

Aaron Bostwick

List of Publications by Year in descending order

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157
papers

17,857
citations

26567

56
h-index

12558

132
g-index

165
all docs

165
docs citations

165
times ranked

18131
citing authors

#	ARTICLE	IF	CITATIONS
1	Twofold van Hove singularity and origin of charge order in topological kagome superconductor CsV ₃ Sb ₅ . Nature Physics, 2022, 18, 301-308.	6.5	176
2	Correlation-driven electron-hole asymmetry in graphene field effect devices. Npj Quantum Materials, 2022, 7, .	1.8	6
3	Strong interlayer interactions in bilayer and trilayer moiré superlattices. Science Advances, 2022, 8, eabk1911.	4.7	9
4	Robust kagome electronic structure in the topological quantum magnets $X\text{Mn}$		

#	ARTICLE	IF	CITATIONS
19	The Itinerant 2D Electron Gas of the Indium Oxide (111) Surface: Implications for Carbon and Energy Conversion Applications. <i>Small</i> , 2020, 16, e1903321.	5.2	17
20	Spectromicroscopic measurement of surface and bulk band structure interplay in a disordered topological insulator. <i>Nature Physics</i> , 2020, 16, 285-289.	6.5	8
21	Dirac fermions and flat bands in the ideal kagome metal FeSn. <i>Nature Materials</i> , 2020, 19, 163-169.	13.3	367
22	Understanding the Mechanism of Electronic Defect Suppression Enabled by Nonidealities in Atomic Layer Deposition. <i>Journal of the American Chemical Society</i> , 2020, 142, 134-145.	6.6	6
23	Two phase transitions driven by surface electron doping in WTe_2 . <i>Physical Review B</i> , 2020, 102, .		
24	Topological flat bands in frustrated kagome lattice CoSn. <i>Nature Communications</i> , 2020, 11, 4004.	5.8	203
25	Enhanced tunability of two-dimensional electron gas on SrTiO ₃ through heterostructuring. <i>Current Applied Physics</i> , 2020, 20, 1268-1273.	1.1	3
26	Visualizing Orbital Content of Electronic Bands in Anisotropic 2D Semiconducting ReSe ₂ . <i>ACS Nano</i> , 2020, 14, 7880-7891.	7.3	19
27	Momentum-resolved view of highly tunable many-body effects in a graphene/hBN field-effect device. <i>Physical Review B</i> , 2020, 101, .	1.1	13
28	Direct observation of minibands in a twisted graphene/WS ₂ bilayer. <i>Science Advances</i> , 2020, 6, eaay6104.	4.7	39
29	Black phosphorus as a bipolar pseudospin semiconductor. <i>Nature Materials</i> , 2020, 19, 277-281.	13.3	55
30	K-means-driven Gaussian Process data collection for angle-resolved photoemission spectroscopy. <i>Machine Learning: Science and Technology</i> , 2020, 1, 045015.	2.4	7
31	Two-dimensional electron systems in perovskite oxide heterostructures: Role of the polarity-induced substitutional defects. <i>Physical Review Materials</i> , 2020, 4, .	0.9	7
32	Topological surface states above the Fermi level in Hf ₂ Te ₂ P. <i>Physical Review B</i> , 2019, 100, .	1.1	4
33	Rigid Band Shifts in Two-Dimensional Semiconductors through External Dielectric Screening. <i>Physical Review Letters</i> , 2019, 123, 206403.	2.9	65
34	Tunable electronic structure in gallium chalcogenide van der Waals compounds. <i>Physical Review B</i> , 2019, 100, .	1.1	6
35	Surface states and Rashba-type spin polarization in antiferromagnetic $MnBi_2$. <i>Physical Review B</i> , 2019, 100, .		
36	Imaging microscopic electronic contrasts at the interface of single-layer WS ₂ with oxide and boron nitride substrates. <i>Applied Physics Letters</i> , 2019, 114, 151601.	1.5	14

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37	Orbital Fingerprint of Topological Fermi Arcs in the Weyl Semimetal TaP. Physical Review Letters, 2019, 122, 116402.	2.9	22
38	Polarization control at the microscopic and electronic structure observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 914, 156-164.	0.7	0
39	Effects of Defects on Band Structure and Excitons in WS ₂ Revealed by Nanoscale Photoemission Spectroscopy. ACS Nano, 2019, 13, 1284-1291.	7.3	64
40	Intrinsic insulating ground state in transition metal dichalcogenide TiSe ₂ . Physical Review Materials, 2019, 3, .	0.9	13
41	Dirac nodal lines protected against spin-orbit interaction in IrO ₂ . Physical Review Materials, 2019, 3, .	0.9	13
42	The graphene/n-Ge(110) interface: structure, doping, and electronic properties. Nanoscale, 2018, 10, 6088-6098.	2.8	28
43	How to extract the surface potential profile from the ARPES signature of a 2DEG. Journal of Electron Spectroscopy and Related Phenomena, 2018, 225, 16-22.	0.8	13
44	Giant spin-splitting and gap renormalization driven by trions in single-layer WS ₂ /h-BN heterostructures. Nature Physics, 2018, 14, 355-359.	6.5	83
45	Evidence for absence of metallic surface states in BiO ₂ -terminated BaBiO ₃ thin films. Current Applied Physics, 2018, 18, 658-662.	1.1	7
46	Massive Dirac fermions in a ferromagnetic kagome metal. Nature, 2018, 555, 638-642.	13.7	544
47	Evidence for Weyl fermions in a canonical heavy-fermion semimetal YbPtBi. Nature Communications, 2018, 9, 4622.	5.8	62
48	Dirac nodal lines and flat-band surface state in the functional oxide RuO ₂ . Physical Review B, 2018, 98, .	1.1	5
49	Microscopy of hydrogen and hydrogen-vacancy defect structures on graphene devices. Physical Review B, 2018, 98, .	1.1	5
50	Atomic-layer-resolved composition and electronic structure of the cuprate Bi ₂ Te ₂ S ₂ r ₂ . Physical Review B, 2018, 98, .	1.1	5
51	Emergence of a Metal-Insulator Transition and High-Temperature Charge-Density Waves in VSe ₂ at the Monolayer Limit. Nano Letters, 2018, 18, 5432-5438.	4.5	170
52	Nano focusing of soft X-rays by a new capillary mirror optic. Synchrotron Radiation News, 2018, 31, 50-52.	0.2	34
53	Multimodal spectromicroscopy of monolayer WS ₂ enabled by ultra-clean van der Waals epitaxy. 2D Materials, 2018, 5, 045010.	2.0	40
54	Electronic structure of exfoliated and epitaxial hexagonal boron nitride. Physical Review Materials, 2018, 2, .	0.9	19

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55	Volatile two-dimensional electron gas in ultrathin BaTiO_3 films. Physical Review Materials, 2018, 2, .		
56	Universal Mechanism of Band-Gap Engineering in Transition-Metal Dichalcogenides. Nano Letters, 2017, 17, 1610-1615.	4.5	157
57	Evidence for indirect band gap in BaSnO_3 using angle-resolved photoemission spectroscopy. Current Applied Physics, 2017, 17, 595-599.	1.1	21
58	Hallmarks of Hunds coupling in the Mott insulator Ca_2RuO_4 . Nature Communications, 2017, 8, 15176.	5.8	66
59	Quasiparticles and charge transfer at the two surfaces of the honeycomb iridate Na_2IrO_5 . Physical Review B, 2017, 96, .		
60	Electronic Phase Separation and Dramatic Inverse Band Renormalization in the Mixed-Valence Cuprate LiCu_2O . Physical Review Letters, 2017, 118, 176404.		
61	How Indium Nitride Senses Water. Nano Letters, 2017, 17, 7339-7344.	4.5	18
62	NaSn_2As_2 : An Exfoliatable Layered van der Waals Zintl Phase. ACS Nano, 2016, 10, 9500-9508.	7.3	39
63	Nature and topology of the low-energy states in ZrTe_5 . Physical Review B, 2016, 94, .	1.1	50
64	Thickness-dependent electronic structure in ultrathin LaNiO_3 films under tensile strain. Physical Review B, 2016, 93, .	1.1	27
65	New family of graphene-based organic semiconductors: An investigation of photon-induced electronic structure manipulation in half-fluorinated graphene. Physical Review B, 2016, 93, .	1.1	5
66	Energetic, spatial, and momentum character of the electronic structure at a buried interface: The two-dimensional electron gas between two metal oxides. Physical Review B, 2016, 93, .	1.1	29
67	Sublattice Interference as the Origin of $\tilde{\Gamma}_f$ Band Kinks in Graphene. Physical Review Letters, 2016, 116, 186802.	2.9	13
68	Depth-Resolved Composition and Electronic Structure of Buried Layers and Interfaces in a $\text{LaNiO}_3/\text{SrTiO}_3$ Superlattice from Soft- and Hard- X-ray Standing-Wave Angle-Resolved Photoemission. Journal of Electron Spectroscopy and Related Phenomena, 2016, 211, 70-81.	0.8	9
69	Hallmarks of the Mott-metal crossover in the hole-doped pseudospin-1/2 Mott insulator Sr_2IrO_4 . Nature Communications, 2016, 7, 11367.	5.8	99
70	Spatially Resolved Electronic Properties of Single-Layer WS_2 on Transition Metal Oxides. ACS Nano, 2016, 10, 10058-10067.	7.3	31
71	A novel quasi-one-dimensional topological insulator in bismuth iodide $\hat{\Gamma}^2\text{-Bi}_4\text{I}_4$. Nature Materials, 2016, 15, 154-158.	13.3	90
72	Bulk and surface band structure of the new family of semiconductors BiTeX (X=I, Br, Cl). Journal of Electron Spectroscopy and Related Phenomena, 2015, 201, 115-120.	0.8	18

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73	Latent instabilities in metallic LaNiO ₃ films by strain control of Fermi-surface topology. Scientific Reports, 2015, 5, 8746.	1.6	34
74	Insulating-layer formation of metallic LaNiO ₃ on Nb-doped SrTiO ₃ substrate. Applied Physics Letters, 2015, 106, 121601.	1.5	10
75	Superlattice effects in graphene on SiC(0001) and Ir(111) probed by ARPES. Synthetic Metals, 2015, 210, 85-94.	2.1	11
76	microARPES and nanoARPES at diffraction-limited light sources: opportunities and performance gains. Journal of Synchrotron Radiation, 2014, 21, 1048-1056.	1.0	69
77	Impact of vacancy clusters on characteristic resistance change of nonstoichiometric strontium titanate nano-film. Applied Physics Letters, 2014, 104, .	1.5	15
78	Consequences of Broken Translational Symmetry in FeSexTe1-x. Physical Review Letters, 2014, 112, .	2.9	17
79	Publisher's Note: Elemental Topological Insulator with Tunable Fermi Level: Strained $\hat{\Gamma}_{\pm}$ Sn on InSb(001). Physical Review Letters, 2014, 112, .	2.9	2
80	Bilayer splitting and wave functions symmetry in Sr ₃ Sn ₃ Bi ₃ . Physical Review B, 2014, 89, .	2.9	1
81	Angle-Resolved Photoemission Spectroscopy of Tetragonal CuO: Evidence for Intralayer Coupling Between Cupratelike Sublattices. Physical Review Letters, 2014, 113, 187001.	2.9	21
82	Luminescence, Patterned Metallic Regions, and Photon-Mediated Electronic Changes in Single-Sided Fluorinated Graphene Sheets. ACS Nano, 2014, 8, 7801-7808.	7.3	28
83	The electronic structure of the high-symmetry perovskite iridate Ba ₂ IrO ₄ . New Journal of Physics, 2014, 16, 013008.	1.2	35
84	Fermi arcs in a doped pseudospin-1/2 Heisenberg antiferromagnet. Science, 2014, 345, 187-190.	6.0	261
85	Correlation between micrometer-scale ripple alignment and atomic-scale crystallographic orientation of monolayer graphene. Scientific Reports, 2014, 4, 7263.	1.6	21
86	Coexisting massive and massless Dirac fermions in symmetry-broken bilayer graphene. Nature Materials, 2013, 12, 887-892.	13.3	164
87	Elemental Topological Insulator with Tunable Fermi Level: Strained $\hat{\Gamma}_{\pm}$ Sn on InSb(001). Physical Review Letters, 2013, 111, 157205.	2.9	130
88	Role of preferential weak hybridization between the surface-state of a metal and the oxygen atom in the chemical adsorption mechanism. Physical Chemistry Chemical Physics, 2013, 15, 19019.	1.3	8
89	Band offsets in complex-oxide thin films and heterostructures of SrTiO ₃ /LaNiO ₃ and SrTiO ₃ /GdTiO ₃ by soft and hard X-ray photoelectron spectroscopy. Journal of Applied Physics, 2013, 113, .	1.1	29
90	Magnetic order in a frustrated two-dimensional atom lattice at a semiconductor surface. Nature Communications, 2013, 4, 1620.	5.8	57

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91	Tunable Polaronic Conduction in Anatase TiO_2 . Physical Review Letters, 2013, 110, 196403.	2.9	237
92	Role of Transition Metal in Fast Oxidation Reaction on the Pt_3TM (111) (TM = Ni, Co) Surfaces. Advanced Energy Materials, 2013, 3, 1257-1261.	10.2	36
93	Momentum-resolved electronic structure at a buried interface from soft X-ray standing-wave angle-resolved photoemission. Europhysics Letters, 2013, 104, 17004.	0.7	35
94	Au-induced quantum chains on $\text{Ge}(001)$ π -symmetries, long-range order and the conduction path. Journal of Physics Condensed Matter, 2013, 25, 014015.	0.7	14
95	Small scale rotational disorder observed in epitaxial graphene on $\text{SiC}(0001)$. New Journal of Physics, 2013, 15, 023019.	1.2	8
96	Rapid high-resolution spin- and angle-resolved photoemission spectroscopy with pulsed laser source and time-of-flight spectrometer. Review of Scientific Instruments, 2013, 84, 093904.	0.6	21
97	Uniaxial strain induced band splitting in semiconducting SrTiO_3 . Physical Review B, 2013, 87, .	1.1	16
98	Visualizing Atomic-Scale Negative Differential Resistance in Bilayer Graphene. Physical Review Letters, 2013, 110, 036804.	2.9	23
99	Layer-by-Layer Evolution of a Two-Dimensional Electron Gas Near an Oxide Interface. Physical Review Letters, 2013, 111, 126401.	2.9	45
100	Electronic Instability in a Zero-Gap Semiconductor: The Charge-Density Wave in TaSe_4 . Physical Review Letters, 2013, 110, 236401.	2.9	31
101	Evidence for Interlayer Coupling and Moiré Periodic Potentials in Twisted Bilayer Graphene. Physical Review Letters, 2012, 109, 186807.	2.9	179
102	Giant Ambipolar Rashba Effect in the Semiconductor BiTeI . Physical Review Letters, 2012, 109, 096803.	2.9	157
103	Extraordinary epitaxial alignment of graphene islands on $\text{Au}(111)$. New Journal of Physics, 2012, 14, 053008.	1.2	78
104	Zooming in on Electronic Structure: NanoARPES at SOLEIL and ALS. Synchrotron Radiation News, 2012, 25, 19-25.	0.2	36
105	Effective screening and the plasmaron bands in graphene. Physical Review B, 2011, 84, .	1.1	85
106	Highly p-doped epitaxial graphene obtained by fluorine intercalation. Applied Physics Letters, 2011, 98, .	1.5	141
107	Growth from Below: Graphene Bilayers on $\text{Ir}(111)$. ACS Nano, 2011, 5, 2298-2306.	7.3	105
108	Electronic structure of graphene on single-crystal copper substrates. Physical Review B, 2011, 84, .	1.1	148

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109	Fluorographene: A Wide Bandgap Semiconductor with Ultraviolet Luminescence. ACS Nano, 2011, 5, 1042-1046.	7.3	394
110	Giant Faraday rotation in single- and multilayer graphene. Nature Physics, 2011, 7, 48-51.	6.5	521
111	The interaction of Xe and Xe+K with graphene. Journal of Electron Spectroscopy and Related Phenomena, 2011, 183, 118-124.	0.8	3
112	Strictly one-dimensional electron system in Au chains on Ge(001) revealed by photoelectron spectroscopy. Physical Review B, 2011, 83, .	1.1	37
113	Suppression of Near-Fermi Level Electronic States at the Interface in a LaNiO_3 / LaNiO_2 Heterostructure. Physical Review Letters, 2011, 107, 116402.	2.9	39
114	In-plane orientation effects on the electronic structure, stability, and Raman scattering of monolayer graphene on Ir(111). Physical Review B, 2011, 83, .	1.1	146
115	Evidence for a Lifshitz transition in electron-doped iron arsenic superconductors at the onset of superconductivity. Nature Physics, 2010, 6, 419-423.	6.5	237
116	Loss of nodal quasiparticle integrity in underdoped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$. Nature Physics, 2010, 6, 905-911.	6.5	103
117	Change of the Fermi surface of Gd metal upon magnetic ordering as seen via angle-resolved photoelectron spectroscopy. Physical Review B, 2010, 81, .	1.1	18
118	Fermi-Surface Topology and Helical Antiferromagnetism in Heavy Lanthanide Metals. Physical Review Letters, 2010, 104, 246401.	2.9	27
119	Interface properties of magnetic tunnel junction $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$ / $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$ / $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$. Physical Review B, 2010, 82, .	1.1	71
120	The study of oxygen molecules on Pt (111) surface with high resolution x-ray photoemission spectroscopy. Journal of Chemical Physics, 2010, 133, 034501.	1.2	30
121	The interaction of quasi-particles in graphene with chemical dopants. New Journal of Physics, 2010, 12, 125014.	1.2	10
122	Band Structure of SnTe Studied by Photoemission Spectroscopy. Physical Review Letters, 2010, 105, 086404.	2.9	90
123	Unexpected Fermi surface nesting in the pnictide parent compounds BaFe_2As_2 and CaFe_2As_2 . Physical Review B, 2010, 81, .	1.1	76
124	Extended van Hove Singularity and Superconducting Instability in Doped Graphene. Physical Review Letters, 2010, 104, 136803.	2.9	294
125	Observation of Plasmarons in Quasi-Freestanding Doped Graphene. Science, 2010, 328, 999-1002.	6.0	375
126	Preferential occupation of interface bands in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$ / $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$ / $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_2$. Physical Review B, 2010, 82, .	1.1	39

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127	The formation of an energy gap in graphene on ruthenium by controlling the interface. New Journal of Physics, 2010, 12, 033014.	1.2	171
128	Structure and correlation effects in semiconducting SrTiO_3 . Physical Review B, 2010, 81, .	1.1	77
129	High-resolution angle-resolved photoemission studies of quasiparticle dynamics in graphite. Physical Review B, 2009, 79, .	1.1	14
130	Bilayer splitting and c-axis coupling in bilayer manganites showing colossal magnetoresistance. Physical Review B, 2009, 80, .	1.1	7
131	Friction and Dissipation in Epitaxial Graphene Films. Physical Review Letters, 2009, 102, 086102.	2.9	482
132	Towards wafer-size graphene layers by atmospheric pressure graphitization of silicon carbide. Nature Materials, 2009, 8, 203-207.	13.3	2,396
133	Experimental studies of the electronic structure of graphene. Progress in Surface Science, 2009, 84, 380-413.	3.8	75
134	Quasiparticle Transformation during a Metal-Insulator Transition in Graphene. Physical Review Letters, 2009, 103, 056404.	2.9	208
135	Three- to Two-Dimensional Transition of the Electronic Structure in CaFe_2As_2 . A Parent Compound for an Iron Arsenic High-Temperature Superconductor. Physical Review Letters, 2009, 102, 167004.	2.9	208
136	Epitaxial graphene: a new material. Physica Status Solidi (B): Basic Research, 2008, 245, 1436-1446.	0.7	173
137	Origin of the energy bandgap in epitaxial graphene. Nature Materials, 2008, 7, 258-259.	13.3	170
138	In situ doping control of the surface of high-temperature superconductors. Nature Physics, 2008, 4, 527-531.	6.5	175
139	Characterization of graphene through anisotropy of constant-energy maps in angle-resolved photoemission. Physical Review B, 2008, 77, .	1.1	139
140	Morphology of graphene thin film growth on SiC(0001). New Journal of Physics, 2008, 10, 023034.	1.2	156
141	Van Hove singularity and apparent anisotropy in the electron-phonon interaction in graphene. Physical Review B, 2008, 77, .	1.1	50
142	Quantum well and resonance-band split off in a K monolayer on Cu(111). Physical Review B, 2008, 77, .	1.1	16
143	Effect of Linear Density of States on the Quasiparticle Dynamics and Small Electron-Phonon Coupling in Graphite. Physical Review Letters, 2008, 100, 016802.	2.9	29
144	Photoemission Studies of Graphene on SiC: Growth, Interface, and Electronic Structure. , 2008, , 159-170.		24

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145	Symmetry breaking in few layer graphene films. <i>New Journal of Physics</i> , 2007, 9, 385-385.	1.2	174
146	Scanning tunneling spectroscopy of inhomogeneous electronic structure in monolayer and bilayer graphene on SiC. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	238
147	Interlayer Interaction and Electronic Screening in Multilayer Graphene Investigated with Angle-Resolved Photoemission Spectroscopy. <i>Physical Review Letters</i> , 2007, 98, 206802.	2.9	678
148	Renormalization of graphene bands by many-body interactions. <i>Solid State Communications</i> , 2007, 143, 63-71.	0.9	67
149	Quasiparticle dynamics in graphene. <i>Nature Physics</i> , 2007, 3, 36-40.	6.5	1,035
150	Band structure and many body effects in graphene. <i>European Physical Journal: Special Topics</i> , 2007, 148, 5-13.	1.2	32
151	Controlling the Electronic Structure of Bilayer Graphene. <i>Science</i> , 2006, 313, 951-954.	6.0	3,003
152	Semiconducting chalcogenide buffer layer for oxide heteroepitaxy on Si(001). <i>Applied Physics Letters</i> , 2006, 88, 181903.	1.5	8
153	Electron states and the spin density wave phase diagram in Cr(1 $\hat{\text{a}}\text{\%}1\hat{\text{a}}\text{\%}0$) films. <i>New Journal of Physics</i> , 2005, 7, 114-114.	1.2	45
154	Intrinsic Vacancy-Induced Nanoscale Wire Structure in HeteroepitaxialGa ₂ Se ₃ /Si(001). <i>Physical Review Letters</i> , 2005, 94, 116102.	2.9	19
155	Heterointerface formation of aluminum selenide with silicon: Electronic and atomic structure of Si(111):AlSe. <i>Physical Review B</i> , 2005, 71, .	1.1	16
156	Low-energy photoelectron diffraction structure determination of GaSe-bilayer-passivated Si(111). <i>Physical Review B</i> , 2001, 64, .	1.1	14
157	Epitaxial growth of laminar crystalline silicon on CaF ₂ . <i>Applied Physics Letters</i> , 2000, 77, 1289-1291.	1.5	15