Eunha Lee

List of Publications by Year
in descending order

85 papers	3,418 citations	201674 27 h-index	144013 57 g-index
87 all docs	87 docs citations	87 times ranked	4174 citing authors

#	Article	IF	Citations
1	Gated three-terminal device architecture to eliminate persistent photoconductivity in oxide semiconductor photosensor arrays. Nature Materials, 2012, 11, 301-305.	27.5	434
2	A Flexible Bimodal Sensor Array for Simultaneous Sensing of Pressure and Temperature. Advanced Materials, 2014, 26, 796-804.	21.0	375
3	Amorphous hafnium-indium-zinc oxide semiconductor thin film transistors. Applied Physics Letters, 2009, 95, .	3.3	217
4	Quantification of microstructural features in Î±/Î² titanium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 372, 191-198.	5.6	175
5	Anion control as a strategy to achieve high-mobility and high-stability oxide thin-film transistors. Scientific Reports, 2013, 3, 1459.	3.3	137
6	Microstructural visualization of compositional changes induced by transition metal dissolution in Ni-rich layered cathode materials by high-resolution particle analysis. Nano Energy, 2019, 56, 434-442.	16.0	132
7	High-performance amorphous gallium indium zinc oxide thin-film transistors through N2O plasma passivation. Applied Physics Letters, 2008, 93, .	3.3	112
8	Direct observations and analyses of dislocation substructures in the Î± phase of an Î±/Î² Ti-alloy formed by nanoindentation. Acta Materialia, 2005, 53, 5101-5115.	7.9	93
9	Source/Drain Series-Resistance Effects in Amorphous Galliumâ€“Indium Zinc-Oxide Thin Film Transistors. IEEE Electron Device Letters, 2008, 29, 879-881.	3.9	92
10	Self-aligned top-gate amorphous gallium indium zinc oxide thin film transistors. Applied Physics Letters, 2008, 93, .	3.3	89
11	Highly Flexible and Transparent Ag Nanowire Electrode Encapsulated with Ultra-Thin Al2O3: Thermal, Ambient, and Mechanical Stabilities. Scientific Reports, 2017, 7, 41336.	3.3	85
12	Selection of Î± variants during microstructural evolution inÎ±/Î²titanium alloys. Philosophical Magazine, 2007, 87, 3615-3627.	1.6	84
13	Interaction- and defect-free van der Waals contacts between metals and two-dimensional semiconductors. Nature Electronics, 2022, 5, 241-247.	26.0	84
14	Nanocrystalline ZnON; High mobility and low band gap semiconductor material for high performance switch transistor and image sensor application. Scientific Reports, 2014, 4, 4948.	3.3	82
15	Wafer-scale synthesis of thickness-controllable MoS₂films via solution-processing using a dimethylformamide/n-butylamine/2-aminoethanol solvent system. Nanoscale, 2015, 7, 9311-9319.	5.6	82
16	Short Channel Characteristics of Galliumâ€“Indiumâ€“Zincâ€“Oxide Thin Film Transistors for Three-Dimensional Stacking Memory. IEEE Electron Device Letters, 2008, 29, 549-552.	3.9	80
17	Nanometer-Scale Oxide Thin Film Transistor with Potential for High-Density Image Sensor Applications. ACS Applied Materials & Interfaces, 2011, 3, 1-6.	8.0	70
18	Modeling the tensile properties in Î²-processed Î±/Î² Ti alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 559-566.	2.2	66

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19	Origin of High Photoconductive Gain in Fully Transparent Heterojunction Nanocrystalline Oxide Image Sensors and Interconnects. Advanced Materials, 2014, 26, 7102-7109.	21.0	65
20	Influence of V-pits on the efficiency droop in InGaN/GaN quantum wells. Optics Express, 2014, 22, A857.	3.4	64
21	Density of States-Based Design of Metal Oxide Thin-Film Transistors for High Mobility and Superior Photostability. ACS Applied Materials & Interfaces, 2012, 4, 5416-5421.	8.0	63
22	Rapid characterization of titanium microstructural features for specific modelling of mechanical properties. Measurement Science and Technology, 2005, 16, 60-69.	2.6	54
23	Source/Drain Formation of Self-Aligned Top-Gate Amorphous GaInZnO Thin-Film Transistors by $hbox{NH}_{3}$ Plasma Treatment. IEEE Electron Device Letters, 2009, 30, 374-376.	3.9	54
24	Ar plasma treated ZnON transistor for future thin film electronics. Applied Physics Letters, 2015, 107, .	3.3	52
25	Evolution and expansion of Li concentration gradient during chargeâ€“discharge cycling. Nature Communications, 2021, 12, 3814.	12.8	40
26	Effect of oxygen partial pressure on the Fermi level of ZnO1â^'x films fabricated by pulsed laser deposition. Applied Physics Letters, 2010, 96, 201907.	3.3	36
27	Deep learning STEM-EDX tomography of nanocrystals. Nature Machine Intelligence, 2021, 3, 267-274.	16.0	30
28	High performance oxide thin film transistors with double active layers. , 2008, , .		27
29	Ti/Cu bilayer electrodes for SiNx-passivated Hfâ€“Inâ€“Znâ€“O thin film transistors: Device performance and contact resistance. Applied Physics Letters, 2010, 97, 162105.	3.3	27
30	High mobility and high stability glassy metal-oxynitride materials and devices. Scientific Reports, 2016, 6, 23940.	3.3	24
31	Unveiling the Origin of Robust Ferroelectricity in Sub-2 nm Hafnium Zirconium Oxide Films. ACS Applied Materials & Interfaces, 2021, 13, 36499-36506.	8.0	24
32	Synthesis of Vertical MoO₂/MoS₂ Coreâ€“Shell Structures on an Amorphous Substrate via Chemical Vapor Deposition. Journal of Physical Chemistry C, 2017, 121, 27693-27699.	3.1	20
33	180nm gate length amorphous InGaZnO thin film transistor for high density image sensor applications. , 2010, , .		19
34	Amorphous FeZr metal for multi-functional sensor in electronic skin. Npj Flexible Electronics, 2019, 3, .	10.7	18
35	Characteristics and Cleaning of Dry-Etching-Damaged Layer of Amorphous Oxide Thin-Film Transistor. Electrochemical and Solid-State Letters, 2009, 12, H95.	2.2	17
36	High mobility zinc oxynitride-TFT with operation stability under light-illuminated bias-stress conditions for large area and high resolution display applications. , 2012, , .		17

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37	Highly Stable Ga2O3-In2O3-ZnO TFT for Active-Matrix Organic Light-Emitting Diode Display Application. , 2006, , .		16
38	Direct Three-Dimensional Observation of Core/Shell-Structured Quantum Dots with a Composition-Competitive Gradient. ACS Nano, 2018, 12, 12109-12117.	14.6	15
39	Magnetization as a critical defining parameter for strand in precision dipole applications implications for field error and F-J stability. IEEE Transactions on Applied Superconductivity, 2001, 11, 2567-2570.	1.7	13
40	Atomic-scale chemical mapping of copper dopants in Bi2Te2.7Se0.3 thermoelectric alloy. Materials Today Physics, 2021, 17, 100347.	6.0	13
41	Ultrathin monolithic HfO2 formed by Hf-seeded atomic layer deposition on MoS2: Film characteristics and its transistor application. Thin Solid Films, 2019, 673, 112-118.	1.8	12
42	Investigations of semiconductor devices using SIMS; diffusion, contamination, process control. Applied Surface Science, 2008, 255, 1395-1399.	6.1	11
43	Novel stress-memorization-technology (SMT) for high electron mobility enhancement of gate last high-k/metal gate devices. , 2010, , .		11
44	Misorientationâ€Angleâ€Dependent Phase Transformation in van der Waals Multilayers via Electronâ€Beam Irradiation. Advanced Materials, 2018, 30, e1706864.	21.0	10
45	Non-equilibrium fractal growth of MoS₂ for electrocatalytic hydrogen evolution. CrystEngComm, 2019, 21, 478-486.	2.6	10
46	Ferroelasticâ€“Ferroelectric Multiferroicity in van der Waals Rhenium Dichalcogenides. Advanced Materials, 2022, 34, e2108777.	21.0	10
47	In-depth study of the chemical/electronic structures of two-dimensional molybdenum disulfide materials with sub-micrometer-resolution scanning photoelectron microscopy. 2D Materials, 2020, 7, 025002.	4.4	9
48	Direct observations of dislocation substructures formed by nano-indentation of the Î±-phase in an Î±/Î² titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 463-466.	5.6	8
49	Sputtering Effect on Amorphous Gaâ€“Inâ€“Znâ€“O Thin-Film Surface: Occurrence of Subgap and Metallic States. Electrochemical and Solid-State Letters, 2010, 13, H454.	2.2	8
50	Chemical/morphological transition behavior of lithium phosphorus oxynitride solid-electrolyte in air: An analytical approach based on X-ray photoelectron spectroscopy and atomic force microscopy. Journal of Power Sources, 2018, 399, 231-237.	7.8	7
51	Atomic-scale identification of invisible cation vacancies at an oxide homointerface. Materials Today Physics, 2021, 16, 100302.	6.0	7
52	Sulfidation characteristics of amorphous nonstoichiometric Mo-oxides for MoS2 synthesis. Applied Surface Science, 2021, 535, 147684.	6.1	7
53	Ferroelectric switching in GeTe through rotation of lone-pair electrons by Electric field-driven phase transition. Applied Materials Today, 2021, 24, 101122.	4.3	7
54	Areaâ€Selective Atomic Layer Deposition of MoS₂ using Simultaneous Deposition and Etching Characteristics of MoCl₅. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000533.	2.4	7

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55	High trap density and long retention time from self-assembled amorphous Si nanocluster floating gate nonvolatile memory. Applied Physics Letters, 2006, 89, 243513.	3.3	6
56	Auger electron nanoscale mapping and x-ray photoelectron spectroscopy combined with gas cluster ion beam sputtering to study an organic bulk heterojunction. Applied Physics Letters, 2014, 104, 243303.	3.3	6
57	Introduction of an Al Seed Layer for Facile Adsorption of MoCl₅ during Atomic Layer Deposition of MoS₂. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1901042.	1.8	6
58	3D Materials Characterization using Dual-Beam FIB/SEM Techniques. Microscopy and Microanalysis, 2004, 10, 1128-1129.	0.4	5
59	Local structure and local conduction paths in amorphous (In,Ga,Hf)â€“ZnO semiconductor thin films. Solid State Communications, 2012, 152, 1867-1869.	1.9	5
60	Chemically Homogeneous and Thermally Robust Ni_{1â€“x}Pt_xSi Film Formed Under a Non-Equilibrium Melting/Quenching Condition. ACS Applied Materials & Interfaces, 2017, 9, 566-572.	8.0	5
61	Intriguing morphological evolution during chemical vapor deposition of HfS2 using HfCl4 and S on sapphire substrate. Applied Surface Science, 2020, 509, 144701.	6.1	5
62	Low-Dose Sparse-View HAADF-STEM-EDX Tomography of Nanocrystals Using Unsupervised Deep Learning. ACS Nano, 2022, 16, 10314-10326.	14.6	5
63	Fabrication and phase-transformation issues in CTFF-MA processed A15 superconductors. AIP Conference Proceedings, 2002, , .	0.4	4
64	Highly Manufacturable Single Metal Gate Process Using Ultra-Thin Metal Inserted Poly-Si Stack (UT-MIPS). , 2006, , .		4
65	Dual gate photo-thin film transistor with high photoconductive gain for high reliability, and low noise flat panel transparent imager. , 2011, , .		4
66	Ultrafast photocarrier dynamics in nanocrystalline ZnO_xN_y thin films. Optics Letters, 2014, 39, 5062.	3.3	4
67	Hybrid Deep Learning Crystallographic Mapping of Polymorphic Phases in Polycrystalline Hf_{0.5}Zr_{0.5}O₂ Thin Films. Small, 2022, 18, e2107620.	10.0	4
68	Sublayer thickness dependence of nanolaminated HfO2â€“Al2O3 films for ferroelectric phase stabilization. Applied Physics Letters, 2022, 120, .	3.3	4
69	Inverse Stranskiâ€“Krastanov Growth in Single-Crystalline Sputtered Cu Thin Films for Wafer-Scale Device Applications. ACS Applied Nano Materials, 2019, 2, 3300-3306.	5.0	3
70	Reliability of Industrial grade Embedded-STT-MRAM. , 2020, , .		3
71	3D-to-2D phase transformation through highly ordered 1D crystals from transition-metal oxides to dichalcogenides. Materials Today, 2021, 47, 38-44.	14.2	3
72	Analysis of eddy current AC loss for untwisted, multifilamentary superconducting composites with various aspect ratios. IEEE Transactions on Applied Superconductivity, 2001, 11, 2963-2966.	1.7	2

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73	Photocarrier dynamics near V-shaped pits in InxGa1âˆ’xN/GaN multiple quantum wells. Chemical Physics, 2014, 436-437, 51-54.	1.9	2
74	New Approach for Passivation of Ga<inf>2</inf>O<inf>3</inf>-In<inf>2</inf>O<inf>3</inf>-ZnO Thin Film Transistors. , 2007, , .		1
75	Epitaxial growth technology for optical interconnect based on bulk-Si platform. , 2013, , .		1
76	Environment-dependent and anion-vacancy-controlled reversible phase transition of MoS ₂ synthesized by chemical vapor deposition. 2D Materials, 2018, 5, 041002.	4.4	1
77	Lamellar-structured Ni-silicide film formed by eutectic solidification. Journal of Alloys and Compounds, 2019, 771, 124-130.	5.5	1
78	Facile and versatile ligand analysis method of colloidal quantum dot. Scientific Reports, 2021, 11, 19889.	3.3	1
79	Ne[sup +] ion sputtering effect on amorphous Ga-In-Zn-O thin-film surface investigated by high-resolution XPS. AIP Conference Proceedings, 2011, , .	0.4	0
80	Evaluation of Optical Waveguide by Solid Phase Epitaxial Growth of Amorphous Silicon. ECS Transactions, 2012, 41, 19-25.	0.5	0
81	45.3: Invited Paper: High Performance Nanocrystalline ZnO_xN_y for Imaging and Display Applications. Digest of Technical Papers SID International Symposium, 2015, 46, 681-684.	0.3	0
82	3D reconstruction modeling of bulk heterojunction organic photovoltaic cells: Effect of the complexity of the boundary on the morphology. Journal of the Korean Physical Society, 2016, 68, 474-481.	0.7	0
83	Observation of heterostructure epitaxy of Pt-doped Ni-monosilicide on Si(001). Microelectronic Engineering, 2019, 205, 14-19.	2.4	0
84	Elucidating the influence of residual polymer and gas environment on the electronic structure of a graphene layer using in situ APXPS. Applied Surface Science, 2020, 528, 146764.	6.1	0
85	Revealing unique energy level alignment at graphene/MoS2 2-dimensional layered junction using in situ ambient pressure x-ray photoelectron spectroscopy. 2D Materials, 2020, 7, 045012.	4.4	0