Yong Han

List of Publications by Year
in descending order

80	1,617	331670	345221
papers	citations	21 h-index	36 g-index

81	81	81	1850
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	SiO₂â€Enhanced Structural Stability and Strong Adhesion with a New Binder of Konjac Glucomannan Enables Stable Cycling of Silicon Anodes for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1800434.	19.5	135
2	Growth morphology and properties of metals on graphene. Progress in Surface Science, 2015, 90, 397-443.	8.3	123
3	Geometric Constant Defining Shape Transitions of Carbon Nanotubes under Pressure. Physical Review Letters, 2004, 92, 105501.	7.8	103
4	Self-assembly of metal nanostructures on binary alloy surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 989-994.	7.1	75
5	Surface energies, adhesion energies, and exfoliation energies relevant to copper-graphene and copper-graphite systems. Surface Science, 2019, 685, 48-58.	1.9	74
6	Quantum Size Effect on Adatom Surface Diffusion. Physical Review Letters, 2006, 97, 266102.	7.8	72
7	Quantum size effects in metal nanofilms: Comparison of an electron-gas model and density functional theory calculations. Physical Review B, 2009, 80, .	3.2	66
8	Reshaping, Intermixing, and Coarsening for Metallic Nanocrystals: Nonequilibrium Statistical Mechanical and Coarse-Grained Modeling. Chemical Reviews, 2019, 119, 6670-6768.	47.7	50
9	How a silver dendritic mesocrystal converts to a single crystal. Applied Physics Letters, 2008, 92, 173120.	3.3	45
10	Comment on â€œCapture-Zone Scaling in Island Nucleation: Universal Fluctuation Behaviorâ€• Physical Review Letters, 2010, 104, 149601; author reply 149602.	7.8	32
11	Kinetics of Facile Bilayer Island Formation at Low Temperature.<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ag</mml:mi><mml:mo>/</mml:mo><mml:mi>NiAl</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mn>110</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 327 Td (stretchy="false	7.8	29
12	Scanning tunneling microscopy and density functional theory study of initial bilayer growth of Ag films on NiAl(110). Physical Review B, 2007, 76, .	3.2	28
13	Directed assembly of Ru nanoclusters on Ru(0001)-supported graphene: STM studies and atomistic modeling. Physical Review B, 2012, 86, .	3.2	27
14	Formation of Multilayer Cu Islands Embedded beneath the Surface of Graphite: Characterization and Fundamental Insights. Journal of Physical Chemistry C, 2018, 122, 4454-4469.	3.1	27
15	Real-Time Ab Initio KMC Simulation of the Self-Assembly and Sintering of Bimetallic Epitaxial Nanoclusters: Au + Ag on Ag(100). Nano Letters, 2014, 14, 4646-4652.	9.1	25
16	Kinetics, energetics, and size dependence of the transformation from Pt to ordered PtSn intermetallic nanoparticles. Nanoscale, 2019, 11, 5336-5345.	5.6	25
17	Ab Initio Thermodynamics and Kinetics for Coalescence of Two-Dimensional Nanoislands and Nanopits on Metal (100) Surfaces. Journal of Physical Chemistry C, 2016, 120, 21617-21630.	3.1	24
18	Defectâ€fluorite Gd 2 Zr 2 O 7 ceramics under helium irradiation: Amorphization, cell volume expansion, and multiâ€stage bubble formation. Journal of the American Ceramic Society, 2019, 102, 4911-4918.	3.8	24

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19	Interplay between quantum size effect and strain effect on growth of nanoscale metal thin films. Physical Review B, 2012, 86, .	3.2	22
20	Reverse-engineering of graphene on metal surfaces: a case study of embedded ruthenium. Nanotechnology, 2018, 29, 505601.	2.6	22
21	Strainâ€Enhanced Metallic Intermixing in Shapeâ€Controlled Multilayered Coreâ€“Shell Nanostructures: Toward Shaped Intermetallics. Angewandte Chemie - International Edition, 2020, 59, 10574-10580.	13.8	22
22	Coulomb Sink: A Novel Coulomb Effect on Coarsening of Metal Nanoclusters on Semiconductor Surfaces. Physical Review Letters, 2004, 93, 106102.	7.8	21
23	Thermodynamic Preference for Atom Adsorption on versus Intercalation into Multilayer Graphene. Journal of Physical Chemistry Letters, 2020, 11, 9725-9730.	4.6	21
24	SierpiÅ„ski Structure and Electronic Topology in Bi Thin Films on InSb(111)B Surfaces. Physical Review Letters, 2021, 126, 176102.	7.8	20
25	Adsorption, intercalation, diffusion, and adhesion of Cu at the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi><mml:mo>â^’</mml:mo><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> (0001) surface from first-principles calculations. Physical Review Research, 2020, 2, .	3.6	20
26	Quantum stabilities and growth modes of thin metal films: Unsupported and NiAl-supported Ag(110) and Ag(100). Surface Science, 2008, 602, 2532-2540.	1.9	19
27	Formation and coarsening of Ag(110) bilayer islands on NiAl(110): STM analysis and atomistic lattice-gas modeling. Physical Review B, 2010, 81, .	3.2	18
28	Nanoscale â€œQuantumâ€•Islands on Metal Substrates: Microscopy Studies and Electronic Structure Analyses. Materials, 2010, 3, 3965-3993.	2.9	18
29	Formation of a Novel Ordered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Ni</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi>Al</mml:mi></mml:math>Surface Structure by Codeposition on NiAl(110). Physical Review Letters, 2012, 108, 216102.	7.8	16
30	Low-index surface energies, cleavage energies, and surface relaxations for crystalline NiAl from first-principles calculations. Surface Science, 2020, 695, 121532.	1.9	16
31	Flat-surface, step-edge, facetâ€“facet, and facetâ€“step diffusion barriers in growth of a Pb mesa. Surface Science, 2008, 602, 2284-2294.	1.9	15
32	Determining whether metals nucleate homogeneously on graphite: A case study with copper. Physical Review B, 2014, 90, .	3.2	15
33	Energetics of Cu adsorption and intercalation at graphite step edges. Physical Review B, 2019, 99, .	3.2	15
34	Squeezed nanocrystals: equilibrium configuration of metal clusters embedded beneath the surface of a layered material. Nanoscale, 2019, 11, 6445-6452.	5.6	14
35	Fabricating Fe nanocrystals via encapsulation at the graphite surface. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 061403.	2.1	14
36	Shapes of Fe nanocrystals encapsulated at the graphite surface. New Journal of Physics, 2020, 22, 023016.	2.9	14

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37	Far-from-equilibrium film growth on alloy surfaces: Ni and Al on NiAl(110). Physical Review B, 2011, 84, .	3.2	13
38	Point island models for nucleation and growth of supported nanoclusters during surface deposition. Journal of Chemical Physics, 2016, 145, 211904.	3.0	13
39	Thickness-dependent energetics for Pb adatoms on low-index Pb nanofilm surfaces: First-principles calculations. Physical Review B, 2017, 96, .	3.2	13
40	Mechanism of Metal Intercalation under Graphene through Small Vacancy Defects. Journal of Physical Chemistry C, 2021, 125, 6954-6962.	3.1	13
41	Nucleation and growth kinetics for intercalated islands during deposition on layered materials with isolated pointlike surface defects. Physical Review Materials, 2017, 1, .	2.4	13
42	Search for encapsulation of platinum, silver, and gold at the surface of graphite. Physical Review Research, 2020, 2, .	3.6	13
43	Fabricating artificial nanowells with tunable size and shape by using scanning tunneling microscopy. Applied Physics Letters, 2006, 89, 123111.	3.3	12
44	Anisotropic coarsening: One-dimensional decay of Ag islands on Ag(110). Physical Review B, 2013, 87, .	3.2	12
45	Anisotropic Diffusion of a Charged Tritium Interstitial in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>Li</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>Ti</mml:mi><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub></mml:math> from First-Principles Calculations. Physical Review Applied, 2018, 10, .	3.8	12
46	Dy adsorption on and intercalation under graphene on 6 H -SiC(0001) surface from first-principles calculations. Physical Review Materials, 2021, 5, .	2.4	12
47	Atomistic modeling of the directed-assembly of bimetallic Pt-Ru nanoclusters on Ru(0001)-supported monolayer graphene. Journal of Chemical Physics, 2013, 138, 134703.	3.0	10
48	Encapsulation of metal nanoparticles at the surface of a prototypical layered material. Nanoscale, 2021, 13, 1485-1506.	5.6	10
49	Quantum modulation of island nucleation on top of a metal nanomesa. Surface Science, 2008, 602, 62-66.	1.9	9
50	Reshaping of Truncated Pd Nanocubes: Energetic and Kinetic Analysis Integrating Transmission Electron Microscopy with Atomistic-Level and Coarse-Grained Modeling. ACS Nano, 2020, 14, 8551-8561.	14.6	9
51	Kinetics of mesa overlayer growth: Climbing of adatoms onto the mesa top. Applied Physics Letters, 2008, 92, 021909.	3.3	8
52	Formation of complex wedding-cake morphologies during homoepitaxial film growth of Ag on Ag(111): atomistic, step-dynamics, and continuum modeling. Journal of Physics Condensed Matter, 2009, 21, 084216.	1.8	8
53	Temperature-dependent growth shapes of Ni nanoclusters on NiAl(110). Journal of Chemical Physics, 2011, 135, 084706.	3.0	8
54	Adsorption and diffusion of Ru adatoms on Ru(0001)-supported graphene: Large-scale first-principles calculations. Journal of Chemical Physics, 2015, 143, 164706.	3.0	8

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55	Thermodynamic Stabilities of Perfect and Vacancy-Defected <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>Li</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mi>Ti</mml:mi> mathvariant="normal">O</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub></mml:math> (001) Surfaces From First-Principles Analyses. Physical Review Applied, 2019, 11, .	3.8	8
56	Fundamentals of Au(111) Surface Dynamics: Coarsening of Two-Dimensional Au Islands. Journal of Physical Chemistry C, 2020, 124, 7492-7499.	3.1	8
57	Energy barriers for Dy and H penetrating graphene on 6H-SiC(0001) and freestanding bilayer graphene from first-principles calculations. Applied Physics Letters, 2021, 119, .	3.3	8
58	Thermodynamics and kinetics of H adsorption and intercalation for graphene on 6H-SiC(0001) from first-principles calculations. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	2.1	8
59	Directing Anisotropic Assembly of Metallic Nanoclusters by Exploiting Linear Trio Interactions and Quantum Size Effects: AuÂChains on Ag(100) Thin Films. Journal of Physical Chemistry Letters, 2015, 6, 2194-2199.	4.6	7
60	Capture zone area distributions for nucleation and growth of islands during submonolayer deposition. Journal of Chemical Physics, 2016, 145, 211911.	3.0	6
61	Competitive formation of intercalated versus supported metal nanoclusters during deposition on layered materials with surface point defects. Journal of Chemical Physics, 2021, 154, 024703.	3.0	6
62	Shell structure and phase relations in electronic properties of metal nanowires from an electron-gas model. Physical Review B, 2010, 82, .	3.2	5
63	Analysis of magic lengths in growth of supported metallic nanowires. Materials Research Express, 2014, 1, 045030.	1.6	5
64	Effective Fragment Potential-Based Molecular Dynamics Studies of Diffusion in Acetone and Hexane. Journal of Physical Chemistry A, 2021, 125, 3398-3405.	2.5	5
65	Thermodynamically Driven Formation of Intercalated Cu Carpets from Supported Cu Pyramids on MoS₂. Journal of Physical Chemistry Letters, 2022, 13, 6651-6656.	4.6	5
66	Zinc Sulfide/Gallium Phosphide Composites by Chemical Vapor Transport. Journal of the American Ceramic Society, 1995, 78, 1834-1840.	3.8	4
67	A jellium model analysis on quantum growth of metal nanowires and nanomesas. Frontiers of Physics in China, 2008, 3, 436-443.	1.0	4
68	From Initial to Late Stages of Epitaxial Thin Film Growth: STM Analysis and Atomistic or Coarse-Grained Modeling. , 2010, , .		4
69	Analytic formulations for one-dimensional decay of rectangular homoepitaxial islands during coarsening on anisotropic fcc (110) surfaces. Physical Review B, 2013, 88, .	3.2	4
70	Submonolayer Ag films on Fe(100): A first-principles analysis of energetics controlling adlayer thermodynamics and kinetics. Physical Review B, 2016, 93, .	3.2	4
71	Tailoring Kinetics on a Topological Insulator Surface by Defect-Induced Strain: Pb Mobility on Bi₂Te₃. Nano Letters, 2016, 16, 4454-4461.	9.1	4
72	Energy barriers for Pb adatom diffusion on stepped ultrathin Pb(111) quantum nanofilms: First-principles calculations. Physical Review B, 2019, 100, .	3.2	4

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73	Surface structure of linear nanopores in amorphous silica: Comparison of properties for different pore generation algorithms. Journal of Chemical Physics, 2020, 153, 124708.	3.0	4
74	Coulomb sink effect on coarsening of metal nanostructures on surfaces. Frontiers of Physics in China, 2008, 3, 41-48.	1.0	3
75	Single crystal growth via a grain rotation mechanism within amorphous matrix. Applied Physics Letters, 2008, 93, 153115.	3.3	3
76	Strainâ€Enhanced Metallic Intermixing in Shapeâ€Controlled Multilayered Coreâ€“Shell Nanostructures: Toward Shaped Intermetallics. Angewandte Chemie, 2020, 132, 10661-10667.	2.0	2
77	Shape Stability of Truncated Octahedral fcc Metal Nanocrystals. ACS Applied Materials & Interfaces, 2021, 13, 51954-51961.	8.0	2
78	Formation of Irregular Al Islands by Room-Temperature Deposition on NiAl(110). Materials Research Society Symposia Proceedings, 2011, 1318, 1.	0.1	1
79	Atomistic modeling of alloy self-growth by vapor deposition: Ni and Al on NiAl(110). Materials Research Society Symposia Proceedings, 2012, 1411, 63.	0.1	0
80	Modeling of linear nanopores in a-SiO2 tuning pore surface structure. Microporous and Mesoporous Materials, 2022, , 112077.	4.4	0