Jinwoo Hwang

List of Publications by Year
in descending order

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101	3,408	136950	144013
papers	citations	32 h-index	57 g-index

103	103	103	4422
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Remote epitaxy through graphene enables two-dimensional material-based layer transfer. Nature, 2017, 544, 340-343.	27.8	410
2	Demonstration of high mobility and quantum transport in modulation-doped Î²-(AlxGa1-x)2O3/Ga2O3 heterostructures. Applied Physics Letters, 2018, 112, .	3.3	264
3	Modulation-doped Î²-(Al0.2Ga0.8)2O3/Ga2O3 field-effect transistor. Applied Physics Letters, 2017, 111, .	3.3	252
4	Nanoscale Structure and Structural Relaxation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Zr</mml:mi><mml:mn>50</mml:mn></mml:msub><mml:msub><mml:mi>Cu</mml:mi><mml:m Metallic Glass. Physical Review Letters, 2012, 108, 195505.	7.8	167
5	Electrical Switching of Tristate Antiferromagnetic NÃ©el Order in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â^’</mml:mtext><mml:msub><mml:mrow><mml:mi>Fe</mml:mi></m mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: Epitaxial Films. Physical Review Letters, 2020, 124, 027202.	7.8	104
6	MOCVD epitaxy of <i>Î²</i> -(AlxGa1â^’x)2O3 thin films on (010) Ga2O3 substrates and N-type doping. Applied Physics Letters, 2019, 115, .	3.3	93
7	LPCVD homoepitaxy of Si doped Î²-Ga2O3 thin films on (010) and (001) substrates. Applied Physics Letters, 2018, 112, .	3.3	92
8	Three-Dimensional Imaging of Individual Dopant Atoms in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2013, 111, 266101.	7.8	86
9	Interband tunneling for hole injection in III-nitride ultraviolet emitters. Applied Physics Letters, 2015, 106, .	3.3	79
10	Phase transformation in MOCVD growth of (AlxGa1â^’x)2O3 thin films. APL Materials, 2020, 8, .	5.1	75
11	High current density 2D/3D MoS2/GaN Esaki tunnel diodes. Applied Physics Letters, 2016, 109, .	3.3	65
12	Toward an artificial Mott insulator: Correlations in confined high-density electron liquids in SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	64
13	Structural origins of the properties of rare earth nickelate superlattices. Physical Review B, 2013, 87, .	3.2	64
14	Unusual Formation of Point-Defect Complexes in the Ultrawide-Band-Gap Semiconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î²</mml:mi><mml:mtext>â^’</mml:mtext><mml:msub><mml:mrow><mml:mi>Ga</mml:mi></m mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: Physical Review X, 2019, 9, .	8.9	62
15	MOCVD Epitaxy of Ultrawide Bandgap Î²-(Al_{<i>x</i>}Ga_{1â€“<i>x</i>})₂O₃ with High-Al Composition on (100) Î²-Ga₂O₃ Substrates. Crystal Growth and Design, 2020, 20, 6722-6730.	3.0	61
16	Variable Resolution Fluctuation Electron Microscopy on Cu-Zr Metallic Glass Using a Wide Range of Coherent STEM Probe Size. Microscopy and Microanalysis, 2011, 17, 67-74.	0.4	60
17	Nanoscale quantification of octahedral tilts in perovskite films. Applied Physics Letters, 2012, 100, .	3.3	59
18	Correlation between stoichiometry, strain, and metal-insulator transitions of NdNiO3 films. Applied Physics Letters, 2015, 106, .	3.3	58

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19	Tunnel-injected sub 290â€‰nm ultra-violet light emitting diodes with 2.8% external quantum efficiency. Applied Physics Letters, 2018, 112, .	3.3	58
20	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. Journal of Applied Physics, 2017, 121, .	2.5	52
21	Î²-(Al_{0.18}Ga_{0.82})₂O₃/Ga₂O₃ Double Heterojunction Transistor With Average Field of 5.5 MV/cm. IEEE Electron Device Letters, 2021, 42, 899-902.	3.9	52
22	Symmetry Lowering in Extreme-Electron-Density Perovskite Quantum Wells. Physical Review Letters, 2013, 110, 256401.	7.8	51
23	Ga₂O₃-on-SiC Composite Wafer for Thermal Management of Ultrawide Bandgap Electronics. ACS Applied Materials & Interfaces, 2021, 13, 40817-40829.	8.0	49
24	Local chemical and topological order in Alâ€“Tb and its role in controlling nanocrystal formation. Acta Materialia, 2012, 60, 994-1003.	7.9	46
25	Low-resistance GaN tunnel homojunctions with 150â€‰kA/cm2 current and repeatable negative differential resistance. Applied Physics Letters, 2016, 108, .	3.3	45
26	Direct determination of structural heterogeneity in metallic glasses using four-dimensional scanning transmission electron microscopy. Ultramicroscopy, 2018, 195, 189-193.	1.9	44
27	Influence of nanoscale structural heterogeneity on shear banding in metallic glasses. Acta Materialia, 2017, 134, 104-115.	7.9	42
28	Magnetic graphene oxide-nano zero valent iron (GOâ€“nZVI) nanohybrids synthesized using biocompatible cross-linkers for methylene blue removal. RSC Advances, 2019, 9, 963-973.	3.6	36
29	Band offsets of (100) Î² -(AlxGa1â^'x)2O3/ Î² -Ga2O3 heterointerfaces grown via MOCVD. Applied Physics Letters, 2020, 117, .	3.3	36
30	Anisotropic magnetoresistance and nontrivial spin Hall magnetoresistance in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Pt</mml:mi><mml:mo>/</mml:mo><mml:mi>Î±</mml:mi><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> bilayers. Physical Review B, 2019, 100, .	3.2	35
31	Atomic scale investigation of aluminum incorporation, defects, and phase stability in Î²-(AlxGa1â^'x)2O3 films. APL Materials, 2021, 9, .	5.1	35
32	Temperature-dependence of the Hall coefficient of NdNiO₃ thin films. Applied Physics Letters, 2013, 103, 182105.	3.3	33
33	MOCVD growth of Î²-phase (AlxGa1â^'x)2O3 on (2Â¯01) Î²-Ga2O3 substrates. Applied Physics Letters, 2020, 117, .	3.3	33
34	Reflective metal/semiconductor tunnel junctions for hole injection in AlGaN UV LEDs. Applied Physics Letters, 2017, 111, .	3.3	32
35	Evidence of the Topological Hall Effect in Pt/Antiferromagnetic Insulator Bilayers. Physical Review Letters, 2019, 123, 237206.	7.8	31
36	Metalorganic chemical vapor deposition of Î±-Ga2O3 and Î±-(AlxGa1â^'x)2O3 thin films on m-plane sapphire substrates. APL Materials, 2021, 9, .	5.1	30

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37	Variable-angle high-angle annular dark-field imaging: application to three-dimensional dopant atom profiling. Scientific Reports, 2015, 5, 12419.	3.3	29
38	Interfacial Rashba-Effect-Induced Anisotropy in Nonmagnetic-Materialâ€“Ferrimagnetic-Insulator Bilayers. Physical Review Letters, 2020, 124, 257202.	7.8	28
39	Synthesis, Magnetic Properties, and Electronic Structure of Magnetic Topological Insulator MnBi₂Se₄. Nano Letters, 2021, 21, 5083-5090.	9.1	28
40	Nanoscale upconversion for oxygen sensing. Materials Science and Engineering C, 2017, 70, 76-84.	7.3	26
41	Three-dimensional imaging of individual point defects using selective detection angles in annular dark field scanning transmission electron microscopy. Ultramicroscopy, 2017, 172, 17-29.	1.9	24
42	Deep level defects and cation sublattice disorder in ZnGeN2. Journal of Applied Physics, 2020, 127, .	2.5	24
43	Thermal Conductivity of Î²-Phase Ga₂O₃ and (Al_xGa_{1â€“}_x)₂O₃ Heteroepitaxial Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 38477-38490.	8.0	24
44	Reverse Monte Carlo structural model for a zirconium-based metallic glass incorporating fluctuation microscopy medium-range order data. Journal of Materials Research, 2009, 24, 3121-3129.	2.6	23
45	Magnetism and local structure in low-dimensional Mott insulating GdTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 88, .	3.2	22
46	Engineering 1D Quantum Stripes from Superlattices of 2D Layered Materials. Advanced Materials, 2017, 29, 1603798.	21.0	22
47	Transferred large area single crystal MoS2 field effect transistors. Applied Physics Letters, 2015, 107, .	3.3	21
48	Thermal Transport across Metal/Î²-Ga₂O₃ Interfaces. ACS Applied Materials & Interfaces, 2021, 13, 29083-29091.	8.0	21
49	Two-step growth of Î²-Ga2O3 films on (100) diamond via low pressure chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	17
50	Planar and three-dimensional damage-free etching of Î²-Ga2O3 using atomic gallium flux. Applied Physics Letters, 2021, 119, .	3.3	17
51	Cumulative Impacts of Proton Irradiation on the Self-heating of AlGaN/GaN HEMTs. ACS Applied Electronic Materials, 2020, 2, 980-991.	4.3	15
52	Band offsets at metalorganic chemical vapor deposited Î²-(AlxGa1â^'x)2O3/Î²-Ga2O3 interfacesâ€”Crystalline orientation dependence. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	15
53	Si doping in MOCVD grown (010) Î²-(AlxGa1â^'x)2O3 thin films. Journal of Applied Physics, 2022, 131, .	2.5	15
54	Atomic scale investigation of chemical heterogeneity in Î²-(AlxGa1â^'x)2O3 films using atom probe tomography. Applied Physics Letters, 2019, 115, .	3.3	14

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55	Inelastic and elastic mean free paths from FIB samples of metallic glasses. Ultramicroscopy, 2013, 124, 6-12.	1.9	13
56	Silicon Oxycarbide Accelerated Chemical Vapor Deposition of Graphitic Networks on Ceramic Substrates for Thermal Management Enhancement. ACS Applied Nano Materials, 2019, 2, 452-458.	5.0	12
57	Tunable topological Hall effects in noncollinear antiferromagnet Mn3Sn/Pt bilayers. APL Materials, 2021, 9, .	5.1	12
58	Response to â€œComment on â€˜Phase transformation in MOCVD growth of (AlxGa1âˆ’x)2O3 thin filmsâ€™â€•[APL Mater. 8, 089101 (2020)]. APL Materials, 2020, 8, .	5.1	11
59	Effects of cation stoichiometry on surface morphology and crystallinity of ZnGeN2 films grown on GaN by metalorganic chemical vapor deposition. AIP Advances, 2020, 10, .	1.3	11
60	Nonlinear Electronâ€Lattice Interactions in a Wurtzite Semiconductor Enabled via Strongly Correlated Oxide. Advanced Materials, 2016, 28, 8975-8982.	21.0	10
61	Low-Pressure Chemical Vapor Deposition of In2O3 Films on Off-Axis c-Sapphire Substrates. Crystal Growth and Design, 2019, 19, 1965-1972.	3.0	10
62	Perspective on atomic scale investigation of point and extended defects in gallium oxide. Journal of Applied Physics, 2022, 131, .	2.5	10
63	Nanometer-Thick Sr₂IrO₄ Freestanding Films for Flexible Electronics. ACS Applied Nano Materials, 2020, 3, 6310-6315.	5.0	9
64	Hydrogen effects on the thermal conductivity of delocalized vibrational modes in amorphous silicon nitride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mo>(</mml:mo><mml:mi>a</mml:mi><mml:mtext>â€“</mml:mtext><mml 5, .	2.4	8
65	Medium-range ordering, structural heterogeneity, and their influence on properties of Zr-Cu-Co-Al metallic glasses. Physical Review Materials, 2021, 5, .	2.4	8
66	Dual Silicon Oxycarbide Accelerated Growth of Wellâ€Ordered Graphitic Networks for Electronic and Thermal Applications. Advanced Materials Technologies, 2019, 4, 1800324.	5.8	6
67	Nanofiber-based paramagnetic probes for rapid, real-time biomedical oximetry. Biomedical Microdevices, 2016, 18, 38.	2.8	5
68	Understanding the Growth Mechanism of Î²-(Al_xGa_{1âˆ’x})₂O₃ by Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 2508-2509.	0.4	4
69	Band Structure Engineering Based on InGaN/ZnGeN₂ Heterostructure Quantum Wells for Visible Light Emitters. Crystal Growth and Design, 2022, 22, 131-139.	3.0	4
70	Point and Extended Defects in Ultra Wide Band Gap Î²-Ga₂O₃ Interfaces. Microscopy and Microanalysis, 2017, 23, 1454-1455.	0.4	3
71	Microstructural Investigation of the Impact Weld Interface of Pseudo Single Grained Cu and Ag. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 558-561.	2.2	3
72	Molecular beam epitaxy of GaN on 2Hâ€“MoS2. Applied Physics Letters, 2020, 117, .	3.3	3

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73	Substrate-Dependent Band Structures in Trilayer Graphene/hâ^'BN Heterostructures. Physical Review Letters, 2020, 125, 246401.	7.8	3
74	Scattering angle dependence of temperature susceptivity of electron scattering in scanning transmission electron microscopy. Ultramicroscopy, 2022, 232, 113419.	1.9	3
75	Coherent growth and characterization of van der Waals <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi mathvariant="normal">T</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi>VSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> layers on GaAs(111)B using molecular beam epitaxy. Physical Review Materials, 2020, 4, .	2.4	2
76	Myostatin Mutation in Japanese Quail Increased Egg Size but Reduced Eggshell Thickness and Strength. Animals, 2022, 12, 47.	2.3	2
77	Kinetically Controlled Epitaxial Growth of Fe₃GeTe₂ van der Waals Ferromagnetic Films. ACS Applied Electronic Materials, 2022, 4, 3190-3197.	4.3	2
78	Pulsed-Mode MOCVD Growth of ZnSn(Ga)N₂ and Determination of the Valence Band Offset with GaN. Crystal Growth and Design, 2022, 22, 5004-5011.	3.0	2
79	Nanometer-scale Structural Relaxation in Zr-based Bulk Metallic Glass. Materials Research Society Symposia Proceedings, 2007, 1048, 4.	0.1	1
80	New Insights into Deformation of Metallic Glasses by Combining Mesoscale Simulation and Fluctuation Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 1436-1437.	0.4	1
81	Probing Nanoscale Structural Heterogeneity in Metallic Glasses Using 4-D STEM. Microscopy and Microanalysis, 2018, 24, 202-203.	0.4	1
82	Atomic Scale Debye-Waller Thermometry. Microscopy and Microanalysis, 2019, 25, 1642-1643.	0.4	1
83	Quantification of Thermal Interface Resistance Using Atomic Scale Debye-Waller Thermometry. Microscopy and Microanalysis, 2020, 26, 960-962.	0.4	1
84	Point Defects and Alloy Incorporation in Ultrawide Bandgap Î²-(Al_xGa_{1-x})₂O₃ Films. Microscopy and Microanalysis, 2021, 27, 2140-2142.	0.4	1
85	4D-STEM Determination of Atomic Structure of Amorphous Materials for Renewable Energy Applications. Microscopy and Microanalysis, 2021, 27, 396-398.	0.4	1
86	Optical and electronic effects of rapid thermal annealing at Irâ€“Ga2O3 interfaces. Journal of Applied Physics, 2022, 131, .	2.5	1
87	Three-Dimensional Observation of Dopant Atoms in Quantitative Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 52-53.	0.4	0
88	Progress in Applications of Quantitative STEM. Microscopy and Microanalysis, 2014, 20, 58-59.	0.4	0
89	Three-Dimensional Imaging of Point Defects in Functional Materials Using Quantitative STEM. Microscopy and Microanalysis, 2015, 21, 1233-1234.	0.4	0
90	Identifying Atomic Reconstruction at Complex Oxide Interfaces Using Quantitative STEM. Microscopy and Microanalysis, 2015, 21, 1237-1238.	0.4	0

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91	Effect of Probe Channeling on Differential Phase Contrast at the Atomic Scale. Microscopy and Microanalysis, 2016, 22, 934-935.	0.4	0
92	Exploring Thermal Properties of M0S2 Using In Situ Quantitative STEM. Microscopy and Microanalysis, 2016, 22, 912-913.	0.4	0
93	Atomic Scale Structure and Defects in 2D GaSe Films and Van der Waals Interface. Microscopy and Microanalysis, 2017, 23, 1728-1729.	0.4	0
94	Imaging of Individual Vacancies Using Electron Channeling Contrast in STEM. Microscopy and Microanalysis, 2017, 23, 446-447.	0.4	0
95	Nanoscale Structure-Property Relationship in Amorphous Hydrogenated Boron Carbide for Low-k Dielectric Applications. Microscopy and Microanalysis, 2017, 23, 1486-1487.	0.4	0
96	Determining Nanoscale Molecular Ordering in Semiconducting Polymers. Microscopy and Microanalysis, 2017, 23, 1780-1781.	0.4	0
97	4D-STEM Characterization of Molecular Ordering in Organic Semiconductors. Microscopy and Microanalysis, 2019, 25, 1752-1753.	0.4	0
98	Determining Medium Range Atomic Ordering in Metallic Glasses Using 4D-STEM. Microscopy and Microanalysis, 2020, 26, 230-232.	0.4	0
99	Point Defects and Complexes in Gallium Oxide Materials and Devices. Microscopy and Microanalysis, 2020, 26, 838-839.	0.4	0
100	Connecting Structural Heterogeneity to Properties of Disordered Materials. Microscopy and Microanalysis, 2020, 26, 714-716.	0.4	0
101	Four-Dimensional Scanning Transmission Electron Microscopy Identification of Molecular Ordering in Organic Semiconducting Polymers. Microscopy and Microanalysis, 2021, 27, 1534-1536.	0.4	0