Bruce A Davidson

List of Publications by Year
in descending order

67 papers	1,867 citations	257450 24 h-index	254184 43 g-index
68 all docs	68 docs citations	68 times ranked	1996 citing authors

#	Article	IF	Citations
1	Structural and superconducting properties of orientation-orderedY1Ba2Cu3O7â^'xfilms prepared by molecular-beam epitaxy. Physical Review B, 1987, 36, 4039-4042.	3.2	196
2	Superconducting Yâ€Baâ€Cuâ€O oxide films by sputtering. Applied Physics Letters, 1987, 51, 694-696.	3.3	157
3	Geâ€Si layered structures: Artificial crystals and complex cell ordered superlattices. Applied Physics Letters, 1986, 49, 286-288.	3.3	152
4	Strain-Engineered Oxygen Vacancies in CaMnO₃ Thin Films. Nano Letters, 2017, 17, 794-799.	9.1	83
5	Growth mechanism and clustering phenomena: The Ge-on-Si system. Physical Review B, 1989, 39, 7848-7851.	3.2	74
6	Structure and optical properties of Geâ€Si ordered superlattices. Applied Physics Letters, 1987, 50, 760-762.	3.3	66
7	Preparation and characterization of LaMnO3 thin films grown by pulsed laser deposition. Journal of Applied Physics, 2006, 100, 023910.	2.5	66
8	Nature of the metal-insulator transition in few-unit-cell-thick LaNiO3 films. Nature Communications, 2018, 9, 2206.	12.8	66
9	Strain in ultrathin epitaxial films of Ge/Si(100) measured by ion scattering and channeling. Physical Review Letters, 1987, 59, 664-667.	7.8	62
10	Improvements in the heteroepitaxy of GaAs on Si. Applied Physics Letters, 1987, 51, 36-38.	3.3	59
11	Superconducting Tlâ€Baâ€Caâ€Cuâ€O films by sputtering. Applied Physics Letters, 1988, 53, 2102-2104.	3.3	48
12	The Formation and Structure of CVD W Films Produced by the Si Reduction of â€‰WFâ€‰6. Journal of the Electrochemical Society, 1987, 134, 2285-2292.	2.9	47
13	Observation of a halide (F/Cl) stabilized, new perovskite phase in superconducting Y2Ba5Cu7Oxfilms. Applied Physics Letters, 1988, 52, 1625-1627.	3.3	46
14	Evidence of direct correlation between out-of-plane lattice parameter and metal-insulator transition temperature in oxygen-depleted manganite thin films. Applied Physics Letters, 2012, 100, .	3.3	45
15	Deterministic and robust room-temperature exchange coupling in monodomain multiferroic BiFeO3 heterostructures. Nature Communications, 2017, 8, 1583.	12.8	45
16	Preparation of highTcandJcfilms of Ba2YCu3O7using laser evaporation of a composite target containing BaF2. Applied Physics Letters, 1988, 52, 1995-1997.	3.3	42
17	Electron sampling depth and saturation effects in perovskite films investigated by soft x-ray absorption spectroscopy. Physical Review B, 2014, 90, .	3.2	40
18	Superconductorâ€normalâ€superconductor behavior of Josephson junctions scribed in Y1Ba2Cu3O7â^'Î´ by a highâ€brightness electron source. Applied Physics Letters, 1996, 68, 3811-3813.	3.3	37

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19	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YBa</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2010, 82, .	3.2	37
20	Constructing oxide interfaces and heterostructures by atomic layer-by-layer laser molecular beam epitaxy. Npj Quantum Materials, 2017, 2, .	5.2	34
21	Improved tunneling magnetoresistance at low temperature in manganite junctions grown by molecular beam epitaxy. Applied Physics Letters, 2011, 98, .	3.3	28
22	Strain-induced magnetization control in an oxide multiferroic heterostructure. Physical Review B, 2018, 97, .	3.2	26
23	Observation of (5Ã—5) Surface Reconstruction on Pure Silicon and its Stability Against Native-Oxide Formation. Physical Review Letters, 1986, 57, 1332-1335.	7.8	25
24	Evidence of electronic band redistribution in La0.65Sr0.35MnO3â˜'Î´by hard x-ray photoelectron spectroscopy. Physical Review B, 2012, 86, .	3.2	25
25	Observation of strong to Josephson-coupled crossover in 10Â° YBa2Cu3Ox bicrystal junctions. Applied Physics Letters, 1999, 75, 3171-3173.	3.3	24
26	High-quality in situ manganite thin films by pulsed laser deposition at low background pressures. European Physical Journal B, 2006, 51, 337-340.	1.5	21
27	Measuring magnetic profiles at manganite surfaces with monolayer resolution. Journal of Magnetism and Magnetic Materials, 2010, 322, 1212-1216.	2.3	21
28	MgB2 Josephson junctions produced by focused helium ion beam irradiation. AIP Advances, 2018, 8, .	1.3	21
29	Surface Octahedral Distortions and Atomic Design of Perovskite Interfaces. Advanced Materials, 2013, 25, 4043-4048.	21.0	19
30	Surface electronic and magnetic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>La</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:mn Physical Review B, 2008, 78, .	3.2	17
31	Real-time and in situ monitoring of sputter deposition with RHEED for atomic layer controlled growth. APL Materials, 2016, 4, 086111.	5.1	17
32	An integrated ultra-high vacuum apparatus for growth and <i>in situ</i> characterization of complex materials. Review of Scientific Instruments, 2020, 91, 085109.	1.3	17
33	Yâ€Baâ€Cuâ€O films by rf magnetron sputtering using single composite targets: Superconducting and structural properties. Applied Physics Letters, 1988, 52, 1735-1737.	3.3	16
34	Critical layer thickness and strain relaxation measurements in GaSb(001)/AlSb structures. Journal of Applied Physics, 1989, 66, 1687-1694.	2.5	16
35	Magnetic field sensitivity of variable thickness microbridges in TBCCO, BSCCO, and YBCO. IEEE Transactions on Applied Superconductivity, 1994, 4, 228-235.	1.7	16
36	Single-crystalline epitaxial TiO film: A metal and superconductor, similar to Ti metal. Science Advances, 2021, 7, .	10.3	14

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37	High-temperature superconductivity and its robustness against magnetic polarization in monolayer FeSe on EuTiO3. Npj Quantum Materials, 2021, 6, .	5.2	14
38	Statistical equilibrium in particle channeling. Applied Physics Letters, 1987, 50, 135-137.	3.3	12
39	High Resolution Thermal Imaging of Hotspots in Superconducting Films. IEEE Transactions on Applied Superconductivity, 2007, 17, 3215-3218.	1.7	12
40	Reduced Critical Current Spread in Planar MgB₂ Josephson Junction Array Made by Focused Helium Ion Beam. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-6.	1.7	11
41	Strain and critical thickness in GaSb(001)/AlSb. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1989, 7, 764.	1.6	9
42	Effect of strain in La0.7Sr0.3MnO3 epitaxial films with different crystallographic orientation. Journal of Alloys and Compounds, 2006, 423, 228-231.	5.5	9
43	Epitaxial growth of perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrBiO</mml:mi><mml:mn>3</mml:mn></mml:msub><m film on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub><m by oxide molecular beam epitaxy. Physical Review Materials, 2019, 3, .	2.4	9
44	Nature of the Josephson barrier in electron-beam-writtenYBa2Cu3O7âˆ'Îjunctions. Physical Review B, 1997, 56, 10828-10831.	3.2	8
45	Controlling the electrical and magnetic ground states by doping in the complete phase diagram of titanate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Eu</mml:mi><mml:mrow><mml:mn>1</m thin films. Physical Review B, 2020, 101, .	3.2	7
46	Normal-state and superconducting properties of Co-doped BaFe2As2 and MgB2 thin films after focused helium ion beam irradiation. Superconductor Science and Technology, 2019, 32, 095009.	3.5	6
47	Summary Abstract: Structural analysis of ultrathin epitaxial Ge/Si films on Si(100). Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1987, 5, 1147.	1.6	5
48	Epitaxial Films of High T_c Oxide Superconductors Y₁Ba₂Cu₃O₇ Grown on SrTiO₃ by Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 1987, 99, 339.	0.1	4
49	Strained Layer Semiconductor Films: Structure and Stability. Materials Research Society Symposia Proceedings, 1987, 102, 405.	0.1	3
50	High-resistivity SNS Josephson junctions scribed in YBa/sub 2/Cu/sub 3/O/sub 7-Î´/ by electron irradiation. IEEE Transactions on Applied Superconductivity, 1997, 7, 2518-2521.	1.7	3
51	Dynamic properties and nonequilibrium processes in electron-beam scribed YBa2Cu3O7 Josephson junctions. Applied Physics Letters, 1998, 73, 1290-1292.	3.3	3
52	Defect scattering in high Tc and colossal magnetoresistive tunnel junctions. Physica C: Superconductivity and its Applications, 2000, 335, 184-189.	1.2	3
53	Broken Particle-Hole Symmetry at Atomically Flata-AxisYBa2Cu3O7âˆ'Î1nterfaces. Physical Review Letters, 2004, 93, 107004.	7.8	3
54	Two-stage dissipation in a superconducting microbridge: experiment and modeling. Superconductor Science and Technology, 2010, 23, 085005.	3.5	3

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55	Local tunneling magnetoresistance probed by low-temperature scanning laser microscopy. Applied Physics Letters, 2011, 99, 182513.	3.3	3
56	Electrical and magnetic properties of amorphous W-Mn-O films. Journal of Non-Crystalline Solids, 1987, 92, 261-270.	3.1	2
57	Dynamic properties of asymmetric discrete vortex-flow transistors. Superconductor Science and Technology, 1999, 12, 970-973.	3.5	2
58	Growth of â€œcolossalâ€•magnetoresistance heterostructures by molecular beam epitaxy. Materials Research Society Symposia Proceedings, 1999, 602, 9.	0.1	2
59	Supercurrent peaks in planar high-temperature superconducting Josephson junctions. Physical Review B, 2000, 62, 12455-12461.	3.2	2
60	The influence of surface roughness in X-ray resonant magnetic reflectivity experiments. European Physical Journal: Special Topics, 2012, 208, 165-175.	2.6	2
61	Hydrogen Atom Dopingâ€”A Versatile Method for Modulated Interface Resistive Switching. Advanced Electronic Materials, 0, , 2200353.	5.1	2
62	Spin-glass transition in Mg Mn alloys. Solid State Communications, 1987, 62, 835-836.	1.9	1
63	Mechanisms for conduction via low-frequency noise measurements of high-T/sub c/ thin-film microbridges. IEEE Transactions on Applied Superconductivity, 1995, 5, 3369-3372.	1.7	1
64	Microscopic barrier properties in electron-beam scribed YBCO Josephson junctions. Applied Superconductivity, 1997, 5, 277-284.	0.5	1
65	Summary Abstract: The Ge/Sn system: Complex growth of a IV/IV heterostructure. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1986, 4, 888.	1.6	0
66	Design and implementation of a dual-control active device using YBCO grain-boundary junctions. IEEE Transactions on Applied Superconductivity, 1997, 7, 2407-2410.	1.7	0
67	Three Terminal HTc Vortex Flow Transistors: Optimisation of the Device Geometry Employing Bicrystal Grain-Boundary Josephson Junctions. International Journal of Modern Physics B, 1999, 13, 1253-1258.	2.0	0