

# Jinwoo Hwang

## List of Publications by Year in descending order

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101  
papers

3,408  
citations

156536

32  
h-index

162838

57  
g-index

103  
all docs

103  
docs citations

103  
times ranked

5122  
citing authors

#	ARTICLE	IF	CITATIONS
1	Remote epitaxy through graphene enables two-dimensional material-based layer transfer. Nature, 2017, 544, 340-343.	13.7	410
2	Demonstration of high mobility and quantum transport in modulation-doped $\hat{\Gamma}^2$ -(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> /Ga <sub>2</sub> O <sub>3</sub> heterostructures. Applied Physics Letters, 2018, 112, .	1.5	264
3	Modulation-doped $\hat{\Gamma}^2$ -(Al <sub>0.2</sub> Ga <sub>0.8</sub> ) <sub>2</sub> O <sub>3</sub> /Ga <sub>2</sub> O <sub>3</sub> field-effect transistor. Applied Physics Letters, 2017, 111, .	1.5	252
4	Nanoscale Structure and Structural Relaxation in $Zr_{50}Cu_{50}$ Metallic Glass. Physical Review Letters, 2012, 108, 195505.	2.9	167
5	Electrical Switching of In-state Antiferromagnetic Néel Order in $Fe_{1-x}Ni_x$ Epitaxial Films. Physical Review Letters, 2020, 124, 027202.	1.1	104
6	MOCVD epitaxy of $\hat{\Gamma}^2$ -(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> thin films on (010) Ga <sub>2</sub> O <sub>3</sub> substrates and N-type doping. Applied Physics Letters, 2019, 115, .	1.5	93
7	LPCVD homoepitaxy of Si doped $\hat{\Gamma}^2$ -Ga <sub>2</sub> O <sub>3</sub> thin films on (010) and (001) substrates. Applied Physics Letters, 2018, 112, .	1.5	92
8	Three-Dimensional Imaging of Individual Dopant Atoms in $SrTiO_3$ . Physical Review Letters, 2013, 111, 266101.	2.9	86
9	Interband tunneling for hole injection in III-nitride ultraviolet emitters. Applied Physics Letters, 2015, 106, .	1.5	79
10	Phase transformation in MOCVD growth of (Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> thin films. APL Materials, 2020, 8, .	2.2	75
11	High current density 2D/3D MoS <sub>2</sub> /GaN Esaki tunnel diodes. Applied Physics Letters, 2016, 109, .	1.5	65
12	Toward an artificial Mott insulator: Correlations in confined high-density electron liquids in $SrTiO_3$ . Physical Review B, 2012, 86, .	1.1	64
13	Structural origins of the properties of rare earth nickelate superlattices. Physical Review B, 2013, 87, .	1.1	64
14	Unusual Formation of Point-Defect Complexes in the Ultrawide-Band-Gap Semiconductor $Zn_{1-x}Ga_xO$ . Physical Review X, 2019, 9, .	1.1	62
15	MOCVD Epitaxy of Ultrawide Bandgap $\hat{\Gamma}^2$ -(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> with High-Al Composition on (100) $\hat{\Gamma}^2$ -Ga <sub>2</sub> O <sub>3</sub> Substrates. Crystal Growth and Design, 2020, 20, 6722-6730.	1.4	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.	0.2	60
17	Nanoscale quantification of octahedral tilts in perovskite films. Applied Physics Letters, 2012, 100, .	1.5	59
18	Correlation between stoichiometry, strain, and metal-insulator transitions of NdNiO <sub>3</sub> films. Applied Physics Letters, 2015, 106, .	1.5	58

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19	Tunnel-injected sub 290-nm ultra-violet light emitting diodes with 2.8% external quantum efficiency. Applied Physics Letters, 2018, 112, .	1.5	58
20	Molecular beam epitaxy of 2D-layered gallium selenide on GaN substrates. Journal of Applied Physics, 2017, 121, .	1.1	52
21	$\text{In}^{2-}(\text{Al}_{0.18}\text{Ga}_{0.82})_2\text{O}_3/\text{Ga}_2\text{O}_3$ Double Heterojunction Transistor With Average Field of 5.5 MV/cm. IEEE Electron Device Letters, 2021, 42, 899-902.	2.2	52
22	Symmetry Lowering in Extreme-Electron-Density Perovskite Quantum Wells. Physical Review Letters, 2013, 110, 256401.	2.9	51
23	$\text{Ga}_2\text{O}_3$ -on-SiC Composite Wafer for Thermal Management of Ultrawide Bandgap Electronics. ACS Applied Materials & Interfaces, 2021, 13, 40817-40829.	4.0	49
24	Local chemical and topological order in $\text{Al}^{\text{IV}}\text{Tb}$ and its role in controlling nanocrystal formation. Acta Materialia, 2012, 60, 994-1003.	3.8	46
25	Low-resistance GaN tunnel homojunctions with 150 kA/cm <sup>2</sup> current and repeatable negative differential resistance. Applied Physics Letters, 2016, 108, .	1.5	45
26	Direct determination of structural heterogeneity in metallic glasses using four-dimensional scanning transmission electron microscopy. Ultramicroscopy, 2018, 195, 189-193.	0.8	44
27	Influence of nanoscale structural heterogeneity on shear banding in metallic glasses. Acta Materialia, 2017, 134, 104-115.	3.8	42
28	Magnetic graphene oxide-nano zero valent iron (GO-nZVI) nanohybrids synthesized using biocompatible cross-linkers for methylene blue removal. RSC Advances, 2019, 9, 963-973.	1.7	36
29	Band offsets of (100) $\text{In}^{2-}(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3/\text{In}^{2-}\text{Ga}_2\text{O}_3$ heterointerfaces grown via MOCVD. Applied Physics Letters, 2020, 117, .	1.5	36
30	Anisotropic magnetoresistance and nontrivial spin Hall magnetoresistance in $\text{Pt}/\text{In}^{\pm}\text{F}_2\text{O}_3$ bilayers. Physical Review B, 2019, 100, .	1.1	35
31	Atomic scale investigation of aluminum incorporation, defects, and phase stability in $\text{In}^{2-}(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ films. APL Materials, 2021, 9, .	2.2	35
32	Temperature-dependence of the Hall coefficient of $\text{NdNiO}_3$ thin films. Applied Physics Letters, 2013, 103, 182105.	1.5	33
33	MOCVD growth of $\text{In}^{2-}$ -phase $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ on $(2\sqrt{01}) \text{In}^{\pm}\text{Ga}_2\text{O}_3$ substrates. Applied Physics Letters, 2020, 117, .	1.5	33
34	Reflective metal/semiconductor tunnel junctions for hole injection in AlGaIn UV LEDs. Applied Physics Letters, 2017, 111, .	1.5	32
35	Evidence of the Topological Hall Effect in Pt/Antiferromagnetic Insulator Bilayers. Physical Review Letters, 2019, 123, 237206.	2.9	31
36	Metalorganic chemical vapor deposition of $\text{In}^{\pm}\text{Ga}_2\text{O}_3$ and $\text{In}^{\pm}(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ thin films on m-plane sapphire substrates. APL Materials, 2021, 9, .	2.2	30

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37	Variable-angle high-angle annular dark-field imaging: application to three-dimensional dopant atom profiling. <i>Scientific Reports</i> , 2015, 5, 12419.	1.6	29
38	Interfacial Rashba-Effect-Induced Anisotropy in Nonmagnetic-Material/Ferrimagnetic-Insulator Bilayers. <i>Physical Review Letters</i> , 2020, 124, 257202.	2.9	28
39	Synthesis, Magnetic Properties, and Electronic Structure of Magnetic Topological Insulator $\text{MnBi}_2\text{Se}_4$ . <i>Nano Letters</i> , 2021, 21, 5083-5090.	4.5	28
40	Nanoscale upconversion for oxygen sensing. <i>Materials Science and Engineering C</i> , 2017, 70, 76-84.	3.8	26
41	Three-dimensional imaging of individual point defects using selective detection angles in annular dark field scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2017, 172, 17-29.	0.8	24
42	Deep level defects and cation sublattice disorder in $\text{ZnGeN}_2$ . <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	24
43	Thermal Conductivity of $\hat{\Gamma}^2$ -Phase $\text{Ga}_2\text{O}_3$ and $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ Heteroepitaxial Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 38477-38490.		24
44	Reverse Monte Carlo structural model for a zirconium-based metallic glass incorporating fluctuation microscopy medium-range order data. <i>Journal of Materials Research</i> , 2009, 24, 3121-3129.	1.2	23
45	Magnetism and local structure in low-dimensional Mott insulating $\text{GdTiO}_3$ . <i>Physical Review B</i> , 2013, 88, .	1.1	22
46	Engineering 1D Quantum Stripes from Superlattices of 2D Layered Materials. <i>Advanced Materials</i> , 2017, 29, 1603798.	11.1	22
47	Transferred large area single crystal $\text{MoS}_2$ field effect transistors. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	21
48	Thermal Transport across Metal/ $\hat{\Gamma}^2$ - $\text{Ga}_2\text{O}_3$ Interfaces. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 29083-29091.	4.0	21
49	Two-step growth of $\hat{\Gamma}^2$ - $\text{Ga}_2\text{O}_3$ films on (100) diamond via low pressure chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021, 39, .	0.9	17
50	Planar and three-dimensional damage-free etching of $\hat{\Gamma}^2$ - $\text{Ga}_2\text{O}_3$ using atomic gallium flux. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	17
51	Cumulative Impacts of Proton Irradiation on the Self-heating of $\text{AlGaIn/GaN}$ HEMTs. <i>ACS Applied Electronic Materials</i> , 2020, 2, 980-991.	2.0	15
52	Band offsets at metalorganic chemical vapor deposited $\hat{\Gamma}^2$ - $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3/\hat{\Gamma}^2$ - $\text{Ga}_2\text{O}_3$ interfaces: Crystalline orientation dependence. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021, 39, .	0.9	15
53	Si doping in MOCVD grown (010) $\hat{\Gamma}^2$ - $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ thin films. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	15
54	Atomic scale investigation of chemical heterogeneity in $\hat{\Gamma}^2$ - $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$ films using atom probe tomography. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	14



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73	Substrate-Dependent Band Structures in Trilayer Graphene/h <sup>h</sup> BN Heterostructures. Physical Review Letters, 2020, 125, 246401.	2.9	3
74	Scattering angle dependence of temperature susceptibility of electron scattering in scanning transmission electron microscopy. Ultramicroscopy, 2022, 232, 113419.	0.8	3
75	Coherent growth and characterization of van der Waals $\sqrt{2} \times \sqrt{2}$ layers on GaAs(111)B using molecular beam epitaxy. Physical Review Materials, 2020, 4, .	0.9	2
76	Myostatin Mutation in Japanese Quail Increased Egg Size but Reduced Eggshell Thickness and Strength. Animals, 2022, 12, 47.	1.0	2
77	Kinetically Controlled Epitaxial Growth of Fe <sub>3</sub> GeTe <sub>2</sub> van der Waals Ferromagnetic Films. ACS Applied Electronic Materials, 2022, 4, 3190-3197.	2.0	2
78	Pulsed-Mode MOCVD Growth of ZnSn(GaN) <sub>2</sub> and Determination of the Valence Band Offset with GaN. Crystal Growth and Design, 2022, 22, 5004-5011.	1.4	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.	0.2	1
81	Probing Nanoscale Structural Heterogeneity in Metallic Glasses Using 4-D STEM. Microscopy and Microanalysis, 2018, 24, 202-203.	0.2	1
82	Atomic Scale Debye-Waller Thermometry. Microscopy and Microanalysis, 2019, 25, 1642-1643.	0.2	1
83	Quantification of Thermal Interface Resistance Using Atomic Scale Debye-Waller Thermometry. Microscopy and Microanalysis, 2020, 26, 960-962.	0.2	1
84	Point Defects and Alloy Incorporation in Ultrawide Bandgap $\sqrt{2} \times \sqrt{2}$ -(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> Films. Microscopy and Microanalysis, 2021, 27, 2140-2142.	0.2	1
85	4D-STEM Determination of Atomic Structure of Amorphous Materials for Renewable Energy Applications. Microscopy and Microanalysis, 2021, 27, 396-398.	0.2	1
86	Optical and electronic effects of rapid thermal annealing at Ir-Ga <sub>2</sub> O <sub>3</sub> interfaces. Journal of Applied Physics, 2022, 131, .	1.1	1
87	Three-Dimensional Observation of Dopant Atoms in Quantitative Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 52-53.	0.2	0
88	Progress in Applications of Quantitative STEM. Microscopy and Microanalysis, 2014, 20, 58-59.	0.2	0
89	Three-Dimensional Imaging of Point Defects in Functional Materials Using Quantitative STEM. Microscopy and Microanalysis, 2015, 21, 1233-1234.	0.2	0
90	Identifying Atomic Reconstruction at Complex Oxide Interfaces Using Quantitative STEM. Microscopy and Microanalysis, 2015, 21, 1237-1238.	0.2	0

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91	Effect of Probe Channeling on Differential Phase Contrast at the Atomic Scale. <i>Microscopy and Microanalysis</i> , 2016, 22, 934-935.	0.2	0
92	Exploring Thermal Properties of MOS2 Using In Situ Quantitative STEM. <i>Microscopy and Microanalysis</i> , 2016, 22, 912-913.	0.2	0
93	Atomic Scale Structure and Defects in 2D GaSe Films and Van der Waals Interface. <i>Microscopy and Microanalysis</i> , 2017, 23, 1728-1729.	0.2	0
94	Imaging of Individual Vacancies Using Electron Channeling Contrast in STEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 446-447.	0.2	0
95	Nanoscale Structure-Property Relationship in Amorphous Hydrogenated Boron Carbide for Low-k Dielectric Applications. <i>Microscopy and Microanalysis</i> , 2017, 23, 1486-1487.	0.2	0
96	Determining Nanoscale Molecular Ordering in Semiconducting Polymers. <i>Microscopy and Microanalysis</i> , 2017, 23, 1780-1781.	0.2	0
97	4D-STEM Characterization of Molecular Ordering in Organic Semiconductors. <i>Microscopy and Microanalysis</i> , 2019, 25, 1752-1753.	0.2	0
98	Determining Medium Range Atomic Ordering in Metallic Glasses Using 4D-STEM. <i>Microscopy and Microanalysis</i> , 2020, 26, 230-232.	0.2	0
99	Point Defects and Complexes in Gallium Oxide Materials and Devices. <i>Microscopy and Microanalysis</i> , 2020, 26, 838-839.	0.2	0
100	Connecting Structural Heterogeneity to Properties of Disordered Materials. <i>Microscopy and Microanalysis</i> , 2020, 26, 714-716.	0.2	0
101	Four-Dimensional Scanning Transmission Electron Microscopy Identification of Molecular Ordering in Organic Semiconducting Polymers. <i>Microscopy and Microanalysis</i> , 2021, 27, 1534-1536.	0.2	0