

Alexander J Melville

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

44
papers

3,052
citations

21
h-index

47
g-index

47
ext. papers

3,605
ext. citations

10.5
avg, IF

4.32
L-index

#	Paper	IF	Citations
44	A strain-driven morphotropic phase boundary in BiFeO ₃ . <i>Science</i> , 2009 , 326, 977-80	33.3	956
43	Photovoltaic effects in BiFeO ₃ . <i>Applied Physics Letters</i> , 2009 , 95, 062909	3.4	429
42	Spontaneous vortex nanodomain arrays at ferroelectric heterointerfaces. <i>Nano Letters</i> , 2011 , 11, 828-34	11.5	365
41	Domain dynamics during ferroelectric switching. <i>Science</i> , 2011 , 334, 968-71	33.3	277
40	Optical properties of quasi-tetragonal BiFeO ₃ thin films. <i>Applied Physics Letters</i> , 2010 , 96, 131907	3.4	133
39	3D integrated superconducting qubits. <i>Npj Quantum Information</i> , 2017 , 3,	8.6	81
38	Giant Resistive Switching via Control of Ferroelectric Charged Domain Walls. <i>Advanced Materials</i> , 2016 , 28, 6574-80	24	61
37	Analysis and mitigation of interface losses in trenched superconducting coplanar waveguide resonators. <i>Applied Physics Letters</i> , 2018 , 112, 062601	3.4	53
36	Atomic scale structure changes induced by charged domain walls in ferroelectric materials. <i>Nano Letters</i> , 2013 , 13, 5218-23	11.5	52
35	BiFeO ₃ domain wall energies and structures: a combined experimental and density functional theory+U study. <i>Physical Review Letters</i> , 2013 , 110, 267601	7.4	49
34	Is there an intrinsic limit to the charge-carrier-induced increase of the Curie temperature of EuO?. <i>Physical Review Letters</i> , 2010 , 105, 257206	7.4	47
33	Impact of ionizing radiation on superconducting qubit coherence. <i>Nature</i> , 2020 , 584, 551-556	50.4	47
32	Coherent Coupled Qubits for Quantum Annealing. <i>Physical Review Applied</i> , 2017 , 8,	4.3	43
31	Ultrafast optical tuning of ferromagnetism via the carrier density. <i>Nature Communications</i> , 2015 , 6, 67241	17.4	40
30	Waveguide quantum electrodynamics with superconducting artificial giant atoms. <i>Nature</i> , 2020 , 583, 775-779	50.4	40
29	High-quality EuO thin films the easy way via topotactic transformation. <i>Nature Communications</i> , 2015 , 6, 7716	17.4	35
28	Determining Interface Dielectric Losses in Superconducting Coplanar-Waveguide Resonators. <i>Physical Review Applied</i> , 2019 , 12,	4.3	33

27	Probing mixed tetragonal/rhombohedral-like monoclinic phases in strained bismuth ferrite films by optical second harmonic generation. <i>Applied Physics Letters</i> , 2010 , 97, 112903	3.4	33
26	Lutetium-doped EuO films grown by molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2012 , 100, 222101	3.4	26
25	Influence of chemical doping on the magnetic properties of EuO. <i>Physical Review B</i> , 2013 , 87,	3.3	23
24	Hetero-epitaxial EuO interfaces studied by analytic electron microscopy. <i>Applied Physics Letters</i> , 2014 , 104, 091601	3.4	21
23	Low thermal conductivity of CsBiNb2O7 epitaxial layers. <i>Applied Physics Letters</i> , 2010 , 96, 121903	3.4	21
22	Effect of film thickness and biaxial strain on the curie temperature of EuO. <i>Applied Physics Letters</i> , 2013 , 102, 062404	3.4	20
21	Realization of High-Fidelity CZ and ZZ-Free iSWAP Gates with a Tunable Coupler. <i>Physical Review X</i> , 2021 , 11,	9.1	19
20	Solid-state qubits integrated with superconducting through-silicon vias. <i>Npj Quantum Information</i> , 2020 , 6,	8.6	18
19	Influence of the substrate temperature on the Curie temperature and charge carrier density of epitaxial Gd-doped EuO films. <i>Applied Physics Letters</i> , 2011 , 98, 102110	3.4	17
18	Surface, bulk, and interface electronic states of epitaxial BiFeO3 films. <i>Journal of Vacuum Science & Technology B</i> , 2009 , 27, 2012		16
17	Characterizing and Optimizing Qubit Coherence Based on SQUID Geometry. <i>Physical Review Applied</i> , 2020 , 13,	4.3	15
16	Temperature dependence of the electronic structure and Fermi-surface reconstruction of Eu(1-x)Gd(x)O through the ferromagnetic metal-insulator transition. <i>Physical Review Letters</i> , 2012 , 108, 267003	7.4	13
15	Making EuO multiferroic by epitaxial strain engineering. <i>Communications Materials</i> , 2020 , 1,	6	11
14	Generating spatially entangled itinerant photons with waveguide quantum electrodynamics. <i>Science Advances</i> , 2020 , 6,	14.3	9
13	Comparison of dielectric loss in titanium nitride and aluminum superconducting resonators. <i>Applied Physics Letters</i> , 2020 , 117, 124004	3.4	9
12	Microwave Package Design for Superconducting Quantum Processors. <i>PRX Quantum</i> , 2021 , 2,	6.1	9
11	Epitaxial growth of europium monoxide on diamond. <i>Applied Physics Letters</i> , 2013 , 103, 222402	3.4	7
10	Hexagonal boron nitride as a low-loss dielectric for superconducting quantum circuits and qubits.. <i>Nature Materials</i> , 2022 ,	27	4

9	Universal Nonadiabatic Control of Small-Gap Superconducting Qubits. <i>Physical Review X</i> , 2020 , 10,	9.1	4
8	Multi-level quantum noise spectroscopy. <i>Nature Communications</i> , 2021 , 12, 967	17.4	4
7	Exploring the intrinsic limit of the charge-carrier-induced increase of the Curie temperature of Lu- and La-doped EuO thin films. <i>Physical Review Materials</i> , 2020 , 4,	3.2	3
6	Direct observation of polarization-induced two-dimensional electron/hole gases at ferroelectric-insulator interface. <i>Npj Quantum Materials</i> , 2021 , 6,	5	3
5	Silicon Hard-Stop Spacers for 3D Integration of Superconducting Qubits 2019 ,		3
4	Size Effect on Spontaneous Flux-closure Domains in BiFeO ₃ Thin Films. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1596-1597	0.5	2
3	Improving qubit coherence using closed-loop feedback.. <i>Nature Communications</i> , 2022 , 13, 1932	17.4	0
2	Mechanical and Electrical Control of Charged Domain Walls in Ferroelectric Materials. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1546-1547	0.5	
1	Nanosession: Multiferroics - High Transition Temperatures 2013 , 347-355		