

Mina Yoon

List of Publications by Year in descending order

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papers

6,719
citations

76326

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60623

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100
docs citations

100
times ranked

11046
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Responsive Ultrathin GaS Nanosheet Photodetectors on Rigid and Flexible Substrates. Nano Letters, 2013, 13, 1649-1654.	9.1	683
2	CO Oxidation on Supported Single Pt Atoms: Experimental and ab Initio Density Functional Studies of CO Interaction with Pt Atom on $\text{I}_3\text{Al}_2\text{O}_3(010)$ Surface. Journal of the American Chemical Society, 2013, 135, 12634-12645.	13.7	535
3	Calcium as the Superior Coating Metal in Functionalization of Carbon Fullerenes for High-Capacity Hydrogen Storage. Physical Review Letters, 2008, 100, 206806.	7.8	391
4	Interlayer Coupling in Twisted WSe_2/WS_2 Bilayer Heterostructures Revealed by Optical Spectroscopy. ACS Nano, 2016, 10, 6612-6622.	14.6	249
5	Controlled Vapor Phase Growth of Single Crystalline, Two-Dimensional GaSe Crystals with High Photoresponse. Scientific Reports, 2014, 4, 5497.	3.3	222
6	Charged Fullerenes as High-Capacity Hydrogen Storage Media. Nano Letters, 2007, 7, 2578-2583.	9.1	220
7	Patterned arrays of lateral heterojunctions within monolayer two-dimensional semiconductors. Nature Communications, 2015, 6, 7749.	12.8	213
8	Entropy-driven structural transition and kinetic trapping in formamidinium lead iodide perovskite. Science Advances, 2016, 2, e1601650.	10.3	203
9	Magnetism in All-Carbon Nanostructures with Negative Gaussian Curvature. Physical Review Letters, 2003, 91, 237204.	7.8	200
10	Nature of the band gap and origin of the electro-/photo-activity of Co_3O_4 . Journal of Materials Chemistry C, 2013, 1, 4628.	5.5	176
11	Structure and Formation Mechanism of Black TiO_2 Nanoparticles. ACS Nano, 2015, 9, 10482-10488.	14.6	170
12	Highly sensitive phototransistors based on two-dimensional GaTe nanosheets with direct bandgap. Nano Research, 2014, 7, 694-703.	10.4	140
13	Diamond fragments as building blocks of functional nanostructures. Physical Review B, 2004, 70, .	3.2	137
14	Origin of long lifetime of band-edge charge carriers in organic-inorganic lead iodide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7519-7524.	7.1	137
15	Low Energy Implantation into Transition-Metal Dichalcogenide Monolayers to Form Janus Structures. ACS Nano, 2020, 14, 3896-3906.	14.6	136
16	Spectroscopic characterization of Stone-Wales defects in nanotubes. Physical Review B, 2004, 69, .	3.2	134
17	Surface-Induced Orientation Control of CuPc Molecules for the Epitaxial Growth of Highly Ordered Organic Crystals on Graphene. Journal of the American Chemical Society, 2013, 135, 3680-3687.	13.7	125
18	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe_2 Crystals. Nano Letters, 2016, 16, 5213-5220.	9.1	121

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19	Persistent Step-Flow Growth of Strained Films on Vicinal Substrates. <i>Physical Review Letters</i> , 2005, 95, 095501.	7.8	119
20	Binding and Diffusion of Lithium in Graphite: Quantum Monte Carlo Benchmarks and Validation of van der Waals Density Functional Methods. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 5318-5323.	5.3	117
21	Hybrid density functional theory meets quasiparticle calculations: A consistent electronic structure approach. <i>Physical Review B</i> , 2013, 88, .	3.2	115
22	Van der Waals Epitaxial Growth of Two-Dimensional Single-Crystalline GaSe Domains on Graphene. <i>ACS Nano</i> , 2015, 9, 8078-8088.	14.6	103
23	Tunable quasiparticle band gap in few-layer GaSe/graphene van der Waals heterostructures. <i>Physical Review B</i> , 2017, 96, .	3.2	99
24	First-Principles Prediction of Thermodynamically Stable Two-Dimensional Electrides. <i>Journal of the American Chemical Society</i> , 2016, 138, 15336-15344.	13.7	91
25	Alloy Engineering of Defect Properties in Semiconductors: Suppression of Deep Levels in Transition-Metal Dichalcogenides. <i>Physical Review Letters</i> , 2015, 115, 126806.	7.8	81
26	Zipper Mechanism of Nanotube Fusion: Theory and Experiment. <i>Physical Review Letters</i> , 2004, 92, 075504.	7.8	78
27	Strain-engineered optoelectronic properties of 2D transition metal dichalcogenide lateral heterostructures. <i>2D Materials</i> , 2017, 4, 021016.	4.4	72
28	Spatially resolved one-dimensional boundary states in graphene-hexagonal boron nitride planar heterostructures. <i>Nature Communications</i> , 2014, 5, 5403.	12.8	71
29	Solid-phase hetero epitaxial growth of $\sqrt{2} \times \sqrt{2}$ -phase formamidinium perovskite. <i>Nature Communications</i> , 2020, 11, 5514.	12.8	71
30	Microscopic mechanism of fullerene fusion. <i>Physical Review B</i> , 2004, 70, .	3.2	62
31	Model for Self-Assembly of Carbon Nanotubes from Acetylene Based on Real-Time Studies of Vertically Aligned Growth Kinetics. <i>Journal of Physical Chemistry C</i> , 2009, 113, 15484-15491.	3.1	59
32	Highly stable two-dimensional silicon phosphides: Different stoichiometries and exotic electronic properties. <i>Physical Review B</i> , 2015, 91, .	3.2	58
33	First-Principles Prediction of New Electrides with Nontrivial Band Topology Based on One-Dimensional Building Blocks. <i>Physical Review Letters</i> , 2018, 120, 026401.	7.8	58
34	Energetics and packing of fullerenes in nanotube peapods. <i>Physical Review B</i> , 2005, 71, .	3.2	48
35	Electronic Properties of Bilayer Graphene Strongly Coupled to Interlayer Stacking and an External Electric Field. <i>Physical Review Letters</i> , 2015, 115, 015502.	7.8	47
36	Valence band inversion and spin-orbit effects in the electronic structure of monolayer GaSe. <i>Physical Review B</i> , 2018, 98, .	3.2	47

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37	Strain tolerance of two-dimensional crystal growth on curved surfaces. <i>Science Advances</i> , 2019, 5, eaav4028.	10.3	46
38	Revealing the Preferred Interlayer Orientations and Stackings of Two-Dimensional Bilayer Gallium Selenide Crystals. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2712-2717.	13.8	45
39	Observation of two distinct negative trions in tungsten disulfide monolayers. <i>Physical Review B</i> , 2015, 92, .	3.2	44
40	Formation of Ideal Rashba States on Layered Semiconductor Surfaces Steered by Strain Engineering. <i>Nano Letters</i> , 2016, 16, 404-409.	9.1	44
41	Phonon transport at the interfaces of vertically stacked graphene and hexagonal boron nitride heterostructures. <i>Nanoscale</i> , 2016, 8, 4037-4046.	5.6	38
42	Onset of nanotube decay under extreme thermal and electronic excitations. <i>Physica B: Condensed Matter</i> , 2002, 323, 78-85.	2.7	37
43	Benchmarking van der Waals density functionals with experimental data: potential-energy curves for H ₂ molecules on Cu(111), (100) and (110) surfaces. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 424213.	1.8	35
44	Exceptional Optoelectronic Properties of Hydrogenated Bilayer Silicene. <i>Physical Review X</i> , 2014, 4, .	8.9	35
45	Doping transition-metal atoms in graphene for atomic-scale tailoring of electronic, magnetic, and quantum topological properties. <i>Carbon</i> , 2021, 173, 205-214.	10.3	35
46	Energetics and kinetics of Ti clustering on neutral and charged C ₆₀ surfaces. <i>Journal of Chemical Physics</i> , 2008, 129, 134707.	3.0	34
47	Nonequilibrium Synthesis of TiO ₂ Nanoparticle "Building Blocks" for Crystal Growth by Sequential Attachment in Pulsed Laser Deposition. <i>Nano Letters</i> , 2017, 17, 4624-4633.	9.1	33
48	Dynamics of Step Bunching in Heteroepitaxial Growth on Vicinal Substrates. <i>Physical Review Letters</i> , 2007, 99, 055503.	7.8	31
49	Nitrogen Doping Enables Covalent-Like "C-C" Bonding between Graphenes. <i>Nano Letters</i> , 2015, 15, 5482-5491.	9.1	31
50	Growth of Metal Phthalocyanine on Deactivated Semiconducting Surfaces Steered by Selective Orbital Coupling. <i>Physical Review Letters</i> , 2015, 115, 096101.	7.8	30
51	Influence of defects and doping on phonon transport properties of monolayer MoSe ₂ . <i>2D Materials</i> , 2018, 5, 031008.	4.4	30
52	GPU acceleration of all-electron electronic structure theory using localized numeric atom-centered basis functions. <i>Computer Physics Communications</i> , 2020, 254, 107314.	7.5	30
53	Effect of Metal Doping and Vacancies on the Thermal Conductivity of Monolayer Molybdenum Diselenide. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 4921-4928.	8.0	29
54	Metastable Li _{1+x} Mn ₂ O ₄ (0 ≤ x ≤ 1) Spinel Phases Revealed by in Operando Neutron Diffraction and First-Principles Calculations. <i>Chemistry of Materials</i> , 2019, 31, 124-134.	6.7	28

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55	Polygonization and anomalous graphene interlayer spacing of multi-walled carbon nanofibers. <i>Physical Review B</i> , 2007, 75, .	3.2	26
56	Finite-Temperature Hydrogen Adsorption and Desorption Thermodynamics Driven by Soft Vibration Modes. <i>Physical Review Letters</i> , 2013, 111, 066102.	7.8	25
57	Doping of Cr in Graphene Using Electron Beam Manipulation for Functional Defect Engineering. <i>ACS Applied Nano Materials</i> , 2020, 3, 10855-10863.	5.0	24
58	Can photo excitations heal defects in carbon nanotubes?. <i>Chemical Physics Letters</i> , 2004, 392, 209-213.	2.6	23
59	Electron transfer and localization in endohedral metallofullerenes: <i>Ab initio</i> density functional theory calculations. <i>Physical Review B</i> , 2008, 78, .	3.2	23
60	Interaction between hydrogen molecules and metallofullerenes. <i>Journal of Chemical Physics</i> , 2009, 131, 064707.	3.0	22
61	The Role of Interfacial Electronic Properties on Phonon Transport in Two-Dimensional MoS ₂ on Metal Substrates. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 33299-33306.	8.0	21
62	Understanding the Charge Transfer at the Interface of Electron Donors and Acceptors: TTFâ€“TCNQ as an Example. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 27266-27272.	8.0	21
63	Strain-Induced Growth of Twisted Bilayers during the Coalescence of Monolayer MoS ₂ Crystals. <i>ACS Nano</i> , 2021, 15, 4504-4517.	14.6	19
64	GPU-acceleration of the ELPA2 distributed eigensolver for dense symmetric and hermitian eigenproblems. <i>Computer Physics Communications</i> , 2021, 262, 107808.	7.5	19
65	Understanding the Metal-Directed Growth of Single-Crystal M-TCNQF ₄ Organic Nanowires with Time-Resolved, in Situ X-ray Diffraction and First-Principles Theoretical Studies. <i>Journal of the American Chemical Society</i> , 2012, 134, 14353-14361.	13.7	17
66	Interplay between intercalated oxygen superstructures and monolayer h-BN on Cu(100). <i>Physical Review B</i> , 2016, 94, .	3.2	16
67	Surface Magnetism of Cobalt Nanoislands Controlled by Atomic Hydrogen. <i>Nano Letters</i> , 2017, 17, 292-298.	9.1	15
68	Selective Antisite Defect Formation in WS ₂ Monolayers via Reactive Growth on Dilute Wâ€“Au Alloy Substrates. <i>Advanced Materials</i> , 2022, 34, e2106674.	21.0	14
69	Antiferromagnetic Order and Linear Magnetoresistance in Fe-Substituted Shandite Co ₃ In ₂ S ₂ . <i>Chemistry of Materials</i> , 2021, 33, 9741-9749.	6.7	14
70	Stabilized Synthesis of 2D Verbeekite: Monoclinic PdSe ₂ Crystals with High Mobility and In-Plane Optical and Electrical Anisotropy. <i>ACS Nano</i> , 2022, 16, 13900-13910.	14.6	14
71	First-principles studies of hydrogen interaction with ultrathin Mg and Mg-based alloy films. <i>Physical Review B</i> , 2011, 83, .	3.2	13
72	Cobalt-based magnetic Weyl semimetals with high-thermodynamic stabilities. <i>Npj Computational Materials</i> , 2021, 7, .	8.7	13

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73	Revealing the Chemical Bonding in Adatom Arrays via Machine Learning of Hyperspectral Scanning Tunneling Spectroscopy Data. <i>ACS Nano</i> , 2021, 15, 11806-11816.	14.6	13
74	Equilibrium structure of ferrofluid aggregates. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 455105.	1.8	12
75	Weak competing interactions control assembly of strongly bonded TCNQ ionic acceptor molecules on silver surfaces. <i>Physical Review B</i> , 2014, 90, .	3.2	11
76	Phonon transport properties of two-dimensional electride Ca ₂ Nâ€”A first-principles study. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	11
77	Quantum Phase Engineering of Two-Dimensional Post-Transition Metals by Substrates: Toward a Room-Temperature Quantum Anomalous Hall Insulator. <i>Nano Letters</i> , 2020, 20, 7186-7192.	9.1	9
78	Enhanced dipole moments in photo-excited TTFâ€”TCNQ dimers. <i>New Journal of Physics</i> , 2011, 13, 073039.	2.9	8
79	Understanding Heterogeneities in Quantum Materials. <i>Advanced Materials</i> , 2023, 35, e2106909.	21.0	8
80	Boundary effects on dynamic behavior of Josephson-junction arrays. <i>Physical Review B</i> , 2000, 62, 5357-5360.	3.2	7
81	How the shape of catalyst nanoparticles determines their crystallographic orientation during carbon nanofiber growth. <i>Carbon</i> , 2013, 60, 41-45.	10.3	7
82	Crystal structures and rotational dynamics of a two-dimensional metal halide perovskite (OA) ₂ PbI ₄ . <i>Journal of Chemical Physics</i> , 2020, 152, 014703.	3.0	7
83	Understanding Substrate-Guided Assembly in van der Waals Epitaxy by <i>in Situ</i> Laser Crystallization within a Transmission Electron Microscope. <i>ACS Nano</i> , 2021, 15, 8638-8652.	14.6	7
84	Temporally decoherent and spatially coherent vibrations in metal halide perovskites. <i>Physical Review B</i> , 2020, 102, .	3.2	7
85	Lattice effects on the current-voltage characteristics of superconducting arrays. <i>Physical Review B</i> , 2000, 61, 3263-3266.	3.2	6
86	Recent advances in computational materials design: methods, applications, algorithms, and informatics. <i>Journal of Materials Science</i> , 2022, 57, 10471-10474.	3.7	6
87	Revealing the Preferred Interlayer Orientations and Stackings of Twoâ€”Dimensional Bilayer Gallium Selenide Crystals. <i>Angewandte Chemie</i> , 2015, 127, 2750-2755.	2.0	5
88	Assessing the Predictive Power of Density Functional Theory in Finite-Temperature Hydrogen Adsorption/Desorption Thermodynamics. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26189-26195.	3.1	5
89	Targeted medication delivery using magnetic nanostructures. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 086210.	1.8	4
90	A hybrid optimization algorithm to explore atomic configurations of TiO ₂ nanoparticles. <i>Computational Materials Science</i> , 2018, 141, 1-9.	3.0	4

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91	Laser Interactions for the Synthesis and In Situ Diagnostics of Nanomaterials. Springer Series in Materials Science, 2014, , 143-173.	0.6	4
92	Floquet band engineering and topological phase transitions in 1Tâ€™™ transition metal dichalcogenides. 2D Materials, 2022, 9, 025005.	4.4	4
93	Self-regulated growth of candidate topological superconducting parkerite by molecular beam epitaxy. APL Materials, 2021, 9, 101110.	5.1	3
94	Performance of biologically inspired algorithms tuned on TiO2 nanoparticle benchmark system. Computational Materials Science, 2019, 165, 63-73.	3.0	2
95	Topography inversion in scanning tunneling microscopy of single-atom-thick materials from penetrating substrate states. Scientific Reports, 2022, 12, 7321.	3.3	2
96	Laser Synthesis, Processing, and Spectroscopy of Atomically-Thin Two Dimensional Materials. Springer Series in Materials Science, 2018, , 1-37.	0.6	1
97	Emerging edge states on the surface of the epitaxial semimetal CuMnAs thin film. Applied Physics Letters, 2020, 116, 061603.	3.3	1
98	Phase Transformations and Surface/Interface Properties in Functional Perovskites with Aberration-Corrected STEM/EELS. Microscopy and Microanalysis, 2015, 21, 2429-2430.	0.4	0
99	A first-principles study of phonon transport properties of monolayer MoSe<inf>2</inf>, , 2017, , .		0