Hyungwoo Lee

List of Publications by Year
in descending order

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58 papers	1,668 citations	331259 21 h-index	288905 40 g-index
59 all docs	59 docs citations	59 times ranked	2663 citing authors

#	Article	IF	Citations
1	Variance-aware weight quantization of multi-level resistive switching devices based on Pt/LaAlO3/SrTiO3 heterostructures. Scientific Reports, 2022, 12, .	1.6	6
2	Strong Interfacial Charge Trapping in Ultrathin SrRuO₃ on SrTiO₃ Probed by Noise Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 5618-5625.	2.1	4
3	Cooperative evolution of polar distortion and nonpolar rotation of oxygen octahedra in oxide heterostructures. Science Advances, 2021, 7, .	4.7	20
4	One-dimensional Kronigâ€“Penney superlattices at the LaAlO3/SrTiO3 interface. Nature Physics, 2021, 17, 782-787.	6.5	9
5	Electronic and Structural Transitions of LaAlO₃/SrTiO₃ Heterostructure Driven by Polar Fieldâ€Assisted Oxygen Vacancy Formation at the Surface. Advanced Science, 2021, 8, e2002073.	5.6	23
6	Electronically reconfigurable complex oxide heterostructure freestanding membranes. Science Advances, 2021, 7, .	4.7	15
7	Hot Electron Tunneling in Pt/LaAlO₃/SrTiO₃ Heterostructures for Enhanced Photodetection. ACS Applied Materials & Interfaces, 2021, 13, 47208-47217.	4.0	8
8	Anisotropic Diffusion of Charges on Au Nanoclusters Embedded in Al 2 O 3 Dielectrics. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900596.	1.2	1
9	Largeâ€Scale Assembly of Peptideâ€Based Hierarchical Nanostructures and Their Antiferroelectric Properties. Small, 2020, 16, e2003986.	5.2	6
10	Engineered spin-orbit interactions in LaAlO ₃ /SrTiO ₃ -based 1D serpentine electron waveguides. Science Advances, 2020, 6, .	4.7	10
11	Gate-Tunable Optical Nonlinearities and Extinction in Graphene/LaAlO3/SrTiO3 Nanostructures. Nano Letters, 2020, 20, 6966-6973.	4.5	6
12	Pascal conductance series in ballistic one-dimensional LaAlO ₃ /SrTiO ₃ channels. Science, 2020, 367, 769-772.	6.0	43
13	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	13.7	218
14	Coupled Nanowires: Longâ€Range Nonâ€Coulombic Electronâ€“Electron Interactions between LaAlO₃/SrTiO₃ Nanowires (Adv. Mater. Interfaces 15/2019). Advanced Materials Interfaces, 2019, 6, 1970098.	1.9	0
15	Direct Observation of Field-induced Modulation of Two-dimensional Electron Gas at Oxide Interfaces. Microscopy and Microanalysis, 2019, 25, 1848-1849.	0.2	0
16	Strong Aharonov-Bohm quantum interference in simply connected <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">LaAlO</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mo>/</mml:mo><mml:msub><mml:mi mathvariant="normal">SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> structures. Physical Review B, 2019, 100, .	1.1	1
17	Inhomogeneous energy landscape in LaAlO₃/SrTiO₃ nanostructures. Nanoscale Horizons, 2019, 4, 1194-1201.	4.1	5
18	Reconfigurable edge-state engineering in graphene using LaAlO3/SrTiO3 nanostructures. Applied Physics Letters, 2019, 114, .	1.5	5

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19	Over 100-THz bandwidth selective difference frequency generation at LaAlO3/SrTiO3 nanojunctions. Light: Science and Applications, 2019, 8, 24.	7.7	6
20	Characterization and Modeling of Co/BaTiO₃/SrRuO₃ Ferroelectric Tunnel Junction Memory by Capacitanceâ€“Voltage (${C}$ â€“${V}$), Currentâ€“Voltage (${I}$ â€“${V}$), and High-Frequency Measurements. IEEE Transactions on Electron Devices, 2019, 66, 2186-2191.	1.6	4
21	Longâ€Range Nonâ€Coulombic Electronâ€“Electron Interactions between LaAlO 3 /SrTiO 3 Nanowires. Advanced Materials Interfaces, 2019, 6, 1900301.	1.9	5
22	Probing vacancy behavior across complex oxide heterointerfaces. Science Advances, 2019, 5, eaau8467.	4.7	21
23	Oxygen Stoichiometry Effect on Polar Properties of LaAlO₃/SrTiO₃. Advanced Functional Materials, 2018, 28, 1707159.	7.8	22
24	One-Dimensional Nature of Superconductivity at the <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:mn>3</mml:mn></mml:msub><mml:mo><</mml:mo> Interface. Physical Review Letters, 2018, 120, 147001.	2.9	34
25	Direct imaging of the electron liquid at oxide interfaces. Nature Nanotechnology, 2018, 13, 198-203.	15.6	40
26	Shubnikovâ€“de Haasâ€“like Quantum Oscillations in Artificial One-Dimensional <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:mn>3</mml:mn></mml:msub><mml:mo><</mml:mo> Electron Channels. Physical Review Letters, 2018, 120, 076801.	2.9	19
27	Nanoscale Mapping of Molecular Vibrational Modes via Vibrational Noise Spectroscopy. Nano Letters, 2018, 18, 1001-1009.	4.5	8
28	Tunneling Hot Spots in Ferroelectric SrTiO₃. Nano Letters, 2018, 18, 491-497.	4.5	30
29	Quantized Ballistic Transport of Electrons and Electron Pairs in LaAlO₃/SrTiO₃ Nanowires. Nano Letters, 2018, 18, 4473-4481.	4.5	50
30	Control of Epitaxial BaFe₂As₂ Atomic Configurations with Substrate Surface Terminations. Nano Letters, 2018, 18, 6347-6352.	4.5	16
31	Graphene-Complex-Oxide Nanoscale Device Concepts. ACS Nano, 2018, 12, 6128-6136.	7.3	6
32	Optical control of polarization in ferroelectric heterostructures. Nature Communications, 2018, 9, 3344.	5.8	119
33	Polarization-Mediated Modulation of Electronic and Transport Properties of Hybrid MoS₂â€“BaTiO₃â€“SrRuO₃ Tunnel Junctions. Nano Letters, 2017, 17, 922-927.	4.5	75
34	Direct mapping of electrical noise sources in molecular wire-based devices. Scientific Reports, 2017, 7, 43411.	1.6	12
35	Roomâ€Temperature Quantum Transport Signatures in Graphene/LaAlO₃/SrTiO₃ Heterostructures. Advanced Materials, 2017, 29, 1603488.	11.1	12
36	Electrostatically tuned dimensional crossover in LaAlO₃/SrTiO₃ heterostructures. APL Materials, 2017, 5, 106107.	2.2	6

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37	Direct imaging of sketched conductive nanostructures at the LaAlO3/SrTiO3 interface. Applied Physics Letters, 2017, 111, 233104.	1.5	4
38	Charge Transfer to LaAlO₃/SrTiO₃ Interfaces Controlled by Surface Water Adsorption and Proton Hopping. Advanced Functional Materials, 2016, 26, 5453-5459.	7.8	19
39	Tunable Electron-Electron Interactions in LaAlO3/SrTiO3 Nanostructures. Physical Review X, 2016, 6, .	2.8	29
40	Nanodomain Engineering in Ferroelectric Capacitors with Graphene Electrodes. Nano Letters, 2016, 16, 6460-6466.	4.5	41
41	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.	2.9	32
42	Scanning tunneling microscopy of an interfacial two-dimensional electron gas in oxide heterostructures. Physical Review B, 2016, 93, .	1.1	3
43	Giant conductivity switching of LaAlO3/SrTiO3 heterointerfaces governed by surface protonation. Nature Communications, 2016, 7, 10681.	5.8	68
44	Imprint Control of BaTiO₃ Thin Films via Chemically Induced Surface Polarization Pinning. Nano Letters, 2016, 16, 2400-2406.	4.5	56
45	Nanoscale direct mapping of localized and induced noise sources on conducting polymer films. Nanoscale, 2016, 8, 835-842.	2.8	16
46	Electromechanics of Ferroelectricâ€Like Behavior of LaAlO₃ Thin Films. Advanced Functional Materials, 2015, 25, 6538-6544.	7.8	42
47	CMOS compatible integrated ferroelectric tunnel junctions (FTJ). , 2015, , .		4
48	Real-time detection of chlorine gas using Ni/Si shell/core nanowires. Nanoscale Research Letters, 2015, 10, 18.	3.1	9
49	Electric field effects in graphene/LaAlO₃/SrTiO₃ heterostructures and nanostructures. APL Materials, 2015, 3, 062502.	2.2	17
50	Electron pairing without superconductivity. Nature, 2015, 521, 196-199.	13.7	141
51	The application of orthogonal photolithography to micro-scale organic field effect transistors and complementary inverters on flexible substrate. Applied Physics Letters, 2014, 104, 053301.	1.5	20
52	Room-temperature electronically-controlled ferromagnetism at the LaAlO3/SrTiO3 interface. Nature Communications, 2014, 5, 5019.	5.8	115
53	Plasmonâ€“Exciton Interactions in Hybrid Structures of Au Nanohemispheres and CdS Nanowires for Improved Photoconductive Devices. Journal of Physical Chemistry C, 2013, 117, 24543-24548.	1.5	13
54	Aligned networks of cadmium sulfidenanowires for highly flexible photodetectors with improved photoconductive responses. Journal of Materials Chemistry, 2012, 22, 2173-2179.	6.7	84

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55	Grapheneâ€“nanowire hybrid structures for high-performance photoconductive devices. Journal of Materials Chemistry, 2012, 22, 8372.	6.7	47
56	Highâ€Performance Photoconductive Channels Based on (Carbon Nanotube)â€“(CdS Nanowire) Hybrid Nanostructures. Small, 2012, 8, 1650-1656.	5.2	13
57	Integrated devices based on networks of nanotubes and nanowires. NPG Asia Materials, 2010, 2, 103-111.	3.8	18
58	Wide Contact Structures for Low-Noise Nanochannel Devices Based on a Carbon Nanotube Network. ACS Nano, 2010, 4, 7612-7618.	7.3	12