Dongmok Whang

List of Publications by Year
in descending order

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106	10,159	109321	32842
papers	citations	35 h-index	100 g-index

110	110	110	11609
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A homochiral metalâ€“organic porous material for enantioselective separation and catalysis. Nature, 2000, 404, 982-986.	27.8	3,805
2	Wafer-Scale Growth of Single-Crystal Monolayer Graphene on Reusable Hydrogen-Terminated Germanium. Science, 2014, 344, 286-289.	12.6	831
3	Large-Scale Hierarchical Organization of Nanowire Arrays for Integrated Nanosystems. Nano Letters, 2003, 3, 1255-1259.	9.1	813
4	Molecular Container Assembly Capable of Controlling Binding and Release of Its Guest Molecules:Â Reversible Encapsulation of Organic Molecules in Sodium Ion Complexed Cucurbituril. Journal of the American Chemical Society, 1996, 118, 9790-9791.	13.7	342
5	Scalable Interconnection and Integration of Nanowire Devices without Registration. Nano Letters, 2004, 4, 915-919.	9.1	337
6	Polycatenated Two-Dimensional Polyrotaxane Net. Journal of the American Chemical Society, 1997, 119, 451-452.	13.7	291
7	Self-Assembly of a Polyrotaxane Containing a Cyclic â€œBeadâ€•in Every Structural Unit in the Solid State:Â Cucurbituril Molecules Threaded on a One-Dimensional Coordination Polymer. Journal of the American Chemical Society, 1996, 118, 11333-11334.	13.7	228
8	Molecular Necklace:Â Quantitative Self-Assembly of a Cyclic Oligorotaxane from Nine Molecules. Journal of the American Chemical Society, 1998, 120, 4899-4900.	13.7	213
9	Designed Self-Assembly of Molecular Necklaces. Journal of the American Chemical Society, 2002, 124, 2140-2147.	13.7	201
10	A Two-Dimensional Polyrotaxane with Large Cavities and Channels: A Novel Approach to Metal-Organic Open-Frameworks by Using Supramolecular Building Blocks. Angewandte Chemie - International Edition, 2001, 40, 399-402.	13.8	195
11	Large Thermoelectric Figure-of-Merits from SiGe Nanowires by Simultaneously Measuring Electrical and Thermal Transport Properties. Nano Letters, 2012, 12, 2918-2923.	9.1	181
12	Transition Metal Ion Directed Supramolecular Assembly of One- and Two-Dimensional Polyrotaxanes Incorporating Cucurbituril. Chemistry - A European Journal, 2002, 8, 498-508.	3.3	166
13	Nanolithography Using Hierarchically Assembled Nanowire Masks. Nano Letters, 2003, 3, 951-954.	9.1	151
14	Shape-Induced, Hexagonal, Open Frameworks: Rubidium Ion Complexed Cucurbituril. Angewandte Chemie - International Edition, 1999, 38, 641-643.	13.8	146
15	Stretchable, Transparent Zinc Oxide Thin Film Transistors. Advanced Functional Materials, 2010, 20, 3577-3582.	14.9	133
16	Helical polyrotaxane: cucurbituril â€˜beadsâ€™ threaded onto a helical one-dimensional coordination polymer. Chemical Communications, 1997, , 2361-2362.	4.1	117
17	Columnar one-dimensional coordination polymer formed with a metal ion and a hostâ€“guest complex as building blocks: potassium ion complexed cucurbituril. Inorganica Chimica Acta, 2000, 297, 307-312.	2.4	102
18	Catalyst-free Growth of Single-Crystal Silicon and Germanium Nanowires. Nano Letters, 2009, 9, 864-869.	9.1	88

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19	Direct growth of graphene on rigid and flexible substrates: progress, applications, and challenges. Chemical Society Reviews, 2017, 46, 6276-6300.	38.1	81
20	Layer-engineered large-area exfoliation of graphene. Science Advances, 2020, 6, .	10.3	81
21	Hierarchically assembled tubular shell-core-shell heterostructure of hybrid transition metal chalcogenides for high-performance supercapacitors with ultrahigh cyclability. Nano Energy, 2017, 37, 15-23.	16.0	72
22	A Simple Construction of a Rotaxane and Pseudorotaxane: Syntheses and X-Ray Crystal Structures of Cucurbituril Threaded on Substituted Spermine. Chemistry Letters, 1996, 25, 503-504.	1.3	64
23	Epitaxial Growth of a Single-Crystal Hybridized Boron Nitride and Graphene Layer on a Wide-Band Gap Semiconductor. Journal of the American Chemical Society, 2015, 137, 6897-6905.	13.7	55
24	A pseudo-capacitive chalcogenide-based electrode with dense 1-dimensional nanoarrays for enhanced energy density in asymmetric supercapacitors. Journal of Materials Chemistry A, 2016, 4, 10084-10090.	10.3	55
25	Waferâ€Scale and Lowâ€Temperature Growth of 1Tâ€WS₂ Film for Efficient and Stable Hydrogen Evolution Reaction. Small, 2020, 16, e1905000.	10.0	53
26	Syntheses and characterization of dichlorozirconium porphyrin complexes and their novel organometallic derivatives. X-ray structure of Zr(TPP)Cl2(THF). Inorganic Chemistry, 1993, 32, 360-362.	4.0	50
27	Clean Interface Contact Using a ZnO Interlayer for Low-Contact-Resistance MoS₂ Transistors. ACS Applied Materials & Interfaces, 2020, 12, 5031-5039.	8.0	50
28	Realization of continuous Zachariasen carbon monolayer. Science Advances, 2017, 3, e1601821.	10.3	46
29	Structurally stabilized lithium-metal anode via surface chemistry engineering. Energy Storage Materials, 2021, 37, 315-324.	18.0	46
30	Synthesis and characterization of a di-N-hydroxyethylated tetraaza macrocycle and its nickel(II) and copper(II) complexes: crystal structure of the nickel(II) complex. Journal of the Chemical Society Dalton Transactions, 1995, , 363.	1.1	45
31	Low-temperature wafer-scale growth of MoS2-graphene heterostructures. Applied Surface Science, 2019, 470, 129-134.	6.1	44
32	Lithium metal storage in zeolitic imidazolate framework derived nanoarchitectures. Energy Storage Materials, 2020, 33, 95-107.	18.0	40
33	The influence of phonon scatterings on the thermal conductivity of SiGe nanowires. Applied Physics Letters, 2012, 101, 043114.	3.3	37
34	Pt-polyaniline nanocomposite on boron-doped diamond electrode for amperometic biosensor with low detection limit. Mikrochimica Acta, 2010, 171, 249-255.	5.0	36
35	Seed-free electrochemical growth of ZnO nanotube arrays on single-layer graphene. Materials Letters, 2012, 72, 25-28.	2.6	33
36	Design of cobalt catalysed carbon nanotubes in bimetallic zeolitic imidazolate frameworks. Applied Surface Science, 2021, 547, 149134.	6.1	33

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37	Entangled Germanium Nanowires and Graphite Nanofibers for the Anode of Lithium-Ion Batteries. Journal of the Electrochemical Society, 2013, 160, A112-A116.	2.9	31
38	Electrochemical growth of vertically aligned ZnO nanorod arrays on oxidized bi-layer graphene electrode. CrystEngComm, 2011, 13, 6036.	2.6	30
39	Super-Nernstian pH Sensor Based on Anomalous Charge Transfer Doping of Defect-Engineered Graphene. Nano Letters, 2021, 21, 34-42.	9.1	29
40	Toward Scalable Growth for Single-Crystal Graphene on Polycrystalline Metal Foil. ACS Nano, 2020, 14, 3141-3149.	14.6	26
41	Synthesis, characterization and crystal structures of novel hafnium porphyrins. Journal of the Chemical Society Dalton Transactions, 1993, , 205.	1.1	22
42	Novel Disulfido- and Diselenido-Bridged Zirconium and Hafnium Porphyrin Dimers with Unusual Coordination Geometries:Â [M(TPP)]2(Î¼-Î·2-Q2)2(M = Zr, Hf; Q = S, Se). Inorganic Chemistry, 1997, 36, 4607-4609.	4.0	21
43	Self-Assembly of Interlocked Structures: Rotaxanes, Polyrotaxanes and Molecular Necklaces. Molecular Crystals and Liquid Crystals, 1999, 327, 65-70.	0.3	21
44	Graphene on Groupâ€IV Elementary Semiconductors: The Direct Growth Approach and Its Applications. Advanced Materials, 2019, 31, e1803469.	21.0	21
45	Amorphous germanium oxide nanobubbles for lithium-ion battery anode. Materials Research Bulletin, 2019, 110, 24-31.	5.2	21
46	Realization of Waferâ€Scale 1Tâ€MoS₂ Film for Efficient Hydrogen Evolution Reaction. ChemSusChem, 2021, 14, 1344-1350.	6.8	21
47	Analytical Characteristics of Electrochemical Biosensor Using Ptâ€Dispersed Graphene on Boron Doped Diamond Electrode. Electroanalysis, 2011, 23, 2408-2414.	2.9	20
48	Low-Programmable-Voltage Nonvolatile Memory Devices Based on Omega-shaped Gate Organic Ferroelectric P(VDF-TrFE) Field Effect Transistors Using p-type Silicon Nanowire Channels. Nano-Micro Letters, 2015, 7, 35-41.	27.0	20
49	Unraveling the Factors Affecting the Electrochemical Performance of MoS₂â€“Carbon Composite Catalysts for Hydrogen Evolution Reaction: Surface Defect and Electrical Resistance of Carbon Supports. ACS Applied Materials & Interfaces, 2019, 11, 5037-5045.	8.0	20
50	Solution-Processed MoS₂Film with Functional Interfaces via Precursor-Assisted Chemical Welding. ACS Applied Materials & Interfaces, 2021, 13, 12221-12229.	8.0	19
51	Tunable bandgap of a single layer graphene doped by the manganese oxide using the electrochemical doping. Applied Physics Letters, 2013, 102, 032106.	3.3	17
52	2D Doping Layer for Flexible Transparent Conducting Graphene Electrodes with Low Sheet Resistance and High Stability. Advanced Electronic Materials, 2018, 4, 1700622.	5.1	17
53	Selectivity of Threefold Symmetry in Epitaxial Alignment of Liquid Crystal Molecules on Macroscale Singleâ€Crystal Graphene. Advanced Materials, 2018, 30, e1802441.	21.0	17
54	Self-Assembly of Interlocked Structures and Open Framework Materials using Coordination Bonds. Molecular Crystals and Liquid Crystals, 2000, 342, 29-38.	0.3	16

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55	Catalytic etching of monolayer graphene at low temperature via carbon oxidation. Physical Chemistry Chemical Physics, 2016, 18, 101-109.	2.8	16
56	Critical role of surface craters for improving the reversibility of Li metal storage in porous carbon frameworks. Nano Energy, 2021, 88, 106243.	16.0	16
57	The catalytic activity of new ruthenium(II) complexes containing chelating diphosphine ligand in the homogeneous hydrogenation of cyclohexene. Polyhedron, 1994, 13, 1887-1894.	2.2	15
58	Microwave Characterization of a Single Wall Carbon Nanotube Bundle. Japanese Journal of Applied Physics, 2008, 47, 4965-4968.	1.5	15
59	An Ecoâ€Friendly, CMOSâ€Compatible Transfer Process for Largeâ€Scale CVDâ€Graphene. Advanced Materials Interfaces, 2019, 6, 1900084.	3.7	15
60	Synthesis and characterization of nickel(II) complexes of di-N-alkylated 14-membered tetraaza macrocycles containing cyclohexane rings via regioselective alkylation reaction. Inorganica Chimica Acta, 1998, 279, 238-242.	2.4	14
61	Ultralow-power non-volatile memory cells based on P(VDF-TrFE) ferroelectric-gate CMOS silicon nanowire channel field-effect transistors. Nanoscale, 2015, 7, 11660-11666.	5.6	14
62	CMOS-compatible catalytic growth of graphene on a silicon dioxide substrate. Applied Physics Letters, 2016, 109, .	3.3	14
63	Defect-Free Mechanical Graphene Transfer Using n-Doping Adhesive Gel Buffer. ACS Nano, 2021, 15, 11276-11284.	14.6	14
64	Tunable threshold voltage of an n-type Si nanowire ferroelectric-gate field effect transistor for high-performance nonvolatile memory applications. Nanotechnology, 2014, 25, 205201.	2.6	13
65	Organic Electrolyte Based Pulsed Nanoplating and Fabrication of Carbon Nanotube Network Transistors. Japanese Journal of Applied Physics, 2011, 50, 06GE11.	1.5	13
66	Trioxygen-Bridged Porphyrin Dimers with Unusual Molecular Geometries. X-Ray Crystal Structures of {(Î¼-OH)3[Zr(OEP)]2}(7,8-C2B9H12) and (Î¼-O)(Î¼-OH)2[Zr(TPP)]2. Chemistry Letters, 1993, 22, 807-810.	1.3	12
67	Silicon Embedded Nanoporous Carbon Composite for the Anode of Li Ion Batteries. Journal of the Electrochemical Society, 2012, 159, A1273-A1277.	2.9	12
68	Control of Lateral Dimension in Metal-Catalyzed Germanium Nanowire Growth: Usage of Carbon Sheath. Nano Letters, 2012, 12, 4007-4012.	9.1	12
69	A facile route to Si nanowire gate-all-around field effect transistors with a steep subthreshold slope. Nanoscale, 2013, 5, 8968.	5.6	11
70	Controlled growth of in-plane graphene/h-BN heterostructure on a single crystal Ge substrate. Applied Surface Science, 2021, 554, 149655.	6.1	11
71	Electrical Characteristics of the Backgated Bottom-Up Silicon Nanowire FETs. IEEE Nanotechnology Magazine, 2008, 7, 683-687.	2.0	10
72	Highly Efficient n-Type Doping of Graphene by Vacuum Annealed Amine-Rich Macromolecules. Materials, 2020, 13, 2166.	2.9	10

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73	Synthesis, characterization and structure of the highly sterically congested complex (3,14-dimethyl-14-nitromethyl-2,6,13,17-tetraazatricyclo[16.4.0.07.12]docos-2-ene)nickel diperchlorate and structure of (3,14-dimethyl-2,6,13,17-tetraazatricyclo[16.4.0.07.12]docosa-2,13-diene)nickel diperchlorate. Journal of the Chemical Society Dalton Transactions, 1994, , 853.	1.1	9
74	Microwave Characterization of a Field Effect Transistor with Dielectrophoretically-Aligned Single Silicon Nanowire. Japanese Journal of Applied Physics, 2010, 49, 06GG12.	1.5	9
75	Axial pâ€“n Nanowire Gated Diodes as a Direct Probe of Surface-Dominated Charge Dynamics in Semiconductor Nanomaterials. Journal of Physical Chemistry C, 2011, 115, 23552-23557.	3.1	9
76	Coreâ€“shell Si_{1â^'x}Ge_x nanowires with controlled structural defects for phonon scattering enhancement. Journal of Materials Chemistry A, 2014, 2, 12153-12157.	10.3	9
77	Reliability Enhancement of Germanium Nanowires Using Graphene as a Protective Layer: Aspect of Thermal Stability. ACS Applied Materials & Interfaces, 2014, 6, 5069-5074.	8.0	9
78	Synthesis, characterization and X-ray crystal structure of the benzenedithiolatohafnium(IV) porphyrin complex. Inorganica Chimica Acta, 1994, 221, 51-54.	2.4	8
79	Homogeneous hydrogenation with new cationic ruthenium(II) complexes of [RuH(CO)(NCCH3)(PPh3)2(diphos)]+ and [RuH(CO)(NCCH3)(PPh3)(diphos)]+. Crystal structure of [RuH(CO)(NCCH3)(PPh3) (Fe(Î·5-C5H4PPh2)2)][BF4]. Polyhedron, 1996, 15, 3811-3820.	2.2	8
80	Electrical characteristics of nickel silicideâ€“silicon heterojunction in suspended silicon nanowires. Solid-State Electronics, 2011, 56, 130-134.	1.4	8
81	High performance Si nanowire field-effect-transistors based on a CMOS inverter with tunable threshold voltage. Nanoscale, 2014, 6, 5479.	5.6	8
82	Carbon out-diffusion mechanism for direct graphene growth on a silicon surface. Acta Materialia, 2015, 96, 18-23.	7.9	8
83	Loose-fit graphitic encapsulation of silicon nanowire for one-dimensional Si anode design. Journal of Materials Science and Technology, 2017, 33, 1120-1127.	10.7	8
84	Amperometric Glucose Biosensor Based on a Pt-Dispersed Hierarchically Porous Electrode. Journal of the Korean Physical Society, 2009, 54, 1612-1618.	0.7	8
85	Control of selective and catalyst-free growth of Sb2Te3 and Te nanowires from sputter-deposited Al-Sb-Te thin films. CrystEngComm, 2012, 14, 4255.	2.6	7
86	Catalyst-free growth of Sb2Te3 nanowires. Materials Letters, 2011, 65, 812-814.	2.6	6
87	Selective exfoliation of single-layer graphene from non-uniform graphene grown on Cu. Nanotechnology, 2015, 26, 455304.	2.6	6
88	Ultralow power complementary inverter circuits using axially doped p- and n-channel Si nanowire field effect transistors. Nanoscale, 2016, 8, 12022-12028.	5.6	6
89	Growth of quantum dot coated core-shell anisotropic nanowires for improved thermal and electronic transport. Applied Physics Letters, 2019, 114, 243104.	3.3	6
90	Morphology of Ti on Monolayer Nanocrystalline Graphene and Its Unexpectedly Low Hydrogen Adsorption. Journal of Physical Chemistry C, 2019, 123, 1572-1578.	3.1	6

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91	Graphene shell on silica nanowires toward a nanostructured electrode with controlled morphology. Applied Physics Letters, 2013, 103, .	3.3	5
92	Large reduction in thermal conductivity for SiGe alloy nanowire wrapped with a Ge nanoparticle-embedded SiO₂shell. Nanotechnology, 2016, 27, 305703.	2.6	5
93	Electronic Structure of Graphene Grown on a Hydrogen-terminated Ge (110) Wafer. Journal of the Korean Physical Society, 2018, 73, 656-660.	0.7	5
94	Template-Assisted CVD Growth of Silicon Nanowires on a Gram Scale. Journal of the Korean Physical Society, 2009, 54, 152-156.	0.7	5
95	The chemistry and catalytic activity of new cationic ruthenium(II) complexes in the hydrogenation of cyclohexene. Crystal structure of [RuH(CO)(PPh3)(P(OMe)3)(Ph2PCH2CH2AsPh2)]ClO4Â·nâ€™C5H12. Polyhedron, 1996, 15, 1473-1479.	2.2	4
96	Thermoelectric Properties of Nanowires with a Graphitic Shell. ChemSusChem, 2015, 8, 2372-2377.	6.8	3
97	Pattern Pick and Place Method for Twisted Bi- and Multi-Layer Graphene. Materials, 2019, 12, 3740.	2.9	3
98	One-pot size-controlled growth of graphene-encapsulated germanium nanocrystals. Applied Surface Science, 2018, 440, 553-559.	6.1	2
99	Self-Catalytic Growth of Elementary Semiconductor Nanowires with Controlled Morphology and Crystallographic Orientation. Nano Letters, 2021, 21, 9909-9915.	9.1	2
100	Aluminum Nanotransmission Lines with No Grain Boundaries and No Surface Roughness. Applied Physics Express, 2011, 4, 064104.	2.4	1
101	Organic Electrolyte Based Pulsed Nanoplating and Fabrication of Carbon Nanotube Network Transistors. Japanese Journal of Applied Physics, 2011, 50, 06GE11.	1.5	1
102	Atomic-scale Investigation of Interface Between Graphene Monolayer and Ge(110). Journal of the Korean Physical Society, 2019, 74, 241-244.	0.7	1
103	Methane-Mediated Vapor Transport Growth of Monolayer WSe2 Crystals. Nanomaterials, 2019, 9, 1642.	4.1	1
104	Millimeter-Scale Growth of Single-Oriented Graphene on a Palladium Silicide Amorphous Film. ACS Nano, 2019, 13, 1127-1135.	14.6	1
105	Synthesized Aluminum Nanowires for Future Interconnects [Nanopackaging]. IEEE Nanotechnology Magazine, 2012, 6, 24-26.	1.3	0
106	Water-induced room-temperature transformation of straight Ge/Si core/shell nanowires into circular silica nanotubes. CrystEngComm, 2015, 17, 6142-6148.	2.6	0