

# Young-Kyun Kwon

## List of Publications by Year in descending order

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92  
papers

6,118  
citations

218381

26  
h-index

69108

77  
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96  
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96  
docs citations

96  
times ranked

7415  
citing authors

#	ARTICLE	IF	CITATIONS
1	Unusually High Thermal Conductivity of Carbon Nanotubes. <i>Physical Review Letters</i> , 2000, 84, 4613-4616.	2.9	2,775
2	Effect of van der Waals Interactions on the Raman Modes in Single Walled Carbon Nanotubes. <i>Physical Review Letters</i> , 2001, 86, 3895-3898.	2.9	340
3	Hydrogen adsorption on boron nitride nanotubes: A path to room-temperature hydrogen storage. <i>Physical Review B</i> , 2004, 69, .	1.1	243
4	Electronic and structural properties of multiwall carbon nanotubes. <i>Physical Review B</i> , 1998, 58, R16001-R16004.	1.1	241
5	Linker-free directed assembly of high-performance integrated devices based on nanotubes and nanowires. <i>Nature Nanotechnology</i> , 2006, 1, 66-71.	15.6	197
6	Thermal Contraction of Carbon Fullerenes and Nanotubes. <i>Physical Review Letters</i> , 2004, 92, 015901.	2.9	195
7	Fractional Quantum Conductance in Carbon Nanotubes. <i>Physical Review Letters</i> , 2000, 84, 1974-1977.	2.9	166
8	“Bucky Shuttle”-Memory Device: Synthetic Approach and Molecular Dynamics Simulations. <i>Physical Review Letters</i> , 1999, 82, 1470-1473.	2.9	155
9	Effect of intertube coupling on the electronic structure of carbon nanotube ropes. <i>Physical Review B</i> , 1998, 58, R13314-R13317.	1.1	130
10	Morphology and Stability of Growing Multiwall Carbon Nanotubes. <i>Physical Review Letters</i> , 1997, 79, 2065-2068.	2.9	106
11	Microscopic Formation Mechanism of Nanotube Peapods. <i>Physical Review Letters</i> , 2002, 88, 185502.	2.9	101
12	Electronic and structural properties of carbon nanohorns. <i>Physical Review B</i> , 2000, 62, R2291-R2294.	1.1	90
13	Hydrogen storage by physisorption: beyond carbon. <i>Solid State Communications</i> , 2004, 129, 769-773.	0.9	86
14	Nanoscale Spin-State Ordering in $\text{LaCoO}_3$ Epitaxial Thin Films. <i>Chemistry of Materials</i> , 2014, 26, 2496-2501.	3.2	74
15	Universal Parameters for Carbon Nanotube Network-Based Sensors: Can Nanotube Sensors Be Reproducible?. <i>ACS Nano</i> , 2011, 5, 4373-4379.	7.3	62
16	Voltage-switchable photocurrents in single-walled carbon nanotube-silicon junctions for analog and digital optoelectronics. <i>Nature Photonics</i> , 2014, 8, 239-243.	15.6	61
17	Electronic structures of one-dimensional metal-molecule hybrid chains studied using scanning tunneling microscopy and density functional theory. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 7304.	1.3	51
18	Elucidating the origin of electroplasticity in metallic materials. <i>Applied Materials Today</i> , 2020, 21, 100874.	2.3	50

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19	Oriental Melting in Carbon Nanotube Ropes. <i>Physical Review Letters</i> , 2000, 84, 1483-1486.	2.9	45
20	Characterization of spatial correlations in carbon nanotubes-modelling studies. <i>Journal of Alloys and Compounds</i> , 2001, 328, 222-225.	2.8	45
21	Nanowire and nanotube transistors for lab-on-a-chip applications. <i>Lab on A Chip</i> , 2009, 9, 2267.	3.1	44
22	Architected van der Waals epitaxy of ZnO nanostructures on hexagonal BN. <i>NPG Asia Materials</i> , 2014, 6, e145-e145.	3.8	43
23	Reactivity of different surface sites with silicon chlorides during atomic layer deposition of silicon nitride. <i>RSC Advances</i> , 2016, 6, 68515-68524.	1.7	33
24	Textured Network Devices: Overcoming Fundamental Limitations of Nanotube/Nanowire Network-Based Devices. <i>Small</i> , 2009, 5, 1642-1648.	5.2	30
25	Designing rigid carbon foams. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 334220.	0.7	29
26	Diameter Selective Growth of Vertically Aligned Single Walled Carbon Nanotubes and Study on Their Growth Mechanism. <i>Journal of Physical Chemistry C</i> , 2008, 112, 17143-17147.	1.5	28
27	Unusually High Thermal Conductivity in Carbon Nanotubes. , 2006, , 227-265.		27
28	Bonding and Energy Dissipation in a Nanohook Assembly. <i>Physical Review Letters</i> , 2003, 91, 165503.	2.9	26
29	Electrical transport in small bundles of single-walled carbon nanotubes: Intertube interaction and effects of tube deformation. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	26
30	Surface reaction of silicon chlorides during atomic layer deposition of silicon nitride. <i>Applied Surface Science</i> , 2018, 432, 127-131.	3.1	25
31	High-performance H <sub>2</sub> S detection by redox reactions in semiconducting carbon nanotube-based devices. <i>Analyst</i> , The, 2013, 138, 7206.	1.7	24
32	Molecular adsorption study of nicotine and caffeine on single-walled carbon nanotubes from first principles. <i>Chemical Physics Letters</i> , 2013, 580, 57-61.	1.2	23
33	Extremely high electrical conductance of microporous 3D graphene-like zeolite-templated carbon framework. <i>Scientific Reports</i> , 2017, 7, 11460.	1.6	23
34	Band gap control of small bundles of carbon nanotubes using applied electric fields: A density functional theory study. <i>Applied Physics Letters</i> , 2010, 97, 063113.	1.5	22
35	Ab initio study of aspirin adsorption on single-walled carbon and carbon nitride nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 8076-8081.	1.3	21
36	Promoting the Reversible Oxygen Redox Reaction of Excess Layered Cathode Materials with Surface Vanadium Cation Doping. <i>Advanced Science</i> , 2021, 8, 2003013.	5.6	21

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37	Closing the Surface Bandgap in Thin Bi <sub>2</sub> Se <sub>3</sub> /Graphene Heterostructures. ACS Nano, 2019, 13, 3931-3939.	7.3	20
38	Unique phonon modes of a CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> hybrid perovskite film without the influence of defect structures: an attempt toward a novel THz-based application. NPG Asia Materials, 2020, 12, .	3.8	20
39	Entropy-Based Analysis and Bioinformatics-Inspired Integration of Global Economic Information Transfer. PLoS ONE, 2013, 8, e51986.	1.1	20
40	Enhanced mechanical property of Fe-Al alloy due to Mn insertion: ab initio study. Journal of Alloys and Compounds, 2014, 583, 295-299.	2.8	19
41	Self-Clusterized Glycines on Single-Walled Carbon Nanotubes for Alcohol Sensing. Journal of Physical Chemistry C, 2008, 112, 629-634.	1.5	18
42	Ultra-low Energy Phase Change Memory with Improved Thermal Stability by Tailoring the Local Structure through Ag Doping. ACS Applied Materials & Interfaces, 2020, 12, 37285-37294.	4.0	18
43	Selective Formation of the Li <sub>4</sub> Mn <sub>5</sub> O <sub>12</sub> Surface Spinel Phase in Sulfur-Doped Li-Excess-Layered Cathode Materials for Improved Cycle Life. ACS Sustainable Chemistry and Engineering, 2020, 8, 8037-8048.	3.2	17
44	Low Lattice Thermal Conductivity of a Two-Dimensional Phosphorene Oxide. Scientific Reports, 2019, 9, 5149.	1.6	16
45	Symmetry Dictated Grain Boundary State in a Two-Dimensional Topological Insulator. Nano Letters, 2020, 20, 5837-5843.	4.5	16
46	Hydrogen Adsorption on sp <sup>2</sup> -Bonded Carbon Structures: Ab-initio Study. Journal of the Korean Physical Society, 2010, 57, 778-786.	0.3	16
47	Structure Controlled Synthesis of Vertically Aligned Carbon Nanotubes Using Thermal Chemical Vapor Deposition Process. Journal of Heat Transfer, 2011, 133, .	1.2	15
48	Rigid unit modes in carbon systems: Origin of negative thermal expansion. Physical Review B, 2015, 92, .	1.4	15
49	Unveiling giant hidden Rashba effects in two-dimensional Si <sub>2</sub> Bi <sub>2</sub> . Npj 2D Materials and Applications, 2020, 4, .	3.9	14
50	Do Carbon Nanotubes Spin When Bundled?. Journal of Materials Research, 1998, 13, 2363-2367.	1.2	13
51	Tunable charge donation and spin polarization of metal adsorbates on graphene using an applied electric field. Physical Review B, 2010, 82, .	1.1	13
52	Laser irradiation-induced modification of the amorphous phase in GeTe films: the role of intermediate Ge-Te bonding in the crystallization mechanism. Journal of Materials Chemistry C, 2015, 3, 9393-9402.	2.7	12
53	Reactivity of different nitrating agents with chlorine-terminated surface during atomic layer deposition of silicon nitride. Applied Surface Science, 2021, 535, 147727.	3.1	12
54	Giant magneto-conductance in twisted carbon nanotubes. Europhysics Letters, 2002, 59, 75-80.	0.7	11

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55	Glassy materials as a hydrogen storage medium: Density functional calculations. <i>Physical Review B</i> , 2005, 71, .	1.1	11
56	Unusual terahertz-wave absorptions in $\sqrt{2}\sqrt{2}$ -mixed-phase FAPbI <sub>3</sub> single crystals: interfacial phonon vibration modes. <i>NPG Asia Materials</i> , 2021, 13, .	3.8	10
57	Liquid metal nanodroplet dynamics inside nanocontainers. <i>Scientific Reports</i> , 2013, 3, 2588.	1.6	9
58	Modulation of optical and electrical properties in hexagonal boron nitride by defects induced via oxygen plasma treatment. <i>2D Materials</i> , 2021, 8, 045041.	2.0	9
59	Kwon, Berber, and Tománek Reply:. <i>Physical Review Letters</i> , 2005, 94, .	2.9	8
60	Effect of bundling on the stability, equilibrium geometry, and electronic structure of $\text{Mo}_6\text{S}_8$ . <i>Physical Review B</i> , 2010, 82, .	1.1	8
61	Phase-change mechanism and role of each element in Ag-In-Sb-Te: Chemical bond evolution. <i>Applied Surface Science</i> , 2021, 544, 148838.	3.1	8
62	Large-scale assembly of $\alpha$ -type-switchable™ field effect transistors based on carbon nanotubes and nanoparticles. <i>Nanotechnology</i> , 2010, 21, 345301.	1.3	7
63	First-principles investigation on dimerization of metal-encapsulated gold nanoclusters. <i>RSC Advances</i> , 2014, 4, 192-198.	1.7	7
64	Strain effects on phase transitions in transition metal dichalcogenides. <i>Current Applied Physics</i> , 2019, 19, 690-696.	1.1	7
65	Morphology transformation of patterned, uniform and faceted GaN microcrystals. <i>Journal Physics D: Applied Physics</i> , 2008, 41, 015406.	1.3	6
66	Linear and Hexagonal Porous Structures of an Organic Charge Acceptor Hexaaza-triphenylene-hexacarbonitrile on Au(111) with CNA···CN Dipolar Interactions. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21371-21375.	1.5	6
67	Is hexagonal boron nitride always good as a substrate for carbon nanotube-based devices?. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 5072-5077.	1.3	6
68	A $\alpha$ -non-dynamical way of describing room-temperature paramagnetic manganese oxide. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 15932-15939.	1.3	6
69	Interplay between structural and electronic properties of bundled $\text{Mo}_6\text{S}_9$ nanowires. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 505301.	0.7	5
70	Adsorption properties of chalcogen atoms on a golden buckyball $\text{Au}_{16}$ from first principles. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 505301.	0.7	5
71	Understanding luminescence properties of grain boundaries in GaN thin films and their atomistic origin. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	5
72	Two-dimensional Dirac fermions on oxidized black phosphorus. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 24206-24211.	1.3	5

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73	Phase-change like process through bond switching in distorted and resonantly bonded crystal. Scientific Reports, 2019, 9, 12816.	1.6	4
74	Enhanced reliability of phase-change memory <i>via</i> modulation of local structure and chemical bonding by incorporating carbon in Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> . RSC Advances, 2021, 11, 22479-22488.	1.7	4
75	Effects of paramagnetic fluctuations on the thermochemistry of MnO(100) surfaces in the oxygen evolution reaction. Physical Chemistry Chemical Physics, 2021, 23, 859-865.	1.3	4
76	Role of anisotropic Coulomb interactions in the superexchange coupling of mixed-valent $\text{MnO}_4$ . Physical Review B, 2021, 104, .	1.1	4
77	Ethylene oxides as hydrogen storage material with pockets in the electronic binding energy distribution. Physical Review B, 2009, 79, .	1.1	3
78	Binding properties of a nitrogen atom onto an anionic golden fullerene. Chemical Physics Letters, 2012, 545, 83-87.	1.2	3
79	The determining factor of a preferred orientation of GaN domains grown on m-plane sapphire substrates. Scientific Reports, 2015, 5, 16236.	1.6	3
80	Enhancing mechanical toughness of aluminum surfaces by nano-boron implantation: An ab initio study. Chemical Physics Letters, 2015, 620, 25-28.	1.2	3
81	Oxidation-enhanced thermoelectric efficiency in a two-dimensional phosphorene oxide. Scientific Reports, 2021, 11, 18525.	1.6	3
82	Transition Metal-Free Half-Metallicity in Two-Dimensional Gallium Nitride with a Quasi-Flat Band. Journal of Physical Chemistry Letters, 2021, 12, 12150-12156.	2.1	3
83	The potential of carbon-based memory systems. , 0, , .		2
84	Latent Order in High-Angle Grain Boundary of GaN. Scientific Reports, 2018, 8, 4647.	1.6	2
85	Comparative evaluation of the polynomial and spline fitting methods for the B0 correction of CEST MRI data acquired from human brains. International Journal of Imaging Systems and Technology, 2019, 29, 272-282.	2.7	2
86	Simple linear response model for predicting energy band alignment of two-dimensional vertical heterostructures. Physical Review B, 2021, 103, .	1.1	2
87	Electronic properties of carbon nanotubes partially unzipped by oxygenation or fluorination. Solid State Communications, 2013, 167, 27-30.	0.9	1
88	First-principles study on the adsorption properties of phenylalanine on carbon graphitic structures. Journal of the Korean Physical Society, 2015, 67, 2020-2025.	0.3	1
89	Suppression of the Hybridization of Surface States and Transport Property in Ultrathin Bi <sub>2</sub> Se <sub>3</sub> /graphene Heterostructure. Applied Science and Convergence Technology, 2019, 28, 207-212.	0.3	1
90	Oxygen-mediated selection of Cu crystallographic orientation for growth of single-crystalline graphene. Applied Surface Science, 2022, 584, 152585.	3.1	1

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91	Strain Induced Topological Phase Transition in $\text{Si}_2\text{Bi}_2$ : First-Principles Study. New Physics: Sae Mulli, 2021, 71, 218-224.	0.0	0
92	Current Status of Integrated Science in College Liberal Education. New Physics: Sae Mulli, 2022, 72, 125-134.	0.0	0