

Gun-Do Lee

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88
papers

2,593
citations

28
h-index

49
g-index

90
ext. papers

2,911
ext. citations

8.1
avg, IF

4.79
L-index

#	Paper	IF	Citations
88	OH molecule-involved formation of point defects in monolayer graphene. <i>Nanotechnology</i> , 2021 , 32, 025704	3.4	
87	Density Functional Theory Study of Edge-Induced Atomic-Scale Structural Phase Transitions of MoS ₂ Nanocrystals: Implications for a High-Performance Catalyst. <i>ACS Applied Nano Materials</i> , 2021 , 4, 5496-5502	5.6	2
86	Atomically Precise Control of Carbon Insertion into hBN Monolayer Point Vacancies using a Focused Electron Beam Guide. <i>Small</i> , 2021 , 17, e2100693	11	3
85	Quasi-graphitic carbon shell-induced Cu confinement promotes electrocatalytic CO reduction toward C products. <i>Nature Communications</i> , 2021 , 12, 3765	17.4	17
84	Reaction mechanisms of chlorine reduction on hydroxylated alumina in titanium nitride growth: First principles study. <i>Applied Surface Science</i> , 2021 , 550, 149391	6.7	2
83	Two-dimensional iodine-monofluoride epitaxy on WSe ₂ . <i>Npj 2D Materials and Applications</i> , 2021 , 5,	8.8	2
82	Phase Engineering of Transition Metal Dichalcogenides via a Thermodynamically Designed Gas-Solid Reaction. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 8430-8439	6.4	
81	Thermodynamically driven self-formation of copper-embedded nitrogen-doped carbon nanofiber catalysts for a cascade electroreduction of carbon dioxide to ethylene. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11632-11641	13	17
80	Direct observation and catalytic role of mediator atom in 2D materials. <i>Science Advances</i> , 2020 , 6, eaba4942	44.2	5
79	The influence of hydrogen concentration in amorphous carbon films on mechanical properties and fluorine penetration: a density functional theory and molecular dynamics study.. <i>RSC Advances</i> , 2020 , 10, 6822-6830	3.7	4
78	Thermodynamic insights into interfacial interactions in TiN/amorphous Al ₂ O ₃ heterostructures: ab initio molecular dynamics and first principles investigation. <i>Inorganic Chemistry Frontiers</i> , 2020 , 7, 4347-4356	6.8	0
77	Scanning Moiré Fringe Method: A Superior Approach to Perceive Defects, Interfaces, and Distortion in 2D Materials. <i>ACS Nano</i> , 2020 , 14, 6034-6042	16.7	6
76	Analysis of surface adsorption kinetics of SiH ₄ and Si ₂ H ₆ for deposition of a hydrogenated silicon thin film using intermediate pressure SiH ₄ plasmas. <i>Applied Surface Science</i> , 2019 , 496, 143728	6.7	7
75	Atomic Structure and Dynamics of Epitaxial Platinum Bilayers on Graphene. <i>ACS Nano</i> , 2019 , 13, 12162-12170	21.7	12
74	Atomic Scale Imaging of Reversible Ring Cyclization in Graphene Nanoconstrictions. <i>ACS Nano</i> , 2019 , 13, 2379-2388	16.7	2
73	Effects of nitrogen doping in amorphous carbon layers on the diffusion of fluorine atoms: A first-principles study. <i>Journal of Applied Physics</i> , 2019 , 125, 155701	2.5	8
72	Bonding structure and etching characteristics of amorphous carbon for a hardmask deposited by DC sputtering. <i>Carbon</i> , 2019 , 154, 277-284	10.4	8

71	Predictive fabrication of Ni phosphide embedded in carbon nanofibers as active and stable electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 7451-7458	13	17
70	First principles investigation on energetics, structure, and mechanical properties of amorphous carbon films doped with B, N, and Cl. <i>Scientific Reports</i> , 2019 , 9, 18961	4.9	3
69	Single-Crystalline Nanobelts Composed of Transition Metal Ditellurides. <i>Advanced Materials</i> , 2018 , 30, e1707260	24	15
68	Effects of H and N treatment for BH dosing process on TiN surfaces during atomic layer deposition: an study.. <i>RSC Advances</i> , 2018 , 8, 21164-21173	3.7	3
67	Overall reaction mechanism for a full atomic layer deposition cycle of W films on TiN surfaces: first-principles study.. <i>RSC Advances</i> , 2018 , 8, 39039-39046	3.7	3
66	Solid-Phase Epitaxial Growth of an Alumina Layer Having a Stacking-Mismatched Domain Structure of the Intermediate β Phase. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 41487-41496	9.5	3
65	The impact of substrate surface defects on the properties of two-dimensional van der Waals heterostructures. <i>Nanoscale</i> , 2018 , 10, 19212-19219	7.7	9
64	Lattice contraction with boron doping in fully strained SiGe epitaxial layers. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 065504	1.4	4
63	Graphene as a flexible template for controlling magnetic interactions between metal atoms. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 085001	1.8	1
62	Improved performance of AlGaIn-based deep ultraviolet light-emitting diodes with nano-patterned AlN/sapphire substrates. <i>Applied Physics Letters</i> , 2017 , 110, 191103	3.4	63
61	Electrically Driven Reversible Phase Changes in Layered In Se Crystalline Film. <i>Advanced Materials</i> , 2017 , 29, 1703568	24	45
60	Point defects in turbostratic stacked bilayer graphene. <i>Nanoscale</i> , 2017 , 9, 13725-13730	7.7	8
59	Gaseous Nanocarving-Mediated Carbon Framework with Spontaneous Metal Assembly for Structure-Tunable Metal/Carbon Nanofibers. <i>Advanced Materials</i> , 2017 , 29, 1702958	24	10
58	Dissociation reaction of B ₂ H ₆ on TiN surfaces during atomic layer deposition: first-principles study. <i>RSC Advances</i> , 2017 , 7, 55750-55755	3.7	9
57	In Situ Atomic Level Dynamics of Heterogeneous Nucleation and Growth of Graphene from Inorganic Nanoparticle Seeds. <i>ACS Nano</i> , 2016 , 10, 9397-9410	16.7	8
56	Atomic Structure and Spectroscopy of Single Metal (Cr, V) Substitutional Dopants in Monolayer MoS ₂ . <i>ACS Nano</i> , 2016 , 10, 10227-10236	16.7	77
55	Direct imaging of rotating molecules anchored on graphene. <i>Nanoscale</i> , 2016 , 8, 13174-80	7.7	9
54	Elongated Silicon-Carbon Bonds at Graphene Edges. <i>ACS Nano</i> , 2016 , 10, 142-9	16.7	15

53	Electron beam-formed ferromagnetic defects on MoS surface along 1 T phase transition. <i>Scientific Reports</i> , 2016 , 6, 38730	4.9	19
52	Detailed Atomic Reconstruction of Extended Line Defects in Monolayer MoS ₂ . <i>ACS Nano</i> , 2016 , 10, 5419-307	16.7	115
51	Layer-dependent modulation of tungsten disulfide photoluminescence by lateral electric fields. <i>ACS Nano</i> , 2015 , 9, 2740-8	16.7	39
50	Rotating Anisotropic Crystalline Silicon Nanoclusters in Graphene. <i>ACS Nano</i> , 2015 , 9, 9497-506	16.7	13
49	Atomic Level Distributed Strain within Graphene Divacancies from Bond Rotations. <i>ACS Nano</i> , 2015 , 9, 8599-608	16.7	20
48	Atomic Structure of Graphene Subnanometer Pores. <i>ACS Nano</i> , 2015 , 9, 11599-607	16.7	56
47	Thermally Induced Dynamics of Dislocations in Graphene at Atomic Resolution. <i>ACS Nano</i> , 2015 , 9, 10066-75	16.7	27
46	Partial Dislocations in Graphene and Their Atomic Level Migration Dynamics. <i>Nano Letters</i> , 2015 , 15, 5950-5	11.5	33
45	Spatially dependent lattice deformations for dislocations at the edges of graphene. <i>ACS Nano</i> , 2015 , 9, 656-62	16.7	11
44	Atomic-scale mechanism of grain boundary motion in graphene. <i>Carbon</i> , 2015 , 84, 146-150	10.4	8
43	Hydrogen-free graphene edges. <i>Nature Communications</i> , 2014 , 5, 3040	17.4	63
42	The role of the bridging atom in stabilizing odd numbered graphene vacancies. <i>Nano Letters</i> , 2014 , 14, 3972-80	11.5	36
41	Stability and dynamics of the tetravacancy in graphene. <i>Nano Letters</i> , 2014 , 14, 1634-42	11.5	57
40	Atomic structure and dynamics of metal dopant pairs in graphene. <i>Nano Letters</i> , 2014 , 14, 3766-72	11.5	168
39	Detailed formation processes of stable dislocations in graphene. <i>Nanoscale</i> , 2014 , 6, 14836-44	7.7	24
38	Extended Klein edges in graphene. <i>ACS Nano</i> , 2014 , 8, 12272-9	16.7	31
37	Atomistic processes of grain boundary motion and annihilation in graphene. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 155301	1.8	6
36	Bond length and charge density variations within extended arm chair defects in graphene. <i>ACS Nano</i> , 2013 , 7, 9860-6	16.7	32

35	Rippling graphene at the nanoscale through dislocation addition. <i>Nano Letters</i> , 2013 , 13, 4937-44	11.5	54
34	Formation and development of dislocation in graphene. <i>Applied Physics Letters</i> , 2013 , 102, 021603	3.4	28
33	Less strained and more efficient GaN light-emitting diodes with embedded silica hollow nanospheres. <i>Scientific Reports</i> , 2013 , 3, 3201	4.9	33
32	Reduction of graphene damages during the fabrication of InGaN/GaN light emitting diodes with graphene electrodes. <i>Nanotechnology</i> , 2012 , 23, 425302	3.4	8
31	Improved emission efficiency of a-plane GaN light emitting diodes with silica nano-spheres integrated into a-plane GaN buffer layer. <i>Applied Physics Letters</i> , 2012 , 100, 191116	3.4	6
30	Growth mechanism of highly uniform InAs/GaAs quantum dot with periodic arsine interruption by metalorganic chemical vapor deposition. <i>Journal of Applied Physics</i> , 2011 , 110, 044302	2.5	3
29	Dynamics and stability of divacancy defects in graphene. <i>Physical Review B</i> , 2011 , 84,	3.3	80
28	The role of pentagon-heptagon pair defect in carbon nanotube: The center of vacancy reconstruction. <i>Applied Physics Letters</i> , 2010 , 97, 093106	3.4	14
27	Reconstruction and evaporation at graphene nanoribbon edges. <i>Physical Review B</i> , 2010 , 81,	3.3	53
26	High quality Ge epitaxial layers on Si by ultrahigh vacuum chemical vapor deposition. <i>Thin Solid Films</i> , 2009 , 517, 3990-3994	2.2	12
25	Stability of dislocation defect with two pentagon-heptagon pairs in graphene. <i>Physical Review B</i> , 2008 , 78,	3.3	93
24	Effect of C incorporation on relaxation of SiGe/Si. <i>Applied Physics Letters</i> , 2008 , 93, 221902	3.4	5
23	The formation of pentagon-heptagon pair defect by the reconstruction of vacancy defects in carbon nanotube. <i>Applied Physics Letters</i> , 2008 , 92, 043104	3.4	33
22	Effect of interstitial C incorporation on the Raman scattering of Si _{1-x} GexCy epitaxial layer. <i>Applied Physics Letters</i> , 2008 , 92, 061906	3.4	1
21	Atomistic simulation studies of complex carbon and silicon systems using environment-dependent tight-binding potentials. <i>Scientific Modeling and Simulation SMNS</i> , 2008 , 15, 97-121		4
20	Atomistic simulation studies of complex carbon and silicon systems using environment-dependent tight-binding potentials. <i>Lecture Notes in Computational Science and Engineering</i> , 2008 , 97-121	0.3	
19	Formation of carbon nanotube semiconductor-metal intramolecular junctions by self-assembly of vacancy defects. <i>Physical Review B</i> , 2007 , 76,	3.3	30
18	Formation of flat, relaxed Si _{1-x} Gex alloys on Si(001) without buffer layers. <i>Applied Physics Letters</i> , 2006 , 88, 122103	3.4	6

17	Diffusion of adatom in the selective epitaxial growth of Si(100): A molecular dynamics study. <i>Applied Physics Letters</i> , 2006 , 88, 231909	3-4	0
16	Vacancy defects and the formation of local haeckelite structures in graphene from tight-binding molecular dynamics. <i>Physical Review B</i> , 2006 , 74,	3-3	77
15	Diffusion, coalescence, and reconstruction of vacancy defects in graphene layers. <i>Physical Review Letters</i> , 2005 , 95, 205501	7-4	416
14	The emission wavelength tuning of InAs/InP quantum dots with thin GaAs, InGaAs, InP capping layers by MOCVD. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005 , 26, 169-173	3	2
13	Microscopic study on the behavior of the {311} facet in the selective epitaxial growth of Si(100). <i>Applied Physics Letters</i> , 2004 , 85, 4624-4626	3-4	2
12	Theoretical study on the temperature-induced structural transition of the Si(1 1 3) surface. <i>Surface Science</i> , 2004 , 559, 63-69	1-8	8
11	Isotropic/Anisotropic Selective Epitaxial Growth of Si on Local Oxidation of Silicon (LOCOS) Patterned Si (100) Substrate by Cold Wall Ultrahigh Vacuum Chemical Vapor Deposition (UHV-CVD). <i>Japanese Journal of Applied Physics</i> , 2003 , 42, 3966-3970	1-4	3
10	Structural evolution of the Si(113) surface: Ab initio and tight-binding molecular dynamics calculations. <i>Physical Review B</i> , 2003 , 68,	3-3	17
9	Heat-induced transformation of nanodiamond into a tube-shaped fullerene: a molecular dynamics simulation. <i>Physical Review Letters</i> , 2003 , 91, 265701	7-4	42
8	Catalytic decomposition of acetylene on Fe(001): A first-principles study. <i>Physical Review B</i> , 2002 , 66,	3-3	22
7	ADDIMER DIFFUSIION ON THE Si(100) SURFACE. <i>Surface Review and Letters</i> , 1999 , 06, 1015-1023	1-1	1
6	Addimer diffusion along the trough between dimer rows on Si(001). <i>Surface Science</i> , 1999 , 426, L427-L432		13
5	Ad-Dimer Diffusion between Trough and Dimer Row on Si(100). <i>Physical Review Letters</i> , 1998 , 81, 5872-5875		31
4	Ab initio pseudopotential study of the structural and electronic properties of ZnTe under high pressure. <i>Journal of Physics Condensed Matter</i> , 1997 , 9, 6619-6631	1-8	10
3	Microscopic study of the pressure-induced structural phase transition of ZnTe. <i>Physical Review B</i> , 1996 , 53, R7622-R7625	3-3	38
2	Environment-dependent tight-binding potential model. <i>Physical Review B</i> , 1996 , 53, 979-982	3-3	214
1	Role of d electrons in the zinc-blende semiconductors ZnS, ZnSe, and ZnTe. <i>Physical Review B</i> , 1995 , 52, 1459-1462	3-3	76