Kenneth S Burch

List of Publications by Year
in descending order

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62 papers	4,062 citations	159585 30 h-index	118850 62 g-index
65 all docs	65 docs citations	65 times ranked	6007 citing authors

#	Article	IF	Citations
1	Magnetism in two-dimensional van der Waals materials. Nature, 2018, 563, 47-52.	27.8	994
2	Scattering Continuum and Possible Fractionalized Excitations in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mrow><mml:mi>RuCl</mml:mi><mml:mi><mml:mi>Physical Review Letters, 2015, 114, 147201.	7.8	367
3	Colossal mid-infrared bulk photovoltaic effect in a type-I Weyl semimetal. Nature Materials, 2019, 18, 471-475.	27.5	253
4	Magneto-elastic coupling in a potential ferromagnetic 2D atomic crystal. 2D Materials, 2016, 3, 025035.	4.4	195
5	Proximity-induced high-temperature superconductivity in the topological insulators Bi2Se3 and Bi2Te3. Nature Communications, 2012, 3, 1056.	12.8	153
6	When Chiral Photons Meet Chiral Fermions: Photoinduced Anomalous Hall Effects in Weyl Semimetals. Physical Review Letters, 2016, 116, 026805.	7.8	143
7	Spin-orbit excitations and electronic structure of the putative Kitaev magnet<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mo>â^'</mml:mo><mml:mn>3</mml:mn><mml:msub><mml:mrow><mml:mi><mml:mi>Physical Review B, 2016, 93, .	3.2	119
8	A ferromagnetic insulating substrate for the epitaxial growth of topological insulators. Journal of Applied Physics, 2013, 114, 114907.	2.5	138
9	Layer Hall effect in a 2D topological axion antiferromagnet. Nature, 2021, 595, 521-525.	27.8	136
10	Controlling Magnetic and Optical Properties of the van der Waals Crystal CrCl_{3â^'}_xBr_x via Mixed Halide Chemistry. Advanced Materials, 2018, 30, e1801325.	21.0	100
11	Optical properties of III-Mn-V ferromagnetic semiconductors. Journal of Magnetism and Magnetic Materials, 2008, 320, 3207-3228.	2.3	85
12	High mobility in a van der Waals layered antiferromagnetic metal. Science Advances, 2020, 6, eaay6407.	10.3	85
13	Topology and geometry under the nonlinear electromagnetic spotlight. Nature Materials, 2021, 20, 1601-1614.	27.5	71
14	Dielectrophoresis assisted rapid, selective and single cell detection of antibiotic resistant bacteria with G-FETs. Biosensors and Bioelectronics, 2020, 156, 112123.	10.1	62
15	Optical evidence of surface state suppression in Bi-based topological insulators. Physical Review B, 2014, 89, .	3.2	56
16	Fabrication and characterization of topological insulator Bi2Se3 nanocrystals. Applied Physics Letters, 2011, 98, .	3.3	55
17	Coulomb blockade in an atomically thin quantum dot coupled to a tunable Fermi reservoir. Nature Nanotechnology, 2019, 14, 442-446.	31.5	54
18	Activation of Ultrathin Films of Hematite for Photoelectrochemical Water Splitting via H₂ Treatment. ChemSusChem, 2015, 8, 1557-1567.	6.8	51

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19	Evidence for Helical Hinge Zero Modes in an Fe-Based Superconductor. Nano Letters, 2019, 19, 4890-4896.	9.1	51
20	Possible structural transformation and enhanced magnetic fluctuations in exfoliated Î±-RuCl3. Journal of Physics and Chemistry of Solids, 2019, 128, 291-295.	4.0	49
21	Atomic-scale strain manipulation of a charge density wave. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6986-6990.	7.1	47
22	Towards a Two-Dimensional Superconducting State of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>La</mml:mi><mml:mrow><mml:mn>2</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi> a Moderate External Magnetic Field. Physical Review Letters, 2010, 104, 157002.	7.8	45
23	Modulation Doping via a Two-Dimensional Atomic Crystalline Acceptor. Nano Letters, 2020, 20, 8446-8452.	9.1	44
24	Accessing new magnetic regimes by tuning the ligand spin-orbit coupling in van der Waals magnets. Science Advances, 2020, 6, eabb9379.	10.3	42
25	Differences in Chemical Doping Matter: Superconductivity in Ti_{1â€“x}Ta_xSe₂ but Not in Ti_{1â€“x}Nb_xSe₂. Chemistry of Materials, 2016, 28, 1927-1935.	6.7	40
26	Mid-infrared Polaritonic Coupling between Boron Nitride Nanotubes and Graphene. ACS Nano, 2014, 8, 11305-11312.	14.6	38
27	The range of non-Kitaev terms and fractional particles in Î±-RuCl3. Npj Quantum Materials, 2020, 5, .	5.2	38
28	Electric switching of magnetism in 2D. Nature Nanotechnology, 2018, 13, 532-532.	31.5	36
29	Cooper-pair-based photon entanglement without isolated emitters. Physical Review B, 2014, 89, .	3.2	34
30	Understanding the evolution of anomalous anharmonicity in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn> Physical Review B, 2017, 95, .	3.2	32
31	Uncovering electron-phonon scattering and phonon dynamics in type-I Weyl semimetals. Physical Review B, 2019, 100, .	3.2	29
32	Evidence for Dominant Phonon-Electron Scattering in Weyl Semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WP</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Physical Review X, 2021, 11, .	8.9	28
33	Local phonon mode in thermoelectric Bi2Te2Se from charge neutral antisites. Applied Physics Letters, 2016, 108, 041911.	3.3	26
34	Broadband multi-interferometer spectroscopy in high magnetic fields: From THz to visible. Review of Scientific Instruments, 2004, 75, 4710-4717.	1.3	23
35	Hybridization and Superconducting Gaps in the Heavy-Fermion Superconductor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>PuCoGa</mml:mi><mml:mn>5</mml:mn></mml:msub></mml:math>Probed via the Dynamics of Photoinduced Quasiparticles. Physical Review Letters, 2010, 104, 227002.	7.8	23
36	Sum-Rule Constraints on the Surface State Conductance of Topological Insulators. Physical Review Letters, 2015, 115, 116804.	7.8	22

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37	Fe2O3/Cu2O heterostructured nanocrystals. Journal of Materials Chemistry A, 2014, 2, 8525-8533.	10.3	19
38	Rapid, Multianalyte Detection of Opioid Metabolites in Wastewater. ACS Nano, 2022, 16, 3704-3714.	14.6	19
39	Doping-dependent charge dynamics in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Cu</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal">Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Se</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2014, 90, .	3.2	18
40	Low vibration high numerical aperture automated variable temperature Raman microscope. Review of Scientific Instruments, 2016, 87, 043105.	1.3	17
41	Emergent Multifunctional Magnetic Proximity in van der Waals Layered Heterostructures. Advanced Science, 2022, 9, .	11.2	17
42	Subterahertz spectroscopy at He-3 temperatures. Review of Scientific Instruments, 2003, 74, 4703-4710.	1.3	16
43	Automatic Spike Removal Algorithm for Raman Spectra. Applied Spectroscopy, 2016, 70, 1861-1871.	2.2	15
44	Axial Higgs mode detected by quantum pathway interference in RTe3. Nature, 2022, 606, 896-901.	27.8	14
45	A cleanroom in a glovebox. Review of Scientific Instruments, 2020, 91, 073909.	1.3	13
46	Electronic Raman scattering in the 2D antiferromagnet NiPS ₃. Science Advances, 2022, 8, eabl7707.	10.3	13
47	Charge transfer in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mtext>EuS/Bi</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> heterostructures as indicated by the absence of Raman scattering. Physical Review B, 2018, 98, .	3.2	12
48	Phase-Controllable Synthesis of Ultrathin Molybdenum Nitride Crystals Via Atomic Substitution of MoS₂. Chemistry of Materials, 2022, 34, 351-357.	6.7	12
49	Detection of a multiâ€disease biomarker in saliva with graphene field effect transistors. Medical Devices & Sensors, 2020, 3, e10121.	2.7	11
50	Hybrid High-Temperature-Superconductorâ€“Semiconductor Tunnel Diode. Physical Review X, 2012, 2, .	8.9	10
51	Optical properties of SrTiO3 on silicon(100). Applied Physics Letters, 2013, 102, .	3.3	9
52	Evidence for a new excitation at the interface between a high-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:math> and a topological insulator. Physical Review B, 2014, 90, .	3.2	9
53	Evidence of a coupled electron-phonon liquid in NbGe2. Nature Communications, 2021, 12, 5292.	12.8	8
54	Crystal structure and elementary electronic properties of Bi-stabilized Î±-In2Se3. Materials Research Bulletin, 2013, 48, 2517-2521.	5.2	7

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55	One-dimensional alignment of nanoparticles via magnetic sorting. Applied Physics Letters, 2010, 96, 163103.	3.3	6
56	Modeling tunneling for the unconventional superconducting proximity effect. Superconductor Science and Technology, 2016, 29, 125006.	3.5	6
57	Dynamical Anyon Generation in Kitaev Honeycomb Non-Abelian Spin Liquids. Physical Review Letters, 2022, 129, .	7.8	6
58	ac Susceptometry of 2D van der Waals Magnets Enabled by the Coherent Control of Quantum Sensors. PRX Quantum, 2021, 2, .	9.2	5
59	Signatures of non-Loudon-Fleury Raman scattering in the Kitaev magnet <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi><mml:mtext>â^’</mml:mtext><mml:msub><mml:mrow><i Physical Review B, 2022, 105, .	3.2	5
60	Structural study of Bi2Sr2CaCu2O8+Î´ exfoliated nanocrystals. Applied Physics Letters, 2012, 101, 223106.	3.3	4
61	Topological Magnon Band Crossing in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">Y</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>7</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: Physical Review Letters, 2021, 127, 267203.	7.8	4
62	Andreev reflection without Fermi surface alignment in high-T_cvan der Waals heterostructures. New Journal of Physics, 2017, 19, 043026.	2.9	3