

Shinbuhm Lee

List of Publications by Year in Descending Order

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Version: 2024-04-26

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74
papers

2,563
citations

28
h-index

49
g-index

76
ext. papers

2,902
ext. citations

7.6
avg, IF

4.95
L-index

#	Paper	IF	Citations
74	Design Principles for the Enhanced Transparency Range of Correlated Transparent Conductors. <i>Laser and Photonics Reviews</i> , 2021 , 15, 2000444	8.3	3
73	Enhancing the conductivity of PEDOT:PSS films for biomedical applications via hydrothermal treatment. <i>Biosensors and Bioelectronics</i> , 2021 , 171, 112717	11.8	13
72	Hydrogen Control of Double Exchange Interaction in La Sr MnO for Ionic-Electric-Magnetic Coupled Applications. <i>Advanced Materials</i> , 2021 , 33, e2007606	24	6
71	Tunable resistivity of correlated VO(A) and VO(B) via tungsten doping. <i>Scientific Reports</i> , 2020 , 10, 9721	4.9	2
70	Persistent metallic Sn-doped InO epitaxial ultrathin films with enhanced infrared transmittance. <i>Scientific Reports</i> , 2020 , 10, 4957	4.9	6
69	Binary Oxide Superlattices: Versatile Tunability of the Metal Insulator Transition in (TiO ₂) _m /(VO ₂) _m Superlattices (Adv. Funct. Mater. 51/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070339	15.6	0
68	Versatile Tunability of the Metal Insulator Transition in (TiO ₂) _m /(VO ₂) _m Superlattices. <i>Advanced Functional Materials</i> , 2020 , 30, 2004914	15.6	1
67	Templated epitaxy of TiO ₂ (B) on a perovskite. <i>Applied Physics Letters</i> , 2020 , 117, 133903	3.4	2
66	Measurement of Exciton and Trion Energies in Multistacked hBN/WS Coupled Quantum Wells for Resonant Tunneling Diodes. <i>ACS Nano</i> , 2020 , 14, 16114-16121	16.7	6
65	High infrared transparency up to 8- μ m-wavelength in correlated vanadium Wadsley conductors. <i>APL Materials</i> , 2020 , 8, 041111	5.7	6
64	Oxygen-Vacancy-Endurable Conductors with Enhanced Transparency Using Correlated 4d ² SrMoO ₃ Thin Films. <i>Advanced Functional Materials</i> , 2020 , 30, 2001489	15.6	12
63	Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO Resistive Switching Memories. <i>Advanced Materials</i> , 2019 , 31, e1901322	24	25
62	Resistive Switching: Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO ₃ Resistive Switching Memories (Adv. Mater. 28/2019). <i>Advanced Materials</i> , 2019 , 31, 1970205	24	1
61	Degradation Mechanism of Vanadium Oxide Films When Grown on Y-Stabilized ZrO ₂ Above 500 °C. <i>Advanced Engineering Materials</i> , 2019 , 21, 1900918	3.5	1
60	Sharp contrast in the electrical and optical properties of vanadium Wadsley (V _m O _{2m+1} , m>1) epitaxial films selectively stabilized on (111)-oriented Y-stabilized ZrO ₂ . <i>Physical Review Materials</i> , 2019 , 3,	3.2	11
59	Coherent-strained superconducting BaPb _{1-x} BixO ₃ thin films by interface engineering. <i>Physical Review Materials</i> , 2019 , 3,	3.2	3
58	Anisotropic suppression of octahedral breathing distortion with the fully strained BaBiO ₃ /BaCeO ₃ heterointerface. <i>APL Materials</i> , 2018 , 6, 016107	5.7	6

57	Electrical and Optical Properties of VO ₂ Polymorphic Films Grown Epitaxially on Y-Stabilized ZrO ₂ . <i>Advanced Electronic Materials</i> , 2018 , 4, 1700620	6.4	12
56	Electrochemically Triggered Metal-Insulator Transition between VO ₂ and V ₂ O ₅ . <i>Advanced Functional Materials</i> , 2018 , 28, 1803024	15.6	25
55	Persistent Electrochemical Performance in Epitaxial VO(B). <i>Nano Letters</i> , 2017 , 17, 2229-2233	11.5	28
54	Ablation laser fluence as an effective parameter to control superconductivity in Ba 1-x K x BiO 3 films. <i>Current Applied Physics</i> , 2017 , 17, 600-604	2.6	
53	Kinetically Controlled Fabrication of Single-Crystalline TiO Nanobrush Architectures with High Energy {001} Facets. <i>Advanced Science</i> , 2017 , 4, 1700045	13.6	5
52	Research Update: Fast and tunable nanoionics in vertically aligned nanostructured films. <i>APL Materials</i> , 2017 , 5, 042304	5.7	30
51	Oxide Epitaxy with Large Symmetry Mismatch: Bronze-phase VO ₂ on SrTiO ₃ . <i>Microscopy and Microanalysis</i> , 2017 , 23, 1580-1581	0.5	0
50	Turning antiferromagnetic Sm(0.34)Sr(0.66)MnO ₃ into a 140 K ferromagnet using a nanocomposite strain tuning approach. <i>Nanoscale</i> , 2016 , 8, 8083-90	7.7	18
49	Enhancing interfacial magnetization with a ferroelectric. <i>Physical Review B</i> , 2016 , 94,	3.3	29
48	Epitaxial stabilization and phase instability of VO ₂ polymorphs. <i>Scientific Reports</i> , 2016 , 6, 19621	4.9	77
47	Emerging magnetism and anomalous Hall effect in iridate-manganite heterostructures. <i>Nature Communications</i> , 2016 , 7, 12721	17.4	85
46	Self-assembled oxide films with tailored nanoscale ionic and electronic channels for controlled resistive switching. <i>Nature Communications</i> , 2016 , 7, 12373	17.4	67
45	Evidence for impact ionization in vanadium dioxide. <i>Physical Review B</i> , 2016 , 94,	3.3	7
44	Determination of ferroelectric contributions to electromechanical response by frequency dependent piezoresponse force microscopy. <i>Scientific Reports</i> , 2016 , 6, 30579	4.9	32
43	Enhanced metallic properties of SrRuO ₃ thin films via kinetically controlled pulsed laser epitaxy. <i>Applied Physics Letters</i> , 2016 , 109, 161902	3.4	12
42	Ferroelectric-like hysteresis loop originated from non-ferroelectric effects. <i>Applied Physics Letters</i> , 2016 , 109, 102901	3.4	24
41	Nanoscale self-templating for oxide epitaxy with large symmetry mismatch. <i>Scientific Reports</i> , 2016 , 6, 38168	4.9	16
40	Memristive switching in Cu/Si/Pt cells and its improvement in vacuum environment. <i>Solid State Ionics</i> , 2016 , 295, 1-6	3.3	1

39	Strongly enhanced oxygen ion transport through samarium-doped CeO ₂ nanopillars in nanocomposite films. <i>Nature Communications</i> , 2015 , 6, 8588	17.4	116
38	Resistive switching phenomena: A review of statistical physics approaches. <i>Applied Physics Reviews</i> , 2015 , 2, 031303	17.3	243
37	Ionic Conductivity Increased by Two Orders of Magnitude in Micrometer-Thick Vertical Yttria-Stabilized ZrO ₂ Nanocomposite Films. <i>Nano Letters</i> , 2015 , 15, 7362-9	11.5	73
36	Electronic structure and insulating gap in epitaxial VO ₂ polymorphs. <i>APL Materials</i> , 2015 , 3, 126109	5.7	33
35	Strain Tuning and Strong Enhancement of Ionic Conductivity in SrZrO ₃ RE ₂ O ₃ (RE = Sm, Eu, Gd, Dy, and Er) Nanocomposite Films. <i>Advanced Functional Materials</i> , 2015 , 25, 4328-4333	15.6	41
34	Novel electroforming-free nanoscaffold memristor with very high uniformity, tunability, and density. <i>Advanced Materials</i> , 2014 , 26, 6284-9	24	62
33	Chemical quantification of atomic-scale EDS maps under thin specimen conditions. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1782-90	0.5	40
32	Impact of vacancy clusters on characteristic resistance change of nonstoichiometric strontium titanate nano-film. <i>Applied Physics Letters</i> , 2014 , 104, 013501	3.4	14
31	Anomalous effect due to oxygen vacancy accumulation below the electrode in bipolar resistance switching Pt/Nb:SrTiO ₃ cells. <i>APL Materials</i> , 2014 , 2, 066103	5.7	35
30	Growth control of the oxidation state in vanadium oxide thin films. <i>Applied Physics Letters</i> , 2014 , 105, 223515	3.4	54
29	Electric-field control of ferromagnetism in a nanocomposite via a ZnO phase. <i>Nano Letters</i> , 2013 , 13, 5886-90	11.5	30
28	Forming time of conducting channels in double-layer Pt/Ta ₂ O ₅ /TaO _x /Pt and single-layer Pt/TaO _x /Pt resistance memories. <i>Thin Solid Films</i> , 2013 , 540, 190-193	2.2	4
27	Forming process of unipolar resistance switching in Ta ₂ O ₅ thin films. <i>Current Applied Physics</i> , 2013 , 13, 1172-1174	2.6	0
26	Gradual electroforming and memristive switching in Pt/CuO(x)/Si/Pt systems. <i>Nanotechnology</i> , 2013 , 24, 325202	3.4	7
25	Origin of variation in switching voltages in threshold-switching phenomena of VO ₂ thin films. <i>Applied Physics Letters</i> , 2013 , 102, 063501	3.4	29
24	Two opposite hysteresis curves in semiconductors with mobile dopants. <i>Applied Physics Letters</i> , 2013 , 102, 253503	3.4	18
23	Dynamic switching mechanism of conduction/set process in Cu/a-Si/Si memristive device. <i>Applied Physics Letters</i> , 2013 , 103, 043503	3.4	12
22	Reversible changes between bipolar and unipolar resistance-switching phenomena in a Pt/SrTiO _x /Pt cell. <i>Current Applied Physics</i> , 2012 , 12, 1515-1517	2.6	11

21	Dielectric-breakdown-like forming process in the unipolar resistance switching of Ta ₂ O ₅ thin films. <i>Current Applied Physics</i> , 2012 , 12, 846-848	2.6	5
20	Avoiding fatal damage to the top electrodes when forming unipolar resistance switching in nano-thick material systems. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 255101	3	5
19	Forming mechanism of the bipolar resistance switching in double-layer memristive nanodevices. <i>Nanotechnology</i> , 2012 , 23, 315202	3.4	17
18	Oxide double-layer nanocrossbar for ultrahigh-density bipolar resistive memory. <i>Advanced Materials</i> , 2011 , 23, 4063-7	24	100
17	Interface-modified random circuit breaker network model applicable to both bipolar and unipolar resistance switching. <i>Applied Physics Letters</i> , 2011 , 98, 033502	3.4	37
16	Conversion from unipolar to bipolar resistance switching by inserting Ta ₂ O ₅ layer in Pt/TaOx/Pt cells. <i>Applied Physics Letters</i> , 2011 , 98, 183507	3.4	31
15	Time-dependent current-voltage curves during the forming process in unipolar resistance switching. <i>Applied Physics Letters</i> , 2011 , 98, 053503	3.4	18
14	Scaling theory for unipolar resistance switching. <i>Physical Review Letters</i> , 2010 , 105, 205701	7.4	67
13	Stabilizing the forming process in unipolar resistance switching using an improved compliance current limiter. <i>Journal Physics D: Applied Physics</i> , 2010 , 43, 485103	3	11
12	Reduction in high reset currents in unipolar resistance switching Pt/SrTiOx/Pt capacitors using acceptor doping. <i>Applied Physics Letters</i> , 2010 , 97, 093505	3.4	20
11	Effects of electrode polarity on filament ruptures during unipolar resistance switchings. <i>Current Applied Physics</i> , 2010 , 10, 817-820	2.6	0
10	Effect of NiO Growth Conditions on the Bipolar Resistance Memory Switching of Pt/NiO/SRO Structure. <i>Journal of the Korean Physical Society</i> , 2010 , 57, 1856-1861	0.6	12
9	Large 1/f noise of unipolar resistance switching and its percolating nature. <i>Applied Physics Letters</i> , 2009 , 95, 122112	3.4	39
8	Multilevel unipolar resistance switching in TiO ₂ thin films. <i>Applied Physics Letters</i> , 2009 , 95, 093508	3.4	29
7	Predictability of reset switching voltages in unipolar resistance switching. <i>Applied Physics Letters</i> , 2009 , 94, 173504	3.4	33
6	Abnormal resistance switching behaviours of NiO thin films: possible occurrence of both formation and rupturing of conducting channels. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 015506	3	12
5	Occurrence of both unipolar memory and threshold resistance switching in a NiO film. <i>Physical Review Letters</i> , 2009 , 102, 026801	7.4	203
4	Strong resistance nonlinearity and third harmonic generation in the unipolar resistance switching of NiO thin films. <i>Applied Physics Letters</i> , 2008 , 93, 252102	3.4	25

3	Scaling behaviors of reset voltages and currents in unipolar resistance switching. <i>Applied Physics Letters</i> , 2008 , 93, 212105	3-4	74
2	Effects of heat dissipation on unipolar resistance switching in PtNiO/Pt capacitors. <i>Applied Physics Letters</i> , 2008 , 92, 183507	3-4	128
1	Random Circuit Breaker Network Model for Unipolar Resistance Switching. <i>Advanced Materials</i> , 2008 , 20, 1154-1159	24	302