

# Ing-Shouh Hwang

## List of Publications by Year in descending order

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100  
papers

2,349  
citations

186209

28  
h-index

233338

45  
g-index

100  
all docs

100  
docs citations

100  
times ranked

1829  
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct measurement of diffusion by hot tunneling microscopy: Activation energy, anisotropy, and long jumps. <i>Physical Review Letters</i> , 1992, 68, 1567-1570.	2.9	202
2	Preparation and Characterization of Single-Atom Tips. <i>Nano Letters</i> , 2004, 4, 2379-2382.	4.5	124
3	Submonolayer phases of Pb on Si(111). <i>Physical Review B</i> , 1991, 43, 7316-7319.	1.1	113
4	Dynamic Behavior of Si Magic Clusters on Si(111) Surfaces. <i>Physical Review Letters</i> , 1999, 83, 120-123.	2.9	82
5	Molecular Layer of Gaslike Domains at a Hydrophobic Water Interface Observed by Frequency-Modulation Atomic Force Microscopy. <i>Langmuir</i> , 2012, 28, 12691-12695.	1.6	82
6	The Glycine-Alanine Dipeptide Repeat from C9orf72 Hexanucleotide Expansions Forms Toxic Amyloids Possessing Cell-to-Cell Transmission Properties. <i>Journal of Biological Chemistry</i> , 2016, 291, 4903-4911.	1.6	73
7	Diffusion of Single Hydrogen Atoms on Si(111)-(7Å-7) Surfaces. <i>Physical Review Letters</i> , 1998, 80, 5584-5587.	2.9	72
8	Site Hopping of Single Chemisorbed Oxygen Molecules on Si(111)-(7Å-7) Surfaces. <i>Physical Review Letters</i> , 1997, 78, 4797-4800.	2.9	68
9	Noble Metal/W(111) Single-Atom Tips and Their Field Electron and Ion Emission Characteristics. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 8972-8983.	0.8	61
10	A fully coherent electron beam from a noble-metal covered W(111) single-atom emitter. <i>Nanotechnology</i> , 2009, 20, 115401.	1.3	61
11	Exchange-Barrier Effects on Nucleation and Growth of Surfactant-Mediated Epitaxy. <i>Physical Review Letters</i> , 1998, 80, 4229-4232.	2.9	59
12	Method of electrochemical etching of tungsten tips with controllable profiles. <i>Review of Scientific Instruments</i> , 2012, 83, 083704.	0.6	56
13	Interface-Induced Ordering of Gas Molecules Confined in a Small Space. <i>Scientific Reports</i> , 2014, 4, 7189.	1.6	56
14	Direct Observation of Reaction-Limited Aggregation on Semiconductor Surfaces. <i>Physical Review Letters</i> , 1999, 83, 1191-1194.	2.9	50
15	Nucleation processes of nanobubbles at a solid/water interface. <i>Scientific Reports</i> , 2016, 6, 24651.	1.6	48
16	Gas field ion source from an Ir-W(111) single-atom tip. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	47
17	Measurement of Cantilever Displacement Using a Compact Disk/Digital Versatile Disk Pickup Head. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 2368-2371.	0.8	46
18	High coverage phases of Pb on the Si(111) surface: structures and phase transitions. <i>Surface Science</i> , 1995, 323, 241-257.	0.8	45

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19	Imaging of soft matter with tapping-mode atomic force microscopy and non-contact-mode atomic force microscopy. <i>Nanotechnology</i> , 2007, 18, 084009.	1.3	44
20	Atomic force microscopy study of nitrogen molecule self-assembly at the HOPG/water interface. <i>Applied Surface Science</i> , 2014, 304, 56-64.	3.1	40
21	Real-time detection of linear and angular displacements with a modified DVD optical head. <i>Nanotechnology</i> , 2008, 19, 115501.	1.3	38
22	Observation of Finite-Size Effects on a Structural Phase Transition of 2D Nanoislands. <i>Physical Review Letters</i> , 2004, 93, 106101.	2.9	37
23	High throughput label-free platform for statistical bio-molecular sensing. <i>Lab on A Chip</i> , 2011, 11, 2411.	3.1	37
24	Tunneling microscope observation of a structural surface phase transition: Structure, fluctuations, and local effects. <i>Physical Review Letters</i> , 1993, 71, 255-258.	2.9	36
25	Imaging surface nanobubbles at graphite/water interfaces with different atomic force microscopy modes. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 184010.	0.7	36
26	Diffusion by bond hopping of hydrogen atoms on the Si(111)-7 $\times$ 7 surface. <i>Physical Review B</i> , 1998, 58, 9867-9875.	1.1	32
27	Direct comparison between subnanometer hydration structures on hydrophilic and hydrophobic surfaces via three-dimensional scanning force microscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 23522-23527.	1.3	31
28	Direct Observation of Electromigration of Si Magic Clusters on Si(111) Surfaces. <i>Physical Review Letters</i> , 2000, 84, 5792-5795.	2.9	30
29	Galectin-1 Restricts Vascular Smooth Muscle Cell Motility Via Modulating Adhesion Force and Focal Adhesion Dynamics. <i>Scientific Reports</i> , 2018, 8, 11497.	1.6	28
30	A single-atom sharp iridium tip as an emitter of gas field ion sources. <i>Nanotechnology</i> , 2009, 20, 335701.	1.3	27
31	High-Resolution Characterization of Preferential Gas Adsorption at the Graphene/Water Interface. <i>Langmuir</i> , 2016, 32, 11164-11171.	1.6	25
32	Imaging initial formation processes of nanobubbles at the graphite/water interface through high-speed atomic force microscopy. <i>Applied Surface Science</i> , 2018, 434, 913-917.	3.1	22
33	Soft incommensurate reconstruction on Pb/Si(111): Structure, stress modulation, and phase transition. <i>Physical Review B</i> , 1995, 51, 10193-10196.	1.1	20
34	Formation of Si clusters and their role in homoepitaxial growth on Si(111)-7 $\times$ 7 surfaces. <i>Surface Science</i> , 2004, 564, 93-107.	0.8	20
35	Phase transition of monolayer Pb/Ge(111): $\sqrt{2} \times \sqrt{3} \sqrt{3} R30^\circ$ at $1/4 180^\circ \text{C}$ . <i>Physical Review B</i> , 1994, 50, 18535-18542.	1.1	18
36	Self-Assembly of MinE on the Membrane Underlies Formation of the MinE Ring to Sustain Function of the Escherichia coli Min System. <i>Journal of Biological Chemistry</i> , 2014, 289, 21252-21266.	1.6	18

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37	C-AFM study on multi - resistive switching modes observed in metal-organic frameworks thin films. <i>Organic Electronics</i> , 2021, 93, 106136.	1.4	18
38	Dynamic behavior of Si magic clusters on Si(111) surfaces. <i>Surface Science</i> , 2002, 514, 309-318.	0.8	17
39	Demountable Single-Atom Electron Source. <i>E-Journal of Surface Science and Nanotechnology</i> , 2005, 3, 412-416.	0.1	17
40	Soft-contact imaging in liquid with frequency-modulation torsion resonance mode atomic force microscopy. <i>Nanotechnology</i> , 2010, 21, 065710.	1.3	17
41	Atomic Force Microscopy Characterization of Protein Fibrils Formed by the Amyloidogenic Region of the Bacterial Protein MinE on Mica and a Supported Lipid Bilayer. <i>PLoS ONE</i> , 2015, 10, e0142506.	1.1	17
42	Growth mechanism and morphology of Ge on Pb covered Si(111) surfaces. <i>Surface Science</i> , 1998, 410, L741-L747.	0.8	16
43	Nucleation and Growth of Ge at Pb/Si(111) Surfaces: Reaction-Limited Aggregation. <i>Japanese Journal of Applied Physics</i> , 2000, 39, 4100-4109.	0.8	16
44	Three-dimensional surface topography of graphene by divergent beam electron diffraction. <i>Nature Communications</i> , 2017, 8, 14440.	5.8	16
45	Preparation of Single-Atom Tips and Their Field Emission Behaviors. <i>E-Journal of Surface Science and Nanotechnology</i> , 2006, 4, 233-238.	0.1	15
46	Assembling an ion channel: ORF 3a from SARS-CoV. <i>Biopolymers</i> , 2013, 99, 628-635.	1.2	15
47	Continuous-time observation of pseudo-vacancy diffusion at Si(111)-7 $\times$ 7 surfaces. <i>Surface Science</i> , 1996, 367, L47-L53.	0.8	14
48	Complete dissociation of water on hot silicon (111)-7 $\times$ 7 surface: direct observation of hopping oxygen atom. <i>Surface Science</i> , 2003, 530, L302-L306.	0.8	14
49	Adsorption and motion of C60 molecules on the Pb-covered Si(111) surface. <i>Physical Review B</i> , 2008, 77, .	1.1	13
50	Investigation of single-walled carbon nanotubes with a low-energy electron point projection microscope. <i>New Journal of Physics</i> , 2013, 15, 043015.	1.2	13
51	Observation of single oxygen atoms decomposed from water molecules on a Si(111)-7 $\times$ 7 surface. <i>Physical Review B</i> , 2006, 73, .	1.1	12
52	Postfitting Control Scheme for Periodic PiezosScanner Driving. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 1917-1921.	0.8	11
53	Low-voltage and high-performance buzzer-scanner based streamlined atomic force microscope system. <i>Nanotechnology</i> , 2013, 24, 455503.	1.3	11
54	Electron and atom dynamics at solid surfaces and relation to epitaxy. <i>Journal of Physics and Chemistry of Solids</i> , 2001, 62, 1689-1730.	1.9	10

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55	Nucleation and growth of Si on Pb monolayer covered Si(111) surfaces. <i>Surface Science</i> , 2011, 605, 1249-1256.	0.8	10
56	Imaging soft matters in water with torsional mode atomic force microscopy. <i>Ultramicroscopy</i> , 2013, 135, 121-125.	0.8	10
57	Xenon gas field ion source from a single-atom tip. <i>Nanotechnology</i> , 2017, 28, 255301.	1.3	10
58	Study of the dynamics of point defects at Si(111)-7 $\times$ 7 surfaces with scanning tunneling microscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998, 16, 2632-2640.	0.9	9
59	Model for surfactant-mediated growth of Ge on Pb-covered Si(111) surfaces. <i>Physical Review B</i> , 2000, 63, .	1.1	9
60	Hydrogen-Adsorption Induced Atomic Rearrangement of a Pb Monolayer on Si(111). <i>Physical Review Letters</i> , 2005, 94, 045505.	2.9	9
61	Nanomechanical recognition of prognostic biomarker suPAR with DVD-ROM optical technology. <i>Nanotechnology</i> , 2013, 24, 444011.	1.3	9
62	Optical imaging module for astigmatic detection system. <i>Review of Scientific Instruments</i> , 2016, 87, 053706.	0.6	9
63	Study of two types of Ir or Rh covered single atom pyramidal W tips. <i>Surface Science</i> , 2007, 601, 3992-3995.	0.8	8
64	Lateral Force Microscopy of Interfacial Nanobubbles: Friction Reduction and Novel Frictional Behavior. <i>Scientific Reports</i> , 2018, 8, 3125.	1.6	8
65	High-sensitivity imaging with lateral resonance mode atomic force microscopy. <i>Nanoscale</i> , 2016, 8, 18421-18427.	2.8	7
66	Emerging Roles of Air Gases in Lipid Bilayers. <i>Small</i> , 2018, 14, e1802133.	5.2	7
67	Multiparametric characterization of heterogeneous soft materials using contact point detection-based atomic force microscopy. <i>Applied Surface Science</i> , 2020, 522, 146423.	3.1	7
68	Investigating states of gas in water encapsulated between graphene layers. <i>Chemical Science</i> , 2021, 12, 2635-2645.	3.7	7
69	Structural and Optical Identification of Planar Side-Chain Stacking P3HT Nanowires. <i>Macromolecules</i> , 2021, 54, 10750-10757.	2.2	7
70	Analysis of island morphology in a model for Pb-mediated growth of Ge on Si(111). <i>Physical Review B</i> , 2001, 64, .	1.1	6
71	Self-assembly of hen egg white lysozyme fibrils doped with magnetic particles. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 471, 400-405.	1.0	6
72	Low-cost, open-source XYZ nanopositioner for high-precision analytical applications. <i>HardwareX</i> , 2022, 11, e00317.	1.1	6

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73	Biased diffusion of Si magic clusters on Si(111) surface. Journal of Applied Physics, 2005, 97, 023522.	1.1	5
74	High stability and electronic structures of noble-metal covered W(111) atom perfect pyramidal tips. Physical Review B, 2010, 81, .	1.1	5
75	Effects of boundaries and point defects on energetics and dynamics of domain walls. Physical Review B, 2011, 83, .	1.1	5
76	High-performance spinning device for DVD-based micromechanical signal transduction. Journal of Micromechanics and Microengineering, 2013, 23, 045016.	1.5	5
77	Torsional resonance mode atomic force microscopy in liquid with Lorentz force actuation. Nanotechnology, 2013, 24, 305702.	1.3	5
78	Probing dynamics of a phase transition of two-dimensional nano-domains with STM imaging and manipulation. Surface Science, 2004, 572, L331-L337.	0.8	4
79	Low-voltage coherent electron microscopy based on a highly coherent electron source built from a nanoemitter. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	4
80	A horizontal-type scanning near-field optical microscope with torsional mode operation toward high-resolution and non-destructive imaging of soft materials. Review of Scientific Instruments, 2020, 91, 073703.	0.6	4
81	A nanoemitter based on a superconducting material. Applied Physics Letters, 2016, 108, .	1.5	3
82	Low-kilovolt coherent electron diffractive imaging instrument based on a single-atom electron source. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	3
83	Low-energy electron point projection microscopy/diffraction study of suspended graphene. Applied Surface Science, 2017, 423, 266-274.	3.1	3
84	Manipulation of single Si adatoms and observation of fast diffusion of Si dimers on a Pb-covered Si(111) surface. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, 041405.	0.9	3
85	Morphology of ramified islands in growth of Ge on Si(111) using Pb as surfactant. Surface Science, 2002, 507-510, 281-284.	0.8	2
86	Adsorption and dynamics of Si atoms at the monolayer Pb/Si(111) surface. Physical Review B, 2017, 95, .	1.1	2
87	Non-classical nucleation pathways revealed by scanning tunneling microscopy of epitaxy of covalent materials. Applied Surface Science, 2020, 500, 143986.	3.1	2
88	SMM actuator for nanoscale positioning. , 2004, , .		1
89	Comment on "Direct Identification of Critical Clusters in Chemical Vapor Deposition". Physical Review Letters, 2006, 97, 089601; discussion 089602.	2.9	1
90	AFM pickup head with holographic optical element (HOE). , 2010, , .		1

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91	Effects of Dissolved Gases on the Amyloid Fibril Morphology. Langmuir, 2021, 37, 516-523.	1.6	1
92	Direct Observation of a Surface Phase Transition by hot Tunneling Microscopy. Materials Research Society Symposia Proceedings, 1992, 280, 377.	0.1	0
93	Metastable Structural Surface Excitations and Concerted ad Atom Motions: A Stm Study of Atomic Motions Within a Semiconductor Surface. Materials Research Society Symposia Proceedings, 1992, 280, 79.	0.1	0
94	Metastable Structural Surface Excitations and Concerted Adatom Motions: a STM Study of Atomic Motions Within a Semiconductor Surface. Materials Research Society Symposia Proceedings, 1992, 295, 41.	0.1	0
95	A Soft Incommensurate Reconstruction on Pb/Si(111). Materials Research Society Symposia Proceedings, 1994, 355, 153.	0.1	0
96	Noble-Metal Covered W(111) Single-Atom Electron Sources. ECS Transactions, 2009, 25, 3-18.	0.3	0
97	Fabrication of ultra-sharp single atom tips. , 2010, , .		0
98	Fabrication of CoPt Ultra-Sharp Single Atom Tips. Journal of Nanoscience and Nanotechnology, 2011, 11, 10687-10690.	0.9	0
99	An electron source possessing spatial and temporal coherence: A niobium nanoemitter. , 2016, , .		0
100	Transmission Electron Microscopy of Gas-Supersaturated Water Encapsulated in Graphene Liquid Cells. Microscopy and Microanalysis, 2019, 25, 1742-1743.	0.2	0