Sangwoo Ryu

List of Publications by Year
in descending order

55 papers	2,592 citations	257450 24 h-index	182427 51 g-index
56 all docs	56 docs citations	56 times ranked	4028 citing authors

#	Article	IF	Citations
1	Polarized Raman scattering of multiferroic BiFeO3 epitaxial films with rhombohedral R3c symmetry. Applied Physics Letters, 2006, 88, 042907.	3.3	371
2	Polar metals by geometric design. Nature, 2016, 533, 68-72.	27.8	262
3	Emergence of room-temperature ferroelectricity at reduced dimensions. Science, 2015, 349, 1314-1317.	12.6	259
4	Switchable Induced Polarization in LaAlO₃/SrTiO₃ Heterostructures. Nano Letters, 2012, 12, 1765-1771.	9.1	167
5	Electron pairing without superconductivity. Nature, 2015, 521, 196-199.	27.8	141
6	Electric modulation of magnetization at the BaTiO3/La0.67Sr0.33MnO3 interfaces. Applied Physics Letters, 2012, 100, .	3.3	118
7	Room-temperature electronically-controlled ferromagnetism at the LaAlO3/SrTiO3 interface. Nature Communications, 2014, 5, 5019.	12.8	115
8	Ferroelectric tunnel junctions with graphene electrodes. Nature Communications, 2014, 5, 5518.	12.8	107
9	Mechanical Tuning of LaAlO₃/SrTiO₃ Interface Conductivity. Nano Letters, 2015, 15, 3547-3551.	9.1	75
10	Variations of ferroelectric off-centering distortion and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi><mml:mtext>â”</mml:mtext><mml:mn>4</mml:mn><mml:mi> mixing in La-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>BiFeO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:n Physical Review B, 2010, 82, .	3.2	74
11	Magnetoelectric coupling susceptibility from magnetodielectric effect. Applied Physics Letters, 2008, 93, .	3.3	69
12	Giant conductivity switching of LaAlO3/SrTiO3 heterointerfaces governed by surface protonation. Nature Communications, 2016, 7, 10681.	12.8	68
13	Improving the openâ€circuit voltage of Cu₂ZnSnSe₄ thin film solar cells via interface passivation. Progress in Photovoltaics: Research and Applications, 2017, 25, 308-317.	8.1	66
14	Deterministic and robust room-temperature exchange coupling in monodomain multiferroic BiFeO3 heterostructures. Nature Communications, 2017, 8, 1583.	12.8	45
15	Electromechanics of Ferroelectricâ€Like Behavior of LaAlO₃ Thin Films. Advanced Functional Materials, 2015, 25, 6538-6544.	14.9	42
16	Evidence for chargeâ€“vortex duality at the LaAlO3/SrTiO3 interface. Nature Communications, 2012, 3, 955.	12.8	41
17	Direct imaging of the electron liquid at oxide interfaces. Nature Nanotechnology, 2018, 13, 198-203.	31.5	40
18	Long-term stabilized high-density CuBi₂O₄/NiO heterostructure thin film photocathode grown by pulsed laser deposition. Chemical Communications, 2019, 55, 12447-12450.	4.1	33

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19	Micrometer-Scale Ballistic Transport of Electron Pairs in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>LaAlO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn> Physical Review Letters, 2016, 117, 096801.	7.8	32
20	Polarization switching characteristics of BiFeO3 thin films epitaxially grown on Pt/MgO at a low temperature. Applied Physics Letters, 2009, 95, 242902.	3.3	30
21	Tunable Electron-Electron Interactions in LaAlO3/SrTiO3 Nanostructures. Physical Review X, 2016, 6, .	8.9	29
22	Retention of resistance states in ferroelectric tunnel memristors. Applied Physics Letters, 2013, 103, .	3.3	26
23	Broadband Terahertz Generation and Detection at 10 nm Scale. Nano Letters, 2013, 13, 2884-2888.	9.1	26
24	Oxide-based platform for reconfigurable superconducting nanoelectronics. Nanotechnology, 2013, 24, 375201.	2.6	26
25	Anomalous Transport in Sketched Nanostructures at theLaAlO3/SrTiO3Interface. Physical Review X, 2013, 3, .	8.9	23
26	Metastable honeycomb SrTiO3/SrIrO3 heterostructures. Applied Physics Letters, 2016, 108, .	3.3	23
27	Electronic and Structural Transitions of LaAlO₃/SrTiO₃ Heterostructure Driven by Polar Fieldâ€Assisted Oxygen Vacancy Formation at the Surface. Advanced Science, 2021, 8, e2002073.	11.2	23
28	Direct imaging of LaAlO3/SrTiO3 nanostructures using piezoresponse force microscopy. APL Materials, 2013, 1, 052110.	5.1	20
29	Template Engineering of CuBi₂O₄ Singleâ€Crystal Thin Film Photocathodes. Small, 2020, 16, e2002429.	10.0	20
30	Cooperative evolution of polar distortion and nonpolar rotation of oxygen octahedra in oxide heterostructures. Science Advances, 2021, 7, .	10.3	20
31	Charge Transfer to LaAlO₃/SrTiO₃ Interfaces Controlled by Surface Water Adsorption and Proton Hopping. Advanced Functional Materials, 2016, 26, 5453-5459.	14.9	19
32	Electric field effects in graphene/LaAlO₃/SrTiO₃ heterostructures and nanostructures. APL Materials, 2015, 3, 062502.	5.1	17
33	In-plane quasi-single-domain BaTiO3 via interfacial symmetry engineering. Nature Communications, 2021, 12, 6784.	12.8	16
34	Magnetoelectric coupling at the EuO/BaTiO3 interface. Applied Physics Letters, 2013, 102, .	3.3	14
35	Non-local piezoresponse of LaAlO3/SrTiO3 heterostructures. Applied Physics Letters, 2014, 104, 161606.	3.3	14
36	Creation of a two-dimensional electron gas and conductivity switching of nanowires at the LaAlO3/SrTiO3 interface grown by 90o off-axis sputtering. Applied Physics Letters, 2013, 103, .	3.3	13

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37	Formation of high-density CuBi₂O₄ thin film photocathodes with polyvinylpyrrolidone-metal interaction. Optics Express, 2019, 27, A171.	3.4	13
38	Gate-tunable superconducting weak link behavior in top-gated LaAlO3-SrTiO3. Applied Physics Letters, 2015, 106, .	3.3	11
39	Electro-mechanical response of top-gated LaAlO3/SrTiO3. Journal of Applied Physics, 2016, 119, .	2.5	11
40	Direct Identification of Antisite Cation Intermixing and Correlation with Electronic Conduction in CuBi₂O₄ for Photocathodes. ACS Applied Materials & Interfaces, 2020, 12, 43720-43727.	8.0	10
41	Large enhancement of the photocurrent density in N-doped Cu3N films through bandgap reduction. Journal of the Korean Ceramic Society, 2020, 57, 345-351.	2.3	10
42	Magnetic field tuned superconductor-to-insulator transition at theLaAlO3/SrTiO3interface. Physical Review B, 2014, 90, .	3.2	9
43	Photoconductive response of a single Au nanorod coupled to LaAlO3/SrTiO3 nanowires. Applied Physics Letters, 2015, 106, .	3.3	6
44	Reversible tuning of two-dimensional electron gases in oxide heterostructures by chemical surface modification. Applied Physics Letters, 2016, 109, .	3.3	6
45	Parallel Conductive-AFM Lithography on LaAlO$_{3}$ /SrTiO$_{3}$ Interfaces. IEEE Nanotechnology Magazine, 2013, 12, 518-520.	2.0	5
46	Two-dimensional mapping of triaxial strain fields in a multiferroic BiFeO3 thin film using scanning x-ray microdiffraction. Applied Physics Letters, 2007, 90, 102904.	3.3	4
47	Highâ€Pressure Evaporationâ€Based Nanoporous Black Sn for Enhanced Performance of Lithiumâ€Ion Battery Anodes. Particle and Particle Systems Characterization, 2019, 36, 1800331.	2.3	4
48	Analysis of Local Charges at Hetero-interfaces by Electron Holography â€“ A Comparative Study of Different Techniques. Ultramicroscopy, 2021, 231, 113236.	1.9	4
49	Fast Pulling of n-Type Si Ingots for Enhanced Si Solar Cell Production. Electronic Materials Letters, 2018, 14, 461-466.	2.2	3
50	Interfacial B-site atomic configuration in polar (111) and non-polar (001) SrIrO3/SrTiO3 heterostructures. APL Materials, 2017, 5, .	5.1	2
51	In-situ probing of coupled atomic restructuring and metallicity of oxide heterointerfaces induced by polar adsorbates. Applied Physics Letters, 2017, 111, 141604.	3.3	2
52	Nucleation and Growth-Controlled Morphology Evolution of Cu Nanostructures During High-Pressure Thermal Evaporation. Journal of Korean Institute of Metals and Materials, 2021, 59, 135-141.	1.0	2
53	Nucleation and Growth-Controlled Facile Fabrication of Gold Nanoporous Structures for Highly Sensitive Surface-Enhanced Raman Spectroscopy Applications. Nanomaterials, 2021, 11, 1463.	4.1	2
54	Reduction of Potential-Induced-Degradation of p-Type PERC Solar Cell Modules by an Ion-Diffusion Barrier Layer Underneath the Front Glass. Processes, 2022, 10, 334.	2.8	2

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55	Electronic reconstruction at the polar (111)-oriented oxide interface. APL Materials, 2022, 10, .	5.1	2