

David Lederman

List of Publications by Year in descending order

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135
all docs

135
docs citations

135
times ranked

4358
citing authors

#	ARTICLE	IF	CITATIONS
1	Composition of terrestrial exoplanet atmospheres from meteorite outgassing experiments. Nature Astronomy, 2021, 5, 575-585.	10.1	18
2	Epitaxial strain and the magnetic properties of canted antiferromagnetic perovskite NaNiF ₃ thin films. APL Materials, 2020, 8, .	5.1	2
3	Subterahertz spin pumping from an insulating antiferromagnet. Science, 2020, 368, 160-165.	12.6	175
4	Mapping Electronic State Changes with STEM EBIC. Microscopy and Microanalysis, 2019, 25, 1396-1397.	0.4	0
5	Thermally induced metal-to-insulator transition in NbO_2 thin films: Modulation of the transition temperature by epitaxial strain. Physical Review Materials, 2019, 3, .	2.4	6
6	Modification of the Chemisorption Properties of Epitaxial Delafossite CuFeO ₂ Thin Films by Substituting Fe for Ga in the Crystal Structure. Topics in Catalysis, 2018, 61, 1193-1200.	2.8	1
7	Protein bioelectronics: a review of what we do and do not know. Reports on Progress in Physics, 2018, 81, 026601.	20.1	180
8	Structural and electrical characterization of polycrystalline NbO ₂ thin film vertical devices grown on TiN-coated SiO ₂ /Si substrates. Journal of Applied Physics, 2018, 124, .	2.5	19
9	Comparative study of the structural and optical properties of epitaxial CuFeO ₂ and CuFe _{1-x} Ga _x O ₂ delafossite thin films grown by pulsed laser deposition methods. Thin Solid Films, 2017, 626, 110-116.	1.8	18
10	Weak ferromagnetism and short range polar order in NaMnF ₃ thin films. Applied Physics Letters, 2017, 110, 092901.	3.3	5
11	Room temperature ferroelectricity in fluoroperovskite thin films. Scientific Reports, 2017, 7, 7182.	3.3	19
12	STEM EBIC Mapping of the Metal-Insulator Transition in Thin-film NbO ₂ . Microscopy and Microanalysis, 2017, 23, 1428-1429.	0.4	1
13	The role of defects in the electrical properties of NbO ₂ thin film vertical devices. AIP Advances, 2016, 6, 125006.	1.3	4
14	Identification of photocurrents in topological insulators. Optics Express, 2016, 24, 23583.	3.4	21
15	STEM Video of Electronically-Driven Metal-Insulator Transitions in Nanoscale NbO ₂ Devices. Microscopy and Microanalysis, 2016, 22, 1254-1255.	0.4	2
16	Effect of Mn doping on ultrafast carrier dynamics in thin films of the topological insulator Bi ₂ Se ₃ . Journal of Physics Condensed Matter, 2016, 28, 165601.	1.8	17
17	Nonlinear optical observation of coherent acoustic Dirac plasmons in thin-film topological insulators. Nature Communications, 2016, 7, 13054.	12.8	30
18	Magnetoelectric properties of 500-nm CrO_3 thin films. Physical Review B, 2016, 93, .	3.2	46

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19	Antiferromagnetic Spin Seebeck Effect. Physical Review Letters, 2016, 116, 097204.	7.8	248
20	Multiferroic BaCoF ₄ in Thin Film Form: Ferroelectricity, Magnetic Ordering, and Strain. ACS Applied Materials & Interfaces, 2016, 8, 2694-2703.	8.0	16
21	Optical detection of carbon dioxide adsorption on epitaxial CuFe _{1-x} Ga _x O ₂ Delafossite film grown by pulse laser deposition. Surface Science, 2016, 648, 23-28.	1.9	8
22	Structural properties of Bi ₂ Mn ₂ Se ₃ thin films grown via molecular beam epitaxy. Journal of Applied Physics, 2015, 118, .	2.5	6
23	Plasmon-enhanced electron-phonon coupling in Dirac surface states of the thin-film topological insulator Bi ₂ Se ₃ . Journal of Applied Physics, 2015, 118, 135713.	2.5	22
24	Nanoscale electron transport measurements of immobilized cytochrome P450 proteins. Nanotechnology, 2015, 26, 155102.	2.6	6
25	Structural and magnetic properties of epitaxial delafossite CuFeO ₂ thin films grown by pulsed laser deposition. Journal of Applied Physics, 2015, 117, .	2.5	37
26	Thickness tunable quantum interference between surface phonon and Dirac plasmon states in thin films of the topological insulator Bi ₂ Se ₃ . Journal of Physics Condensed Matter, 2015, 27, 052203.	1.8	38
27	Dependence of optical second-harmonic generation in thin films of the topological insulator Bi ₂ Se ₃ . Journal of Applied Physics, 2015, 117, 165703.	3.2	29
28	Phase Diagram of a Three-Dimensional Antiferromagnet with Random Magnetic Anisotropy. Physical Review Letters, 2015, 114, 097201.	7.8	6
29	Acoustic phonon dynamics in thin-films of the topological insulator Bi ₂ Se ₃ . Journal of Applied Physics, 2015, 117, 165703.	2.5	32
30	Preparation, characterization, and electrical properties of epitaxial NbO ₂ thin film lateral devices. Journal Physics D: Applied Physics, 2015, 48, 335308.	2.8	38
31	Coherent control of injection currents in high-quality films of Bi ₂ Se ₃ . Applied Physics Letters, 2015, 106, .	3.3	26
32	Quantum Interference Control of Photocurrents in Topological Insulator Films. , 2015, , .		0
33	Effect of carrier recombination on ultrafast carrier dynamics in thin films of the topological insulator Bi ₂ Se ₃ . Applied Physics Letters, 2014, 105, .	3.3	42
34	Electrically induced insulator to metal transition in epitaxial SmNiO ₃ thin films. Applied Physics Letters, 2014, 105, .	3.3	35
35	Engineered spatial inversion symmetry breaking in an oxide heterostructure built from isosymmetric room-temperature magnetically ordered components. Chemical Science, 2014, 5, 1599-1610.	7.4	30
36	Correlation Between Ferromagnetism and Superconductivity at Interfaces of La ₂ /3Ca ₁ /3MnO ₃ /YBa ₂ Cu ₃ O _{7-δ} /La ₂ /3Ca ₁ /3MnO ₃ Trilayers Grown by dc Sputtering. Journal of Superconductivity and Novel Magnetism, 2013, 26, 2289-2293.	1.8	1

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37	The effect of structural order on solar cell parameters, as illustrated in a SiC-organic junction model. Energy and Environmental Science, 2013, 6, 3272.	30.8	8
38	Measurement of Electron Transfer through Cytochrome P450 Protein on Nanopillars and the Effect of Bound Substrates. Journal of the American Chemical Society, 2013, 135, 3834-3840.	13.7	14
39	Ultrafast carrier dynamics in thin-films of the topological insulator Bi ₂ Se ₃ . Applied Physics Letters, 2013, 103, .	3.3	99
40	An investigation into the feasibility of myoglobin-based single-electron transistors. Nanotechnology, 2012, 23, 395705.	2.6	13
41	Changes in magnetic properties of Co/Pd multilayers induced by hydrogen absorption. Journal of Applied Physics, 2012, 111, .	2.5	35
42	Raman and x-ray photoelectron spectroscopy study of ferroelectric switching in Pb(Nb,Zr,Ti)O ₃ thin films. Journal of Applied Physics, 2012, 111, .	2.5	50
43	Interface biquadratic coupling and magnon scattering in exchange-biased ferromagnetic thin films grown on epitaxial FeF ₂ . Journal of Physics Condensed Matter, 2012, 24, 186001.	1.8	2
44	Molecular beam epitaxy and characterization of thin Bi ₂ Se ₃ films on Al ₂ O ₃ (110). Applied Physics Letters, 2011, 99, .	3.3	48
45	Modification of ferroelectric hysteresis in Pb(Nb,Zr,Ti)O ₃ thin films induced by CO ₂ adsorption. Applied Surface Science, 2011, 258, 1181-1183.	6.1	7
46	<i>In-situ</i> stoichiometry determination using x-ray fluorescence generated by reflection-high-energy-electron-diffraction. Journal of Applied Physics, 2011, 109, .	2.5	3
47	Interfacial coupling between ferromagnets and random and dilute antiferromagnets. Physical Review B, 2011, 84, .	3.2	2
48	Effects of hydrogen/deuterium absorption on the magnetic properties of Co/Pd multilayers. Physical Review B, 2011, 83, .	3.2	54
49	Hydrogen absorption by metallic thin films detected by optical transmittance measurements. International Journal of Hydrogen Energy, 2010, 35, 10613-10619.	7.1	9
50	Optical properties of Pd thin films exposed to hydrogen studied by transmittance and reflectance spectroscopy. Journal of Applied Physics, 2010, 107, .	2.5	59
51	In situ thin film and multilayer structural characterization using x-ray fluorescence induced by reflection high energy electron diffraction. Journal of Applied Physics, 2009, 106, 024308.	2.5	5
52	Electrocatalytic Drug Metabolism by CYP2C9 Bonded to A Self-Assembled Monolayer-Modified Electrode. Drug Metabolism and Disposition, 2009, 37, 892-899.	3.3	47
53	Growth and characterization of BLZT-CFO composite thin films. Materials Chemistry and Physics, 2009, 113, 702-706.	4.0	11
54	Surface structure of ($\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" Tj ETQq0 0 0 rgBT /Overlock 10$	1.9	19
	temperature annealing. Surface Science, 2009, 603, 232-236.		

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55	Substrate effect on the optical response of thin palladium films exposed to hydrogen gas. Thin Solid Films, 2008, 516, 7797-7801.	1.8	17
56	Antiferromagnetic domain size and exchange bias. Physical Review B, 2008, 77, .	3.2	23
57	Properties of YMnO ₃ self-assembled nanocrystalline prisms on GaN. Applied Physics Letters, 2008, 92, 013119.	3.3	5
58	Field cooling dependence of the anisotropy in exchange biased FeF ₂ /Co films. Journal of Applied Physics, 2008, 103, 07C114.	2.5	1
59	Structural and compositional characterization of a Co/Re multilayer and superlattice. Journal of Applied Physics, 2007, 101, 103920.	2.5	1
60	Reversible exchange bias and uncompensated magnetization in Fe _x Ni _{1-x} F ₂ /Co bilayers. Applied Physics Letters, 2007, 90, 012511.	3.3	16
61	Giant uncompensated magnetization and exchange bias in Fe _x Ni _{1-x} F ₂ /Co bilayers. Journal of Applied Physics, 2007, 101, 09E503.	2.5	10
62	Preparation, Characterization, and Substrate Metabolism of Gold-Immobilized Cytochrome P450 2C9. Journal of the American Chemical Society, 2006, 128, 8374-8375.	13.7	23
63	Parallel versus Antiparallel Interfacial Coupling in Exchange Biased Co/FeF ₂ . Physical Review Letters, 2006, 96, 027203.	7.8	96
64	In situ measurements of cobalt thin-film surface roughening upon annealing. Journal of Applied Physics, 2006, 99, 023516.	2.5	6
65	Comment on "Photoemission Study of YBa ₂ Cu ₃ O _y Thin Films under Light Illumination". Physical Review Letters, 2006, 97, 119701; author reply 119702.	7.8	1
66	Molecular beam epitaxy of YMnO ₃ on c-plane GaN. Applied Physics Letters, 2006, 88, 132903.	3.3	40
67	Exchange bias of polycrystalline Co on single-crystalline Fe _x Zn _{1-x} F ₂ thin films. Physical Review B, 2005, 72, .	3.2	19
68	Electrical and magnetic properties of La ₂ /3Ca ₁ /3MnO ₃ /YBa ₂ Cu ₃ O _{7-δ} /La ₂ /3Ca ₁ /3MnO ₃ trilayers. Journal of Applied Physics, 2005, 97, 10B115.	2.5	5
69	In-Situ Investigation of Surface Stoichiometry During InGa _N and GaN Growth by Plasma-Assisted Molecular Beam Epitaxy Using RHEED-TRAXS. Materials Research Society Symposia Proceedings, 2005, 892, 46.	0.1	2
70	Superparamagnetic behavior of cobalt nanodots on Al ₂ O ₃ (0001). Journal of Applied Physics, 2005, 97, 10B310.	2.5	5
71	Magneto-optic properties of Fe/Pd and Co/Pd bilayers under hydrogen absorption. Applied Physics Letters, 2004, 85, 615-617.	3.3	23
72	Atomic-scale structural analyses of epitaxial Co/Re superlattices. Applied Physics Letters, 2004, 85, 4082-4084.	3.3	1

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73	First principles calculations of magnetoresistance as a function of external field in layered Co/Re hexagonal-close-packed superlattices. Journal of Applied Physics, 2004, 95, 6765-6767.	2.5	0
74	Exchange bias and enhancement of the Néel temperature in thin NiF ₂ films. Physical Review B, 2004, 69, .	3.2	32
75	Monte Carlo simulations of exchange bias of ferromagnetic thin films on FeF ₂ (110). Physical Review B, 2004, 70, .	3.2	38
76	Exchange-Induced Anisotropies at Ferromagnetic-Antiferromagnetic Interfaces above and below the Néel Temperature. Physical Review Letters, 2003, 90, 257201.	7.8	82
77	Temperature-induced sign change of the exchange bias in Fe _{0.82} Zn _{0.18} F ₂ /Co bilayers. Journal of Applied Physics, 2003, 93, 8600-8602.	2.5	24
78	Hysteretic ferromagnetic resonance as a probe for coercivity, exchange bias, and loop asymmetry. Journal of Applied Physics, 2003, 93, 771-773.	2.5	8
79	Structure Analysis of Co/Re Superlattice Grown on an Al ₂ O ₃ (110) Substrate. Materials Research Society Symposia Proceedings, 2003, 788, 11311.	0.1	0
80	Surface spin-flop transition in epitaxial Co/Re superlattices. Journal of Applied Physics, 2003, 93, 7705-7707.	2.5	1
81	Interdiffusion and exchange bias in the Mn _x Pt _{1-x} /Co system. Journal of Applied Physics, 2003, 93, 4729-4733.	2.5	21
82	Exchange bias in Fe _x Zn _{1-x} F ₂ /Co bilayers. Journal of Applied Physics, 2002, 91, 7763.	2.5	31
83	Large in-plane anisotropies in Co/Re superlattices: What's happening at the interface?. Journal of Applied Physics, 2002, 91, 7529.	2.5	2
84	Exchange bias flop in Fe _x Zn _{1-x} F ₂ /Co bilayers. Physical Review B, 2002, 66, .	3.2	33
85	Interdiffusion, Crystallinity and Exchange Bias in Mn _x Pt _{1-x} /Co Bilayers. Materials Research Society Symposia Proceedings, 2002, 746, 1.	0.1	0
86	Therapeutic Potential of Implantable Replacement Hearts. American Journal of Cardiovascular Drugs, 2002, 2, 297-301.	2.2	7
87	Order Parameter Criticality of the 3D Random-Field Ising Antiferromagnet Fe _{0.85} Zn _{0.15} F ₂ . Physical Review Letters, 2002, 89, 157202.	7.8	34
88	Temperature Dependence of the Magnetoresistance of Co/Re Superlattices. Materials Research Society Symposia Proceedings, 2001, 674, 1.	0.1	0
89	Computational Modeling For Magnetic-Sensor-Based Three-Dimensional Visualization Of Microcracks. Materials Research Society Symposia Proceedings, 2001, 674, 1.	0.1	0
90	Growth study of epitaxial Fe _x Zn _{1-x} F ₂ thin films. Journal of Materials Research, 2001, 16, 1769-1775.	2.6	6

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91	Temperature dependence of the magnetoresistance in Co/Re superlattices on Al ₂ O ₃ (112°). Physical Review B, 2001, 63, .	3.2	9
92	Annealed Co thin films: Pit formation and magnetic anisotropy. Journal of Applied Physics, 2000, 87, 6095-6097.	2.5	19
93	Occasional "long-range" nonequilibrium body-centered-cubic structures in NiFe/Cu spin valves. Journal of Applied Physics, 1999, 86, 4166-4175.	2.5	17
94	Magnetic properties of Co/Rehcp(101°)superlattices. Physical Review B, 1999, 59, 11897-11908.	3.2	15
95	Role of interfacial structure on exchange-biased Fe ₂ ~Fe. Physical Review B, 1999, 59, 6984-6993.	3.2	149
96	Superlattice effect in the transport properties of Ni/Co multilayers. Journal of Magnetism and Magnetic Materials, 1998, 183, 261-271.	2.3	7
97	Perpendicular coupling at Fe~Fe ₂ interfaces. Applied Physics Letters, 1998, 72, 617-619.	3.3	154
98	Competition between direct exchange and indirect RKKY coupling in Fe/V[001] superlattices. IEEE Transactions on Magnetics, 1998, 34, 864-866.	2.1	7
99	Surface Roughness of Metallic Films Probed by Resistivity Measurements. Langmuir, 1998, 14, 3249-3254.	3.5	8
100	Structural and magnetic properties of Fe/Rh(001) sputter deposited multilayers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 1336-1341.	2.1	4
101	Surface smoothing and crystalline reorientation in thin cobalt films. Physical Review B, 1998, 58, R1778-R1781.	3.2	16
102	Evolution of strain-dependent transport properties in ultrathin La _{0.67} Sr _{0.33} MnO ₃ films. Journal of Applied Physics, 1998, 83, 7073-7075.	2.5	60
103	Magnetic properties of Co/Rh (001) multilayers studied by x-ray magnetic-circular dichroism. Physical Review B, 1998, 58, 11493-11500.	3.2	17
104	Fe/Rh (100) multilayer magnetism probed by x-ray magnetic circular dichroism. Physical Review B, 1997, 56, 5474-5483.	3.2	28
105	Search for new superconductors in the Y-Ni-B-C system. Journal of Applied Physics, 1997, 81, 2291-2295.	2.5	6
106	Surface morphology of GaN films determined from quantitative x-ray reflectivity. Applied Physics Letters, 1997, 71, 368-370.	3.3	10
107	Exchange anisotropy and the antiferromagnetic surface order parameter. Physical Review B, 1997, 56, 2332-2335.	3.2	58
108	Persistent photoinduced superconductivity. Journal of Alloys and Compounds, 1997, 251, 87-93.	5.5	7

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109	Positive Exchange Bias in FeF ₂ -Fe Bilayers. Physical Review Letters, 1996, 76, 4624-4627.	7.8	499
110	A general approach to the epitaxial growth of rare-earth-transition-metal films. Applied Physics Letters, 1996, 69, 2438-2440.	3.3	65
111	Oscillations of the transport properties in Ni/Co superlattices. Journal of Magnetism and Magnetic Materials, 1996, 156, 397-398.	2.3	3
112	X-ray scattering in disordered superlattices: Theory and application to FeF ₂ /ZnF ₂ superlattices. Physical Review B, 1996, 53, 7890-7898.	3.2	8
113	Electron localization in Co/Ni superlattices. Physical Review B, 1996, 54, R5291-R5294.	3.2	11
114	Large exchange bias and its connection to interface structure in FeF ₂ -Fe bilayers. Applied Physics Letters, 1996, 68, 3186-3188.	3.3	139
115	Neutron scattering study of the random field Ising film Fe _{0.5} Zn _{0.5} F ₂ . Journal of Magnetism and Magnetic Materials, 1995, 140-144, 1549-1550.	2.3	12
116	Enhancement of persistent photoconductivity in insulating high-T _c thin films. Physical Review B, 1995, 51, 1342-1345.	3.2	67
117	Oscillatory Behavior of the Transport Properties in Ni/Co Multilayers: A Superlattice Effect. Physical Review Letters, 1995, 74, 4515-4518.	7.8	46
118	Growth and structural characterization of Ni/Co superlattices. Physical Review B, 1995, 51, 2550-2555.	3.2	20
119	Photoinduced superconductivity and structural changes in high temperature superconducting films. Applied Physics Letters, 1994, 64, 652-654.	3.3	45
120	Photoexcitation and oxygen ordering in YBa ₂ Cu ₃ O _x films. Physical Review B, 1994, 49, 3675-3678.	3.2	101
121	Large magnetoresistance with low saturation fields in magnetic/magnetic superlattices. Applied Physics Letters, 1994, 64, 2590-2592.	3.3	31
122	Photoinduced enhancement of superconductivity. Journal of Superconductivity and Novel Magnetism, 1994, 7, 127-130.	0.5	4
123	Photoexcitation effects in YBa ₂ Cu ₃ O _x . Journal of Alloys and Compounds, 1993, 195, 667-670.	5.5	7
124	Upconversion luminescence of Er-doped ZnF ₂ channel waveguides grown by MBE. Electronics Letters, 1993, 29, 172.	1.0	18
125	Thermodynamic properties of (FeF ₂) _n (CoF ₂) _n superlattices. Journal of Physics Condensed Matter, 1993, 5, A373-A374.	1.8	7
126	New high-temperature superconducting phase spread alloy thin films. Applied Physics Letters, 1993, 63, 1276-1278.	3.3	5

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127	Finite-size scaling in FeF ₂ /ZnF ₂ superlattices. Physical Review B, 1993, 48, 8365-8375.	3.2	42
128	Comment on "Reflection high-energy diffraction oscillations during epitaxial growth of high-temperature superconducting oxides". Physical Review Letters, 1993, 70, 1731-1731.	7.8	10
129	Photoinduced changes in high temperature superconducting films. Physica Scripta, 1993, T49A, 119-123.	2.5	2
130	Scaling of critical currents in high-temperature superconducting superlattices and thin films. Applied Physics Letters, 1992, 61, 3181-3183.	3.3	9
131	Optical phonon studies of FeF ₂ epitaxial thin films. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 1741-1742.	2.3	4
132	New antiferromagnetic insulator superlattices: Structural and magnetic characterization of (FeF ₂) _m (CoF ₂) _n . Physical Review Letters, 1990, 65, 2913-2915.	7.8	109