

# Simon E Wall

## List of Publications by Year in descending order

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Version: 2024-02-01

48  
papers

2,218  
citations

304743

22  
h-index

265206

42  
g-index

50  
all docs

50  
docs citations

50  
times ranked

3239  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast changes in lattice symmetry probed by coherent phonons. Nature Communications, 2012, 3, 721.	12.8	177
2	Time-domain separation of optical properties from structural transitions in resonantly bonded materials. Nature Materials, 2015, 14, 991-995.	27.5	166
3	Ultrafast disordering of vanadium dimers in photoexcited VO <sub>2</sub> . Science, 2018, 362, 572-576.	12.6	159
4	Coherent orbital waves in the photo-induced insulator-metal dynamics of a magnetoresistive manganite. Nature Materials, 2007, 6, 643-647.	27.5	139
5	Quantum interference between charge excitation paths in a solid-state Mott insulator. Nature Physics, 2011, 7, 114-118.	16.7	134
6	Driving magnetic order in a manganite by ultrafast lattice excitation. Physical Review B, 2011, 84, .	3.2	130
7	Optical switching in VO <sub>2</sub> films by below-gap excitation. Applied Physics Letters, 2008, 92, .	3.3	126
8	High-Field High-Repetition-Rate Sources for the Coherent THz Control of Matter. Scientific Reports, 2016, 6, 22256.	3.3	121
9	Ultrafast energy- and momentum-resolved dynamics of magnetic correlations in the photo-doped Mott insulator Sr <sub>2</sub> IrO <sub>4</sub> . Nature Materials, 2016, 15, 601-605.	27.5	120
10	Tracking the motion of charges in a terahertz light field by femtosecond X-ray diffraction. Nature, 2006, 442, 664-666.	27.8	94
11	Photoinduced Melting of Antiferromagnetic Order in $\text{La}_{0.5}\text{Sr}$ Using Ultrafast Resonant Soft X-Ray Diffraction. Physical Review Letters, 2009, 103, 097402.	7.8	89
12	Strain-engineered diffusive atomic switching in two-dimensional crystals. Nature Communications, 2016, 7, 11983.	12.8	85
13	Ultrafast Coupling between Light, Coherent Lattice Vibrations, and the Magnetic Structure of Semicovalent $\text{LaMnO}_3$ . Physical Review Letters, 2009, 103, 097402.	7.8	81
14	Tracking the evolution of electronic and structural properties of VO <sub>2</sub> during the ultrafast photoinduced insulator-metal transition. Physical Review B, 2013, 87, .	3.2	69
15	Ultrafast and Broadband Tuning of Resonant Optical Nanostructures Using Phase-Change Materials. Advanced Optical Materials, 2016, 4, 1060-1066.	7.3	67
16	Witnessing the formation and relaxation of dressed quasi-particles in a strongly correlated electron system. Nature Communications, 2014, 5, 5112.	12.8	58
17	Study of second and third harmonic generation from an indium tin oxide nanolayer: Influence of nonlocal effects and hot electrons. APL Photonics, 2020, 5, .	5.7	42
18	Attosecond state-resolved carrier motion in quantum materials probed by soft x-ray XANES. Applied Physics Reviews, 2021, 8, .	11.3	30

#	ARTICLE	IF	CITATIONS
19	Sub-nanometre resolution of atomic motion during electronic excitation in phase-change materials. Scientific Reports, 2016, 6, 20633.	3.3	29
20	Programmable chalcogenide-based all-optical deep neural networks. Nanophotonics, 2022, 11, 4073-4088.	6.0	29
21	Ultrafast optical response of the amorphous and crystalline states of the phase change material $\text{Ge}_2\text{Sb}_2\text{Te}_5$ . Physical Review B, 2016, 94, .	3.2	25
22	Imaging Nanometer Phase Coexistence at Defects During the Insulator-Metal Phase Transformation in $\text{VO}_2$ Thin Films by Resonant Soft X-ray Holography. Nano Letters, 2018, 18, 3449-3453.	9.1	24
23	Ultrafast dynamics of spin and orbital correlations in quantum materials: an energy- and momentum-resolved perspective. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20170480.	3.4	20
24	Does $\text{VO}_2$ Host a Transient Monoclinic Metallic Phase?. Physical Review X, 2020, 10, . Evolution of three-dimensional correlations during the photoinduced melting of antiferromagnetic order in $\text{LaSrMnO}_3$ . Physical Review B, 2019, 100, .	8.9	20
25	Transient electronic structure of the photoinduced phase of $\text{SrMnO}_3$ with soft x-ray pulses. Physical Review B, 2009, 80, .	3.2	19
26	Terahertz field control of in-plane orbital order in $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . Nature Communications, 2015, 6, 8175.	12.8	19
27	Laser-induced transient magnons in $\text{SrIr}_2\text{O}_7$ throughout the Brillouin zone. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	19
28	Transient electronic structure of the photoinduced phase of $\text{SrMnO}_3$ with soft x-ray pulses. Physical Review B, 2009, 80, .	3.2	18
29	Phase retrieval and compression of low-power white-light pulses. Applied Physics Letters, 2011, 99, .	3.3	17
30	Measurement of 10-fs pulses across the entire Visible to Near-Infrared Spectral Range. Scientific Reports, 2020, 10, 4690.	3.3	14
31	Quantitative hyperspectral coherent diffractive imaging spectroscopy of a solid-state phase transition in vanadium dioxide. Science Advances, 2021, 7, .	10.3	12
32	Resonant optical control of the structural distortions that drive ultrafast demagnetization in $\text{CrO}_3$ . Physical Review B, 2016, 94, .	3.2	11
33	Advances in Ultrafast Control and Probing of Correlated-Electron Materials. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 81-91.	2.9	9
34	Fermionic Chern insulator from twisted light with linear polarization. Physical Review B, 2022, 105, .	3.2	8
35	Recent Developments in Ultrafast X-ray Techniques for Materials Science Applications. Synchrotron Radiation News, 2016, 29, 13-18.	0.8	7
36	Probing the lattice anharmonicity of superconducting $\text{YBa}_2\text{Cu}_3\text{O}_7$ via phonon harmonics. Physical Review B, 2019, 100, .	3.2	7

#	ARTICLE	IF	CITATIONS
37	Multi-mode excitation drives disorder during the ultrafast melting of a C4-symmetry-broken phase. Nature Communications, 2022, 13, 238.	12.8	7
38	Nanoscale phase separation and pseudogap in the hole-doped cuprates from fluctuating Cu-O-Cu bonds. Physical Review B, 2020, 101, .	3.2	5
39	Nonthermal breaking of magnetic order via photogenerated spin defects in the spin-orbit coupled insulator $\text{Sr}_2\text{VO}_7$ . Physical Review B, 2022, 105, .	3.2	1
40	Light control of orbital domains: case of the prototypical manganite $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . Physica Scripta, 2016, 91, 124002.	2.5	3
41	An achromatic pump-probe setup for broadband, few-cycle ultrafast spectroscopy in quantum materials. Review of Scientific Instruments, 2021, 92, 103003.	1.3	2
42	Ultrafast evolution and transient phases of a prototype out-of-equilibrium Mott-Hubbard material. Nature Communications, 2019, 10, 4034.	12.8	1
43	Coherent Orbital Waves in Manganites. Springer Series in Chemical Physics, 2009, , 170-172.	0.2	0
44	Probing strongly correlated electron dynamics on extreme timescales. Journal of Physics: Conference Series, 2009, 148, 012018.	0.4	0
45	Measuring 3D magnetic correlations during the photo-induced melting of electronic order in $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . EPJ Web of Conferences, 2013, 41, 03003.	0.3	0
46	Competition Between Thermal and Non-Thermal Processes During Femtosecond Switching of Phase Change Materials. , 2014, , .		0
47	Lattice Motions from THz phonon polaritons measured with Femtosecond X-ray Diffraction. Springer Series in Chemical Physics, 2007, , 716-718.	0.2	0
48	Volt-per-Ångstrom terahertz fields from X-ray free-electron lasers. Journal of Synchrotron Radiation, 2020, 27, 796-798.	2.4	0