

# Hanjong Paik

## List of Publications by Year in descending order

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90  
papers

3,113  
citations

186209

28  
h-index

168321

53  
g-index

94  
all docs

94  
docs citations

94  
times ranked

4546  
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconductivity in a quintuple-layer square-planar nickelate. <i>Nature Materials</i> , 2022, 21, 160-164.	13.3	117
2	Correlation-induced emergent charge order in metallic vanadium dioxide. <i>Physical Review B</i> , 2022, 105, .	1.1	3
3	Growth of Ta <sub>2</sub> SnO <sub>6</sub> Films, a Candidate Wide-Band-Gap p-Type Oxide. <i>Journal of Physical Chemistry C</i> , 2022, 126, 3764-3775.	1.5	8
4	Oxide Two-Dimensional Electron Gas with High Mobility at Room Temperature. <i>Advanced Science</i> , 2022, 9, e2105652.	5.6	7
5	Single-Crystal Alkali Antimonide Photocathodes: High Efficiency in the Ultrathin Limit. <i>Physical Review Letters</i> , 2022, 128, 114801.	2.9	20
6	Canonical approach to cation flux calibration in oxide molecular-beam epitaxy. <i>Physical Review Materials</i> , 2022, 6, .	0.9	8
7	Ferroelectric Modulation of Surface Electronic States in BaTiO <sub>3</sub> for Enhanced Hydrogen Evolution Activity. <i>Nano Letters</i> , 2022, 22, 4276-4284.	4.5	13
8	Synthesis and electronic properties of $\text{Nd}_n\text{O}_{3n+1}$ Ruddlesden-Popper nickelate thin films. <i>Physical Review Materials</i> , 2022, 6, .	0.9	0
9	Strain-stabilized superconductivity. <i>Nature Communications</i> , 2021, 12, 59.	5.8	43
10	Epitaxial Ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> with Metallic Pyrochlore Oxide Electrodes. <i>Advanced Materials</i> , 2021, 33, e2006089.	11.1	26
11	Structural Phase Transitions of NbO <sub>2</sub> : Bulk versus Surface. <i>Chemistry of Materials</i> , 2021, 33, 1416-1425.	3.2	14
12	Digital Tuning of the Transition Temperature of Epitaxial VO <sub>2</sub> Thin Films on MgF <sub>2</sub> Substrates by Strain Engineering. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001790.	1.9	13
13	Adsorption-controlled growth of Ga <sub>2</sub> O <sub>3</sub> by suboxide molecular-beam epitaxy. <i>APL Materials</i> , 2021, 9, .	2.2	38
14	Epitaxial stannate pyrochlore thin films: Limitations of cation stoichiometry and electron doping. <i>APL Materials</i> , 2021, 9, .	2.2	3
15	Epitaxial Thin-Film Spinel Oxides as Oxygen Reduction Electrocatalysts in Alkaline Media. <i>Chemistry of Materials</i> , 2021, 33, 4006-4013.	3.2	9
16	Toward the predictive discovery of ambipolarly dopable ultra-wide-band-gap semiconductors: The case of rutile GeO <sub>2</sub> . <i>Applied Physics Letters</i> , 2021, 118, .	1.5	23
17	Impact of 2D-3D Heterointerface on Remote Epitaxial Interaction through Graphene. <i>ACS Nano</i> , 2021, 15, 10587-10596.	7.3	57
18	Role of V-V dimers on structural, electronic, magnetic, and vibrational properties of $\text{VO}_2$ by first-principles simulations and Raman spectroscopic analysis. <i>Physical Review B</i> , 2021, 103, .	1.4	1

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19	An Ising Hamiltonian solver based on coupled stochastic phase-transition nano-oscillators. Nature Electronics, 2021, 4, 502-512.	13.1	57
20	Stromataxic Stabilization of a Metastable Layered ScFeO <sub>3</sub> Polymorph. Chemistry of Materials, 2021, 33, 7423-7431.	3.2	6
21	Breakdown of the Small-Polaron Hopping Model in Higher-Order Spinels. Advanced Materials, 2020, 32, e2004490.	11.1	20
22	Realization of Epitaxial Thin Films of the Topological Crystalline Insulator Sr <sub>3</sub> SnO. Advanced Materials, 2020, 32, 2000809.	11.1	15
23	Control of polymorphism during epitaxial growth of hyperferroelectric candidate LiZnSb on GaSb (111)B. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, .	0.6	9
24	Directly measuring the structural transition pathways of strain-engineered VO <sub>2</sub> thin films. Nanoscale, 2020, 12, 18857-18863.	2.8	20
25	Epitaxial stabilization of rutile germanium oxide thin film by molecular beam epitaxy. Applied Physics Letters, 2020, 117, .	1.5	19
26	̂ <sup>2</sup> -Ni(OH) <sub>2</sub> and NiO Nanostructured Films Prepared by Using Chemical Bath Deposition for the Oxygen Evolution Reaction. Journal of the Korean Physical Society, 2020, 77, 1248-1252.	0.3	2
27	Electronic Charge Transport: Breakdown of the Small-Polaron Hopping Model in Higher-Order Spinels (Adv. Mater. 49/2020). Advanced Materials, 2020, 32, 2070368.	11.1	0
28	Simultaneous Structural and Electronic Transitions in Epitaxial $VO_2$		

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37	Exceptionally High, Strongly Temperature Dependent, Spin Hall Conductivity of SrRuO <sub>3</sub> . Nano Letters, 2019, 19, 3663-3670.	4.5	40
38	Chlorine evolution reaction electrocatalysis on RuO <sub>2</sub> (110) and IrO <sub>2</sub> (110) grown using molecular-beam epitaxy. Journal of Chemical Physics, 2019, 150, 041726.	1.2	39
39	Epitaxial integration of high-mobility La-doped BaSnO <sub>3</sub> thin films with silicon. APL Materials, 2019, 7, .	2.2	28
40	Cooperative effects of strain and electron correlation in epitaxial VO <sub>2</sub> and NbO <sub>2</sub> . Journal of Applied Physics, 2019, 125, 082539.	1.1	15
41	Growth of PdCoO <sub>2</sub> by ozone-assisted molecular-beam epitaxy. APL Materials, 2019, 7, .	2.2	27
42	Epitaxial $\text{SrTiO}_3$ film on silicon with narrow rocking curve despite huge defect density. Physical Review Materials, 2019, 3, .	0.9	12
43	Adsorption-controlled growth and properties of epitaxial SnO films. Physical Review Materials, 2019, 3, .	0.9	15
44	Controlling surface carrier density by illumination in the transparent conductor La-doped BaSnO <sub>3</sub> . Applied Physics Letters, 2018, 112, .	1.5	14
45	Measurements of Oxygen Electroadsorption Energies and Oxygen Evolution Reaction on RuO <sub>2</sub> (110): A Discussion of the Sabatier Principle and Its Role in Electrocatalysis. Journal of the American Chemical Society, 2018, 140, 17597-17605.	6.6	177
46	Rutile $\text{IrO}_2$ superlattices: A hyperconnected analog to the Ruddelsden-Popper structure. Physical Review Materials, 2018, 2, .	0.9	17
47	Engineering Dzyaloshinskii-Moriya interaction in B2O thin-film chiral magnets. Physical Review Materials, 2018, 2, .	0.9	8
48	Opportunities in vanadium-based strongly correlated electron systems. MRS Communications, 2017, 7, 27-52.	0.8	77
49	Mesoscopic quantum effects in a bad metal, hydrogen-doped vanadium dioxide. Journal of Physics Condensed Matter, 2017, 29, 185601.	0.7	2
50	ON-state evolution in lateral and vertical VO <sub>2</sub> threshold switching devices. Nanotechnology, 2017, 28, 405201.	1.3	11
51	Reducing orbital occupancy in $\text{VO}_2$ suppresses Mott physics while Peierls distortions persist. Physical Review B, 2017, 96, .	1.3	10
52	Trap-induced charge transfer/transport at energy harvesting assembly. Journal Physics D: Applied Physics, 2017, 50, 045501.	1.3	1
53	Rotating Disk Electrode Voltammetry of Thin Films of Novel Oxide Materials. Journal of the Electrochemical Society, 2017, 164, H1154-H1160.	1.3	10
54	Adsorption-controlled growth of La-doped BaSnO <sub>3</sub> by molecular-beam epitaxy. APL Materials, 2017, 5, .	2.2	131

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55	Exploiting kinetics and thermodynamics to grow phase-pure complex oxides by molecular-beam epitaxy under continuous codeposition. <i>Physical Review Materials</i> , 2017, 1, .	0.9	20
56	Low-damping sub-10-nm thin films of lutetium iron garnet grown by molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	29
57	Joule Heating-Induced Metal-Insulator Transition in Epitaxial $\text{VO}_2/\text{TiO}_2$ Devices. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 12908-12914.	4.0	101
58	Evolution of electronic correlations across the rutile, perovskite, and Ruddeldsen-Popper iridates with octahedral connectivity. <i>Physical Review B</i> , 2016, 94, .	1.1	38
59	Dynamics of electrically driven sub-nanosecond switching in vanadium dioxide. , 2016, , .		20
60	Stability of the M2 phase of vanadium dioxide induced by coherent epitaxial strain. <i>Physical Review B</i> , 2016, 94, .	1.1	62
61	Atomically engineered ferroic layers yield a room-temperature magnetoelectric multiferroic. <i>Nature</i> , 2016, 537, 523-527.	13.7	275
62	Tuning a strain-induced orbital selective Mott transition in epitaxial $\text{VO}_2/\text{TiO}_2$ . <i>Physical Review B</i> , 2016, 93, .	1.4	28
63	Imprinting of Local Metallic States into $\text{VO}_2$ with Ultraviolet Light. <i>Advanced Functional Materials</i> , 2016, 26, 6612-6618.	7.8	43
64	Direct Observation of Electrostatically Driven Band Gap Renormalization in a Degenerate Perovskite Transparent Conducting Oxide. <i>Physical Review Letters</i> , 2016, 116, 027602.	2.9	100
65	Lone-Pair Stabilization in Transparent Amorphous Tin Oxides: A Potential Route to p-Type Conduction Pathways. <i>Chemistry of Materials</i> , 2016, 28, 4706-4713.	3.2	33
66	Transport properties of ultra-thin $\text{VO}_2$ films on (001) $\text{TiO}_2$ grown by reactive molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	88
67	X-Ray Spectroscopy of Ultra-Thin Oxide/Oxide Heteroepitaxial Films: A Case Study of Single-Nanometer $\text{VO}_2/\text{TiO}_2$ . <i>Materials</i> , 2015, 8, 5452-5466.	1.3	23
68	Epitaxial growth and multiferroic properties of cation-engineered $(\text{Bi}_{0.45}\text{La}_{0.05}\text{Ba}_{0.5})(\text{Fe}_{0.75}\text{Nb}_{0.25})\text{O}_3$ thin film on Ir-buffered (001) $\text{MgO}$ substrate. <i>Applied Surface Science</i> , 2015, 334, 52-57.	3.1	2
69	Dielectric properties of amorphous $\text{ZrAl}_2\text{O}$ and $\text{Zr-Si-O}$ thin films. <i>Journal of Advanced Dielectrics</i> , 2015, 05, 1550010.	1.5	3
70	A steep-slope transistor based on abrupt electronic phase transition. <i>Nature Communications</i> , 2015, 6, 7812.	5.8	294
71	Epitaxial growth of $\text{VO}_2$ by periodic annealing. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	52
72	Pairwise coupled hybrid vanadium dioxide-MOSFET (HVFET) oscillators for non-boolean associative computing. , 2014, , .		59

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73	Hubbard Gap Modulation in Vanadium Dioxide Nanoscale Tunnel Junctions. Nano Letters, 2014, 14, 6115-6120.	4.5	7
74	Synchronized charge oscillations in correlated electron systems. Scientific Reports, 2014, 4, .	1.6	155
75	Nature of the Metal Insulator Transition in Ultrathin Epitaxial Vanadium Dioxide. Nano Letters, 2013, 13, 4857-4861.	4.5	90
76	Intrinsic electronic switching time in ultrathin epitaxial vanadium dioxide thin film. Applied Physics Letters, 2013, 102, .	1.5	39
77	Nanoscale structural evolution of electrically driven insulator to metal transition in vanadium dioxide. Applied Physics Letters, 2013, 103, .	1.5	31
78	Self-Assembled Single-Phase Perovskite Nanocomposite Thin Films. Nano Letters, 2010, 10, 597-602.	4.5	29
79	Orientation control and self-assembled nanopyramid structure of LaFeO <sub>3</sub> films epitaxially grown on SrTiO <sub>3</sub> (001) substrates. Applied Physics Letters, 2009, 95, 121908.	1.5	14
80	Structural and physical properties of room temperature stable multiferroic properties of single-phase (Bi <sub>0.9</sub> La <sub>0.1</sub> )FeO <sub>3</sub> â€“Pb(Fe <sub>0.5</sub> Nb <sub>0.5</sub> )O <sub>3</sub> solid solution systems. Journal of Applied Physics, 2009, 105, 07D919.	1.1	2
81	The effect of growth temperature on physical properties of heavily doped ZnO:Al films. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 697-703.	0.8	27
82	The role of a conductive CaRuO <sub>3</sub> bottom electrode for ferroelectric BaTiO <sub>3</sub> films on a Si substrate. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1478-1483.	0.8	2
83	Effect of oxygen partial pressure on the morphology and properties of Ce doped YBCO films fabricated by a MOCVD process. Physica C: Superconductivity and Its Applications, 2009, 469, 1410-1413.	0.6	8
84	The effect of nitrogen incorporation on surface properties of silicon oxynitride films. Physica Status Solidi - Rapid Research Letters, 2009, 3, 25-27.	1.2	3
85	Effects of the deposition temperature on the transport property, chemical composition and conduction band structure of CaRuO <sub>3</sub> thin films directly grown on Si (100) substrates. Journal Physics D: Applied Physics, 2007, 40, 7794-7798.	1.3	4
86	Room temperature multiferroic properties of single-phase (Bi <sub>0.9</sub> La <sub>0.1</sub> )FeO <sub>3</sub> â€“Ba(Fe <sub>0.5</sub> Nb <sub>0.5</sub> )O <sub>3</sub> solid solution ceramics. Applied Physics Letters, 2007, 90, 042908.	1.5	40
87	Effect of annealing temperature on the electrical transport properties of CaRuO <sub>3</sub> thin films directly deposited on the Si substrate. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2339-2346.	0.8	2
88	CuO formation control as a function of mixed ratio of Cu-free powders in the synthesis of YBCO superconductors on Cu substrates. Journal of Electroceramics, 2006, 17, 1063-1067.	0.8	1
89	ORIENTATION AND FATIGUE IMPROVEMENT OF PZT THIN FILMS ON CUBIC TEXTURED CaRuO <sub>3</sub> ELECTRODE. Integrated Ferroelectrics, 2005, 75, 115-121.	0.3	3
90	A hydrogen field ion source with focusing optics. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1986, 4, 116.	1.6	13