

Steven J May

List of Publications by Year in descending order

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77
papers

9,134
citations

101543

36
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74163

75
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77
all docs

77
docs citations

77
times ranked

10419
citing authors

#	ARTICLE	IF	CITATIONS
1	Transparent Conductive Two-Dimensional Titanium Carbide Epitaxial Thin Films. Chemistry of Materials, 2014, 26, 2374-2381.	6.7	1,173
2	Synthesis and Characterization of 2D Molybdenum Carbide (MXene). Advanced Functional Materials, 2016, 26, 3118-3127.	14.9	945
3	Control of MXenes™ electronic properties through termination and intercalation. Nature Communications, 2019, 10, 522.	12.8	721
4	Highly Conductive Optical Quality Solution-Processed Films of 2D Titanium Carbide. Advanced Functional Materials, 2016, 26, 4162-4168.	14.9	680
5	Interface-induced phenomena in magnetism. Reviews of Modern Physics, 2017, 89, .	45.6	672
6	Control of electronic properties of 2D carbides (MXenes) by manipulating their transition metal layers. Nanoscale Horizons, 2016, 1, 227-234.	8.0	394
7	Control of octahedral connectivity in perovskite oxide heterostructures: An emerging route to multifunctional materials discovery. MRS Bulletin, 2012, 37, 261-270.	3.5	378
8	Surface Termination Dependent Work Function and Electronic Properties of Ti_3C_2Tx MXene. Chemistry of Materials, 2019, 31, 6590-6597.	6.7	359
9	2D molybdenum and vanadium nitrides synthesized by ammoniation of 2D transition metal carbides (MXenes). Nanoscale, 2017, 9, 17722-17730.	5.6	327
10	Quantifying octahedral rotations in strained perovskite oxide films. Physical Review B, 2010, 82, .	3.2	293
11	Experimental and theoretical characterization of ordered MAX phases Mo_2TiAlC_2 and $Mo_2Ti_2AlC_3$. Journal of Applied Physics, 2015, 118, .	2.5	217
12	Three-Dimensional Nanoscale Composition Mapping of Semiconductor Nanowires. Nano Letters, 2006, 6, 181-185.	9.1	214
13	Metal-Insulator Transition and Its Relation to Magnetic Structure in $LaMnO_3$ and $SrMnO_3$. $LaMnO_3$ 7.8 $SrMnO_3$ 202		
14	Tailoring Electronic and Optical Properties of MXenes through Forming Solid Solutions. Journal of the American Chemical Society, 2020, 142, 19110-19118.	13.7	198
15	Magnetic Oxide Heterostructures. Annual Review of Materials Research, 2014, 44, 65-90.	9.3	174
16	Effects of Synthesis and Processing on Optoelectronic Properties of Titanium Carbonitride MXene. Chemistry of Materials, 2019, 31, 2941-2951.	6.7	160
17	Enhanced ordering temperatures in antiferromagnetic manganite superlattices. Nature Materials, 2009, 8, 892-897.	27.5	145
18	Synthesis and Characterization of an Alumina Forming Nanolaminated Boride: $MoAlB$. Scientific Reports, 2016, 6, 26475.	3.3	141

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19	Effect of Interfacial Octahedral Behavior in Ultrathin Manganite Films. Nano Letters, 2014, 14, 2509-2514.	9.1	121
20	Band structure and optical transitions in LaFeO_3 : theory and experiment. Journal of Physics Condensed Matter, 2014, 26, 505502.	1.8	100
21	Dendritic Nanowire Growth Mediated by a Self-Assembled Catalyst. Advanced Materials, 2005, 17, 598-602. Control of octahedral rotations in $(\text{LaNiO}_3)_x(\text{TiO}_2)_{1-x}$ superlattices. Nature Materials, 2006, 5, 671-674.	21.0	94
22	Control of octahedral rotations in $(\text{LaNiO}_3)_x(\text{TiO}_2)_{1-x}$ superlattices. Nature Materials, 2006, 5, 671-674.	3.2	87
23	Towards 3D Mapping of BO_6 Octahedron Rotations at Perovskite Heterointerfaces, Unit Cell by Unit Cell. ACS Nano, 2015, 9, 8412-8419.	14.6	78
24	Probing Interfacial Electronic Structures in Atomic Layer LaMnO_3 and SrTiO_3 Superlattices. Advanced Materials, 2010, 22, 1156-1160.	21.0	69
25	Spatial control of functional properties via octahedral modulations in complex oxide superlattices. Nature Communications, 2014, 5, 5710.	12.8	69
26	Scalable Synthesis of Ultrathin Mn_3N_2 Exhibiting Room-Temperature Antiferromagnetism. Advanced Functional Materials, 2019, 29, 1809001.	14.9	67
27	Fluorination of Epitaxial Oxides: Synthesis of Perovskite Oxyfluoride Thin Films. Journal of the American Chemical Society, 2014, 136, 2224-2227.	13.7	65
28	Solid Solubility and Magnetism upon Mn Incorporation in the Bulk Ternary Carbides Cr_2AlC and Cr_2GaC . Materials Research Letters, 2015, 3, 16-22.	8.7	62
29	Ferromagnetic Self-Assembled Quantum Dots on Semiconductor Nanowires. Nano Letters, 2006, 6, 50-54.	9.1	59
30	Tuning between the metallic antiferromagnetic and ferromagnetic phases of LaMnO_3 . Physical Review B, 2009, 80, 114407.	3.2	52
31	Evidence of a magnetic transition in atomically thin $\text{Cr}_2\text{TiC}_2\text{T}_x$ MXene. Nanoscale Horizons, 2020, 5, 1557-1565.	8.0	51
32	Synthesis and characterization of the atomic laminate Mn_2AlB_2 . Journal of the European Ceramic Society, 2018, 38, 5333-5340.	5.7	49
33	Magnetic properties of Cr_2AlB_2 , Cr_3AlB_4 , and CrB powders. Journal of Alloys and Compounds, 2018, 767, 474-482.	5.5	48
34	Composition analysis of single semiconductor nanowires using pulsed-laser atom probe tomography. Applied Physics A: Materials Science and Processing, 2006, 85, 271-275.	2.3	47
35	Control of Functional Responses Via Reversible Oxygen Loss in $\text{LaSr}_x\text{FeO}_{3-x}$ Films. Advanced Materials, 2014, 26, 1434-1438.	21.0	41
36	Delta Doping of Ferromagnetism in Antiferromagnetic Manganite Superlattices. Physical Review Letters, 2011, 107, 167202.	7.8	40

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37	Polar Oxides without Inversion Symmetry through Vacancy and Chemical Order. Journal of the American Chemical Society, 2017, 139, 2833-2841.	13.7	34
38	Co@CoO@Au core-multi-shell nanocrystals. Journal of Materials Chemistry, 2010, 20, 439-443.	6.7	32
39	Static and Dynamic Optical Properties of $\text{La}_{1-x}\text{Sr}_x\text{FeO}_3$: The Effects of A-Site and Oxygen Stoichiometry. Chemistry of Materials, 2016, 28, 97-105.	6.7	32
40	Distinguishing electronic contributions of surface and sub-surface transition metal atoms in Ti-based MXenes. 2D Materials, 2020, 7, 025015.	4.4	31
41	Structural Doping to Control Local Magnetization in Isovalent Oxide Heterostructures. Physical Review Letters, 2017, 119, 197204.	7.8	28
42	Electronic structure of negative charge transfer across the metal-insulator transition. Physical Review Materials, 2018, 2, .	2.4	28
43	Distinguishing Thermal and Electronic Effects in Ultrafast Optical Spectroscopy Using Oxide Heterostructures. Journal of Physical Chemistry C, 2018, 122, 115-123.	3.1	25
44	Octahedral rotation patterns in strained EuFeO_3 perovskite films: Implications for hybrid improper ferroelectricity. Physical Review B, 2016, 94, .	3.2	21
45	Role of fluoride and fluorocarbons in enhanced stability and performance of halide perovskites for photovoltaics. Physical Review Materials, 2020, 4, .	2.4	20
46	Synthesis, Structure, and Spectroscopy of Epitaxial EuFeO_3 Thin Films. Crystal Growth and Design, 2015, 15, 1105-1111.	3.0	19
47	Effect of cation off-stoichiometry on optical absorption in epitaxial LaFeO_3 films. Physical Chemistry Chemical Physics, 2017, 19, 10371-10376.	2.8	19
48	Itinerancy-dependent noncollinear spin textures in SrFeO_3 and CaFeO_3 .	2.4	19
49	Effect of hydrothermal composition on topochemical synthesis of SrMnO_3 and CaFeO_3 oxifluoride films. Physical Review Materials, 2018, 2, .	2.4	18
50	The effect of oxygen vacancies on the electronic phase transition in $\text{La}_{1/3}\text{Sr}_{2/3}\text{FeO}_3$ films. Applied Physics Letters, 2013, 103, .	3.3	16
51	Raman scattering in $\text{La}_{1-x}\text{Sr}_x\text{FeO}_3$ thin films: annealing-induced reduction and phase transformation. Journal of Physics Condensed Matter, 2015, 27, 155401.	1.8	14
52	Energy Level Alignment and Cation Charge States at the $\text{LaFeO}_3/\text{LaMnO}_3$ (001) Heterointerface. Advanced Materials Interfaces, 2017, 4, 1700183.	3.7	14
53	Electronic transport and conduction mechanism transition in $\text{La}_{1-x}\text{Sr}_x\text{FeO}_3$ thin films. Journal of Applied Physics, 2014, 115, 233704.	2.5	13
54	Instrumental insights. Nature Materials, 2012, 11, 833-834.	27.5	11

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55	Optical properties of Mn-doped InAs and InMnAs epitaxial films. <i>Physica B: Condensed Matter</i> , 2004, 344, 379-384.	2.7	10
56	Strain-Induced Anion-Site Occupancy in Perovskite Oxyfluoride Films. <i>Chemistry of Materials</i> , 2021, 33, 1811-1820.	6.7	10
57	Room-temperature magneto-optical activity of InMnAs thin films. <i>Applied Physics Letters</i> , 2004, 85, 780-782.	3.3	9
58	Atomic-Scale Characterization of Oxide Thin Films Gated by Ionic Liquid. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 17018-17023.	8.0	9
59	Strain Effects in Narrow-Bandwidth Manganites: The Case of Epitaxial $\text{La}_{1/3}\text{Sr}_{2/3}\text{FeO}_3$ Films. <i>Physical Review Applied</i> , 2014, 1, .	3.8	9
60	Electronic transition above room temperature in $\text{CaMn}_7\text{O}_{12}$ films. <i>Applied Physics Letters</i> , 2015, 107, 142901.	3.3	9
61	Depth-Resolved Modulation of Metal-Oxygen Hybridization and Orbital Polarization across Correlated Oxide Interfaces. <i>Advanced Materials</i> , 2019, 31, e1902364.	21.0	9
62	Interplay between Cation and Charge Ordering in $\text{La}_{1/3}\text{Sr}_{2/3}\text{FeO}_3$ Superlattices. <i>Advanced Electronic Materials</i> , 2016, 2, 1500372.	5.1	8
63	Growth and electrical transport properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films on Sr_2IrO_4 single crystals. <i>Physical Review B</i> , 2017, 95, .	3.2	8
64	Deliberate Deficiencies: Expanding Electronic Function through Non-stoichiometry. <i>Matter</i> , 2019, 1, 33-35.	10.0	8
65	Evidence for Interfacial Octahedral Coupling as a Route to Enhance Magnetoresistance in Perovskite Oxide Superlattices. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901576.	3.7	8
66	Effects of cation stoichiometry on electronic and structural properties of LaNiO_3 . <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015, 33, .	2.1	7
67	Inverted orbital polarization in strained correlated oxide films. <i>Physical Review B</i> , 2018, 98, .	3.2	7
68	Reconfigurable lateral anionic heterostructures in oxide thin films via lithographically defined topochemistry. <i>Physical Review Materials</i> , 2019, 3, .	2.4	7
69	Substrate orientation dependence of ferromagnetism in $(\text{Ga},\text{Mn})\text{As}$. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	6
70	Synthesis and Characterization of $\text{Sr}_{1-x}\text{Fe}_x\text{Mn}_{1-x}\text{O}_{3-\delta}$ Oxide ($\delta = 0$ and 0.5) and Oxyfluoride Perovskite Films. <i>Inorganic Chemistry</i> , 2020, 59, 9990-9997.	4.0	6
71	Physical properties of epitaxial $\text{SrMnO}_{2.5}\text{F}_3$ oxyfluoride films. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 365602.	1.8	5
72	Direct observation of room temperature magnetism in $(\text{In},\text{Mn})\text{As}$ thin films by magnetic force microscopy. <i>Applied Surface Science</i> , 2006, 252, 3509-3513.	6.1	4

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73	Structural Investigation of Perovskite Manganite and Ferrite Films on Yttria-Stabilized Zirconia Substrates. Journal of the Electrochemical Society, 2012, 159, F436-F441.	2.9	4
74	Magnetic properties of MnAs thin films grown on GaAs (001) by MOVPE. Physica B: Condensed Matter, 2007, 388, 370-373.	2.7	3
75	Helical magnetism in Sr-doped CaMn7O12 films. Physical Review B, 2018, 98, .	3.2	2
76	Tracking BO 6 Coupling in Perovskite Superlattices to Engineer Magnetic Interface Behavior. Microscopy and Microanalysis, 2016, 22, 904-905.	0.4	0
77	Quantitative Aberration-Corrected STEM for Studies of Oxide Superlattices and Topological Defects in Layered Ferroelectrics. Microscopy and Microanalysis, 2020, 26, 1194-1195.	0.4	0