

Steven R Spurgeon

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7764350/publications.pdf>

Version: 2024-02-01

85
papers

1,135
citations

361413

20
h-index

414414

32
g-index

92
all docs

92
docs citations

92
times ranked

2122
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards data-driven next-generation transmission electron microscopy. <i>Nature Materials</i> , 2021, 20, 274-279.	27.5	130
2	Polarization screening-induced magnetic phase gradients at complex oxide interfaces. <i>Nature Communications</i> , 2015, 6, 6735.	12.8	71
3	One-Pot Aqueous Synthesis of Fe and Ag Core/Shell Nanoparticles. <i>Chemistry of Materials</i> , 2010, 22, 6291-6296.	6.7	66
4	Magnetic properties of Co ₂ C and Co ₃ C nanoparticles and their assemblies. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	64
5	Thickness-Dependent Crossover from Charge- to Strain-Mediated Magnetoelectric Coupling in Ferromagnetic/Piezoelectric Oxide Heterostructures. <i>ACS Nano</i> , 2014, 8, 894-903.	14.6	61
6	Influence of LaFeO ₃ Surface Termination on Water Reactivity. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1038-1043.	4.6	60
7	Growth of La ₂ Ti ₂ O ₇ and LaTiO ₃ thin films using pulsed laser deposition. <i>Journal of Crystal Growth</i> , 2008, 310, 1985-1990.	1.5	41
8	Rapid and flexible segmentation of electron microscopy data using few-shot machine learning. <i>Npj Computational Materials</i> , 2021, 7, .	8.7	37
9	Understanding the Electronic Structure Evolution of Epitaxial LaNi _{1-x} Fe _x O ₃ Thin Films for Water Oxidation. <i>Nano Letters</i> , 2021, 21, 8324-8331.	9.1	31
10	Competing Pathways for Nucleation of the Double Perovskite Structure in the Epitaxial Synthesis of La ₂ MnNiO ₆ . <i>Chemistry of Materials</i> , 2016, 28, 3814-3822.	6.7	29
11	Creation and Ordering of Oxygen Vacancies at WO ₃ and Perovskite Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 17480-17486.	8.0	29
12	Interface-Induced Polarization in SrTiO ₃ /LaCrO ₃ Superlattices. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500779.	3.7	28
13	A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires. <i>Chemistry of Materials</i> , 2020, 32, 2753-2763.	6.7	27
14	The effects of core-level broadening in determining band alignment at the epitaxial SrTiO ₃ (001)/Ge(001) heterojunction. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	26
15	Hole-Trapping-Induced Stabilization of Ni ⁴⁺ in SrNiO ₃ /LaFeO ₃ Superlattices. <i>Advanced Materials</i> , 2020, 32, e2005003.	21.0	26
16	Built-In Potential in Fe ₂ O ₃ /Cr ₂ O ₃ Superlattices for Improved Photoexcited Carrier Separation. <i>Advanced Materials</i> , 2016, 28, 1616-1622.	21.0	24
17	Dynamic interface rearrangement in LaFeO ₃ /LaNiO ₃ heterojunctions. <i>Physical Review Materials</i> , 2017, 1, .	21.0	24
18	Measurement Error in Atomic-Scale Scanning Transmission Electron Microscopy Energy-Dispersive X-Ray Spectroscopy (STEM-EDS) Mapping of a Model Oxide Interface. <i>Microscopy and Microanalysis</i> , 2017, 23, 513-517.	0.4	22

#	ARTICLE	IF	CITATIONS
19	Electronic Structure and Band Alignment of $\text{LaMnO}_3/\text{SrTiO}_3$ Polar/Nonpolar Heterojunctions. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801428.	3.7	22
20	Damage evolution of ion irradiated defected-fluorite $\text{La}_2\text{Zr}_2\text{O}_7$ epitaxial thin films. <i>Acta Materialia</i> , 2017, 130, 111-120.	7.9	20
21	Probing the Origin of Interfacial Carriers in $\text{SrTiO}_3/\text{LaCrO}_3$ Superlattices. <i>Chemistry of Materials</i> , 2017, 29, 1147-1155.	6.7	19
22	Chemical imaging and diffusion of hydrogen and lithium in lithium aluminate. <i>Journal of Nuclear Materials</i> , 2018, 511, 1-10.	2.7	19
23	Nanoscale oxygen defect gradients in UO_{2+x} surfaces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 17181-17186.	7.1	17
24	A study of the effect of iron island morphology and interface oxidation on the magnetic hysteresis of Fe-MgO (001) thin film composites. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	16
25	Oxygen Reduction Electrocatalysis with Epitaxially Grown Spinel MnFe_2O_4 and Fe_3O_4 . <i>ACS Catalysis</i> , 2022, 12, 3577-3588.	11.2	16
26	Tuning piezoelectric properties through epitaxy of $\text{La}_2\text{Ti}_2\text{O}_7$ and related thin films. <i>Scientific Reports</i> , 2018, 8, 3037.	3.3	15
27	An Automated Scanning Transmission Electron Microscope Guided by Sparse Data Analytics. <i>Microscopy and Microanalysis</i> , 2022, 28, 1611-1621.	0.4	15
28	Asymmetric Lattice Disorder Induced at Oxide Interfaces. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901944.	3.7	13
29	Exchange bias and bistable magneto-resistance states in amorphous TbFeCo thin films. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	12
30	An all-perovskite p-n junction based on transparent conducting $\text{La}_{1-x}\text{Sr}_x\text{CrO}_3$ epitaxial layers. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	12
31	Thickness dependent OER electrocatalysis of epitaxial LaFeO_3 thin films. <i>Journal of Materials Chemistry A</i> , 2022, 10, 1909-1918.	10.3	12
32	Design of a graphical user interface for few-shot machine learning classification of electron microscopy data. <i>Computational Materials Science</i> , 2022, 203, 111121.	3.0	12
33	Effect of structure and composition on the electronic excitation induced amorphization of $\text{La}_2\text{Ti}_{2-x}\text{Zr}_x\text{O}_7$ ceramics. <i>Scientific Reports</i> , 2019, 9, 8190.	3.3	11
34	Epitaxial growth and atomic arrangement in Fe_2CrO_4 on crystal symmetry matched (001) MgAl_2O_4 . <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019, 37, 031511.	2.1	10
35	Bulk and Short-Circuit Anion Diffusion in Epitaxial Fe_2O_3 Films Quantified Using Buried Isotopic Tracer Layers. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001768.	3.7	10
36	The role of Nanocartography in the Development of Automated TEM. <i>Microscopy and Microanalysis</i> , 2021, 27, 2986-2987.	0.4	9

#	ARTICLE	IF	CITATIONS
37	Chemical and electronic structure analysis of a SrTiO ₃ (001)/p-Ge (001) hydrogen evolution photocathode. MRS Communications, 2018, 8, 446-452.	1.8	8
38	An Atomic-Scale Understanding of UO ₂ Surface Evolution during Anoxic Dissolution. ACS Applied Materials & Interfaces, 2020, 12, 39781-39786.	8.0	8
39	Reversible Oxidation Quantified by Optical Properties in Epitaxial Fe ₂ CrO ₄ + $\hat{\Gamma}$ Films on (001) MgAl ₂ O ₄ . ACS Omega, 2020, 5, 3240-3249.	3.5	7
40	Onset of phase separation in the double perovskite oxide $\text{La}_{1-x}\text{Mn}_x\text{Mg}_{1-x}\text{Mn}_x\text{O}_{6-2x}$. Physical Review B, 2018, 97, .	8.2	6
41	Percolation of Ion-Irradiation-Induced Disorder in Complex Oxide Interfaces. Nano Letters, 2021, 21, 5353-5359.	9.1	6
42	Heterogeneous Two-Phase Pillars in Epitaxial NiFe ₂ O ₄ /LaFeO ₃ Nanocomposites. Advanced Materials Interfaces, 2017, 4, 1700396.	3.7	5
43	Order-disorder behavior at thin film oxide interfaces. Current Opinion in Solid State and Materials Science, 2020, 24, 100870.	11.5	5
44	Radiation Enhanced Anion Diffusion in Chromia. Journal of Physical Chemistry C, 2021, 125, 27820-27827.	3.1	5
45	Characterization of surface layers formed on DU10Mo ingots after processing steps and high humidity exposure. Journal of Nuclear Materials, 2019, 514, 28-39.	2.7	4
46	Evidence of lithium mobility under neutron irradiation. Journal of Materials Research and Technology, 2021, 14, 475-483.	5.8	4
47	Adatom-Driven Oxygen Intermixing during the Deposition of Oxide Thin Films by Molecular Beam Epitaxy. Nano Letters, 2022, 22, 4963-4969.	9.1	4
48	Electronic and structural properties of single-crystal Jahn-Teller active Co _{1+x} Mn _{2x} O ₄ thin films. Journal of Physics Condensed Matter, 2021, 33, 124002.	1.8	3
49	First-Principles Study of Tritium Trapping in $\hat{\Gamma}^3$ -LiAlO ₂ Nanovoids. Journal of Physical Chemistry C, 2022, 126, 5767-5776.	3.1	3
50	Carbonaceous deposits on aluminide coatings in tritium-producing assemblies. Nuclear Materials and Energy, 2020, 25, 100797.	1.3	2
51	Microscopic model for the stacking-fault potential and the exciton wave function in GaAs. Physical Review B, 2020, 101, .	3.2	2
52	Multimodal Imaging of Cation Disorder and Oxygen Deficiency-Mediated Phase Separation in Double Perovskite Oxides. Microscopy and Microanalysis, 2017, 23, 1678-1679.	0.4	1
53	Fast Atomic Diffusion: Bulk and Short-Circuit Anion Diffusion in Epitaxial Fe ₂ O ₃ Films Quantified Using Buried Isotopic Tracer Layers (Adv. Mater.) Tj ETQq1 1 0.784314 rgBIT /Overl	4.3	1
54	Reply to Comment on "A Mechanistic Understanding of Nonclassical Crystal Growth in Hydrothermally Synthesized Sodium Yttrium Fluoride Nanowires". Chemistry of Materials, 2021, 33, 3862-3864.	6.7	1

#	ARTICLE	IF	CITATIONS
55	Incorporation of Ti in epitaxial Fe ₂ TiO ₄ thin films. Journal of Physics Condensed Matter, 2021, 33, 314004.	1.8	1
56	Influence of Irradiation-Induced Defects on Anion Transport in Epitaxial Cr ₂ O ₃ . Microscopy and Microanalysis, 2021, 27, 2904-2905.	0.4	1
57	Energy Focus: Modified SMP allows high resolution mapping of lithium-ion diffusion. MRS Bulletin, 2010, 35, 836-836.	3.5	0
58	A (111)-ordered Sr ₂ FeRuO ₆ superlattice displays room-temperature magnetic ordering. MRS Bulletin, 2011, 36, 478-478.	3.5	0
59	Nano Focus: IR lasers enable direct patterning on conjugated polymers. MRS Bulletin, 2011, 36, 740-741.	3.5	0
60	Energy Focus: SPM reveals nanoscale understanding of oxygen reactions in fuel cells and batteries. MRS Bulletin, 2011, 36, 741-741.	3.5	0
61	Thin-film heterostructures of Fe and Co-BaTiO ₃ exhibit interface multiferroicity at room temperature. MRS Bulletin, 2011, 36, 843-845.	3.5	0
62	Room-temperature electrical control of ferromagnetic ordering in cobalt demonstrated. MRS Bulletin, 2011, 36, 953-954.	3.5	0
63	Nano Focus: Functional ferroelectric tunnel-junction memories demonstrated. MRS Bulletin, 2012, 37, 101-102.	3.5	0
64	A Combined STEM-EELS and Neutron Reflectometry Study of Charge- and Strain-Mediated Magnetolectric Coupling in LSMO/PZT Heterostructures. Microscopy and Microanalysis, 2012, 18, 1912-1913.	0.4	0
65	Spin bag model proposed for room-temperature ferromagnetism in Sr ₃ YCo ₄ O ₁₀ . MRS Bulletin, 2012, 37, 881-881.	3.5	0
66	Drexel hosts Philly Materials Day. MRS Bulletin, 2012, 37, 888-889.	3.5	0
67	Inverse spin Hall effect observed in silicon. MRS Bulletin, 2012, 37, 186-186.	3.5	0
68	Electric field utilized to locally pin magnetic domain walls. MRS Bulletin, 2013, 38, 598-598.	3.5	0
69	Navy SeaPerch competition spreads STEM awareness. MRS Bulletin, 2013, 38, 780-781.	3.5	0
70	Nano Focus: Superdiffusive electron transport mediates laser-induced demagnetization. MRS Bulletin, 2013, 38, 296-296.	3.5	0
71	Epitaxial strain tunes spintronic behavior of multiferroic BiFeO ₃ . MRS Bulletin, 2013, 38, 529-529.	3.5	0
72	Ferroelectric-like phase transition observed in a metal. MRS Bulletin, 2013, 38, 1002-1002.	3.5	0

#	ARTICLE	IF	CITATIONS
73	Energy Focus: Charge-density waves may be competing with superconductivity. MRS Bulletin, 2013, 38, 295-296.	3.5	0
74	“Paper Factory” produces a blend of science and engineering education. MRS Bulletin, 2014, 39, 945-946.	3.5	0
75	SPM scans the chemical landscape of manganite oxides. MRS Bulletin, 2015, 40, 465-466.	3.5	0
76	Multidimensional Analysis of Nanoscale Phase Separation in Complex Materials Systems. Microscopy and Microanalysis, 2016, 22, 282-283.	0.4	0
77	Single chip integrates transistors and photonic components. MRS Bulletin, 2016, 41, 180-182.	3.5	0
78	Nanoscale Quantification of Interstitial Oxygen in Hyperstoichiometric UO _{2+x} . Microscopy and Microanalysis, 2019, 25, 1598-1599.	0.4	0
79	Atomic-Scale Mechanisms for Interfacial Radiation Damage Resistance of Thin Film Oxide Heterostructures. Microscopy and Microanalysis, 2019, 25, 1562-1563.	0.4	0
80	Correlative Imaging of Phase Separation in Fe ₂ TiO ₄ Thin Films Prepared by Conventional Ga and Xe Plasma FIB Processing. Microscopy and Microanalysis, 2020, 26, 186-187.	0.4	0
81	Probing the Unique Radiation Damage Response of Oxide Interfaces Using Multi-modal STEM Imaging, Diffraction, and Spectroscopy. Microscopy and Microanalysis, 2020, 26, 1666-1667.	0.4	0
82	Quantitative STEM Imaging and Multislice Simulation of Stacking Fault Defects for Exciton Trapping in GaAs. Microscopy and Microanalysis, 2020, 26, 2822-2823.	0.4	0
83	Examining Defect Creation at Interfaces in Electrocatalytically Cycled LaFeO ₃ -SrTiO ₃ Thin Films. Microscopy and Microanalysis, 2021, 27, 1178-1179.	0.4	0
84	Evolution of Defect States from Different Starting States in La _{1-x} Sr _x FeO ₃ Thin Films. Microscopy and Microanalysis, 2021, 27, 2906-2908.	0.4	0
85	Rapid and Flexible Few Shot Learning-Based Classification of Scanning Transmission Electron Microscopy Data. Microscopy and Microanalysis, 2021, 27, 1618-1619.	0.4	0