited quantum dots. <i>Structural Dynamics</i> , 2017, 4, 044034.	0.9	7
48	Light scattering from the critical modes of the Verwey transition in magnetite. <i>Physical Review B</i> , 2018, 98, .	1.1	7
49	Dynamics deep from the core. <i>Structural Dynamics</i> , 2015, 2, 020601.	0.9	6
50	Dynamical Control of Nuclear Isomer Depletion via Electron Vortex Beams. <i>Physical Review Letters</i> , 2022, 128, 162501.	2.9	5
51	Design and implementation of an optimal laser pulse front tilting scheme for ultrafast electron diffraction in reflection geometry with high temporal resolution. <i>Structural Dynamics</i> , 2017, 4, 044032.	0.9	4
52	Ultrafast Momentum-Resolved Free-Electron Probing of Optically Pumped Plasmon Thermal Dynamics. <i>ACS Photonics</i> , 2021, 8, 614-624.	3.2	4
53	Energy domain versus time domain precursor fluctuations above the Verwey transition in magnetite. <i>Physical Review B</i> , 2020, 101, .	1.1	3
54	Resonant Inelastic X-Ray Scattering Study of Electron-Exciton Coupling in High- T_c Cuprates. <i>Physical Review X</i> , 2022, 12, .	2.8	3

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55	Charge Dynamics Electron Microscopy. , 2021, , .		2
56	Light-induced Dynamics of a Dodecanethiol-capped Gold Nanoparticles Supracrystal Revealed by Ultrafast Small-angle Electron Diffraction. , 2016, , .		2
57	Femtosecond manipulation of spins, charges, and ions in nanostructures, thin films, and surfaces. Structural Dynamics, 2017, 4, 061504.	0.9	1
58	Investigating Skyrmions Using Lorentz Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 932-933.	0.2	1
59	Local photo-mechanical stiffness revealed in gold nanoparticles supracrystals by ultrafast small-angle electron diffraction. Structural Dynamics, 2019, 6, 024304.	0.9	1
60	An electron walks into a quantum barâ€¦. Science, 2021, 373, 1309-1310.	6.0	1
61	Direct Visualisation of Skyrmion Lattice Defect Alignment at Grain Boundaries. Nanoscale Research Letters, 2022, 17, 20.	3.1	1
62	Shedding Light on Quantum Materials via Ultrafast Broadband Laser Spectroscopy. , 2019, , .		0
63	Longitudinal and transverse modulation of electron wave function with light, and its application to electron microscopy. , 2021, , .		0