Moon Kim

List of Publications by Year in descending order

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129	8,251	38	88
papers	citations	h-index	g-index
131	131	131	13082
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	MoS ₂ transistors with 1-nanometer gate lengths. Science, 2016, 354, 99-102.	6.0	1,140
2	Field-effect transistors made from solution-grown two-dimensional tellurene. Nature Electronics, 2018, 1, 228-236.	13.1	591
3	Atomically thin resonant tunnel diodes built from synthetic van der Waals heterostructures. Nature Communications, 2015, 6, 7311.	5.8	382
4	Manganese Doping of Monolayer MoS ₂ : The Substrate Is Critical. Nano Letters, 2015, 15, 6586-6591.	4.5	357
5	Highly Scalable, Atomically Thin WSe ₂ Grown <i>via</i> Metal–Organic Chemical Vapor Deposition. ACS Nano, 2015, 9, 2080-2087.	7.3	339
6	Covalent Nitrogen Doping and Compressive Strain in MoS ₂ by Remote N ₂ Plasma Exposure. Nano Letters, 2016, 16, 5437-5443.	4.5	323
7	Harvesting electrical energy from carbon nanotube yarn twist. Science, 2017, 357, 773-778.	6.0	306
8	Pd–Ir Core–Shell Nanocubes: A Type of Highly Efficient and Versatile Peroxidase Mimic. ACS Nano, 2015, 9, 9994-10004.	7.3	254
9	Direct Synthesis of van der Waals Solids. ACS Nano, 2014, 8, 3715-3723.	7.3	253
10	Conformal Al2O3 dielectric layer deposited by atomic layer deposition for graphene-based nanoelectronics. Applied Physics Letters, 2008, 92, .	1.5	245
11	Cowpea Mosaic Virus as a Scaffold for 3-D Patterning of Gold Nanoparticles. Nano Letters, 2004, 4, 867-870.	4.5	209
12	Atomic Layer-by-Layer Deposition of Platinum on Palladium Octahedra for Enhanced Catalysts toward the Oxygen Reduction Reaction. ACS Nano, 2015, 9, 2635-2647.	7.3	209
13	Ru Nanoframes with an fcc Structure and Enhanced Catalytic Properties. Nano Letters, 2016, 16, 2812-2817.	4.5	187
14	Giant polarization in super-tetragonal thin films through interphase strain. Science, 2018, 361, 494-497.	6.0	173
15	MoS2 functionalization for ultra-thin atomic layer deposited dielectrics. Applied Physics Letters, 2014, 104, .	1.5	171
16	Kinetic Stability of Bulk LiNiO ₂ and Surface Degradation by Oxygen Evolution in LiNiO ₂ â€Based Cathode Materials. Advanced Energy Materials, 2019, 9, 1802586.	10.2	160
17	Atomically Thin Heterostructures Based on Single-Layer Tungsten Diselenide and Graphene. Nano Letters, 2014, 14, 6936-6941.	4.5	132
18	Raman response and transport properties of tellurium atomic chains encapsulated in nanotubes. Nature Electronics, 2020, 3, 141-147.	13.1	126

#	Article	IF	Citations
19	Nickel–Platinum Nanoparticles as Peroxidase Mimics with a Record High Catalytic Efficiency. Journal of the American Chemical Society, 2021, 143, 2660-2664.	6.6	124
20	Defects and Surface Structural Stability of MoTe ₂ Under Vacuum Annealing. ACS Nano, 2017, 11, 11005-11014.	7.3	117
21	Pt–Ni octahedral nanocrystals as a class of highly active electrocatalysts toward the hydrogen evolution reaction in an alkaline electrolyte. Journal of Materials Chemistry A, 2016, 4, 12392-12397.	5.2	103
22	Tailoring Renal Clearance and Tumor Targeting of Ultrasmall Metal Nanoparticles with Particle Density. Angewandte Chemie - International Edition, 2016, 55, 16039-16043.	7.2	92
23	Rapid Selective Etching of PMMA Residues from Transferred Graphene by Carbon Dioxide. Journal of Physical Chemistry C, 2013, 117, 23000-23008.	1.5	89
24	Synthesis of Pt–Ni Octahedra in Continuous-Flow Droplet Reactors for the Scalable Production of Highly Active Catalysts toward Oxygen Reduction. Nano Letters, 2016, 16, 3850-3857.	4.5	86
25	Controllable growth of layered selenide and telluride heterostructures and superlattices using molecular beam epitaxy. Journal of Materials Research, 2016, 31, 900-910.	1.2	85
26	Remote heteroepitaxy of GaN microrod heterostructures for deformable light-emitting diodes and wafer recycle. Science Advances, 2020, 6, eaaz5180.	4.7	80
27	Photochemical Deposition of Highly Dispersed Pt Nanoparticles on Porous CeO ₂ Nanofibers for the Waterâ€Gas Shift Reaction. Advanced Functional Materials, 2015, 25, 4153-4162.	7.8	75
28	Interface Chemistry of Contact Metals and Ferromagnets on the Topological Insulator Bi ₂ Se ₃ . Journal of Physical Chemistry C, 2017, 121, 23551-23563.	1.5	71
29	Highâ∈Mobility Helical Tellurium Fieldâ€Effect Transistors Enabled by Transferâ€Free, Lowâ€Temperature Direct Growth. Advanced Materials, 2018, 30, e1803109.	11.1	71
30	Tailoring MWCNTs and \hat{I}^2 -Cyclodextrin for Sensitive Detection of Acetaminophen and Estrogen. ACS Applied Materials & Samp; Interfaces, 2018, 10, 21411-21427.	4.0	66
31	New Mo ₆ Te ₆ Subâ€Nanometerâ€Diameter Nanowire Phase from 2Hâ€MoTe ₂ . Advanced Materials, 2017, 29, 1606264.	11.1	64
32	Stable and Active Oxidation Catalysis by Cooperative Lattice Oxygen Redox on SmMn ₂ O ₅ Mullite Surface. Journal of the American Chemical Society, 2019, 141, 10722-10728.	6.6	64
33	Studies of two-dimensional h-BN and MoS2 for potential diffusion barrier application in copper interconnect technology. Npj 2D Materials and Applications, 2017, 1, .	3.9	57
34	Coherent Interlayer Tunneling and Negative Differential Resistance with High Current Density in Double Bilayer Graphene–WSe ₂ Heterostructures. Nano Letters, 2017, 17, 3919-3925.	4.5	53
35	Atomically Controlled Tunable Doping in Highâ€Performance WSe ₂ Devices. Advanced Electronic Materials, 2020, 6, 1901304.	2.6	46
36	Morphology-Invariant Metallic Nanoparticles with Tunable Plasmonic Properties. ACS Nano, 2021, 15, 2428-2438.	7.3	44

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37	Regulated Interfacial Thermal Conductance between Cu and Diamond by a TiC Interlayer for Thermal Management Applications. ACS Applied Materials & Samp; Interfaces, 2019, 11, 26507-26517.	4.0	41
38	High stability of ultra-small and isolated gold nanoparticles in metal–organic framework materials. Journal of Materials Chemistry A, 2019, 7, 17536-17546.	5.2	41
39	Strainâ€Engineered Anisotropic Optical and Electrical Properties in 2D Chiralâ€Chain Tellurium. Advanced Materials, 2020, 32, e2002342.	11.1	40
40	Template Regeneration in Galvanic Replacement: A Route to Highly Diverse Hollow Nanostructures. ACS Nano, 2020, 14, 791-801.	7.3	38
41	Fermi Level Manipulation through Native Doping in the Topological Insulator Bi ₂ Se ₃ . ACS Nano, 2018, 12, 6310-6318.	7.3	37
42	Atomic and electronic structure of Lomer dislocations at CdTe bicrystal interface. Scientific Reports, 2016, 6, 27009.	1.6	35
43	Enhancing Interconnect Reliability and Performance by Converting Tantalum to 2D Layered Tantalum Sulfide at Low Temperature. Advanced Materials, 2019, 31, e1902397.	11.1	35
44	Low temperature synthesis of graphite on Ni films using inductively coupled plasma enhanced CVD. Journal of Materials Chemistry C, 2015, 3, 5192-5198.	2.7	34
45	Indium segregation in N-polar InGaN quantum wells evidenced by energy dispersive X-ray spectroscopy and atom probe tomography. Applied Physics Letters, 2017, 110, .	1.5	34
46	Structural effect of two-dimensional BNNS on grain growth suppressing behaviors in Al-matrix nanocomposites. Scientific Reports, 2018, 8, 1614.	1.6	33
47	Strong Second Harmonic Generation in a Tungsten Bronze Oxide by Enhancing Local Structural Distortion. Journal of the American Chemical Society, 2020, 142, 7480-7486.	6.6	33
48	Solution synthesis of few-layer 2H MX $<$ sub $>$ 2 $<$ /sub $>$ (M = Mo, W; X = S, Se). Journal of Materials Chemistry C, 2017, 5, 2859-2864.	2.7	32
49	A Mechanistic Study on the Nucleation and Growth of Au on Pd Seeds with a Cubic or Octahedral Shape. ChemCatChem, 2012, 4, 1668-1674.	1.8	28
50	Tailoring Renal Clearance and Tumor Targeting of Ultrasmall Metal Nanoparticles with Particle Density. Angewandte Chemie, 2016, 128, 16273-16277.	1.6	28
51	Sub-10 nm Tunable Hybrid Dielectric Engineering on MoS ₂ for Two-Dimensional Material-Based Devices. ACS Nano, 2017, 11, 10243-10252.	7.3	28
52	Transferable, flexible white light-emitting diodes of GaN p–n junction microcrystals fabricated by remote epitaxy. Nano Energy, 2021, 86, 106075.	8.2	27
53	Aberration Corrected Electron Microscopy Study of Bimetallic Pd–Pt Nanocrystal: Core–Shell Cubic and Core–Frame Concave Structures. Journal of Physical Chemistry C, 2014, 118, 28876-28882.	1.5	26
54	Surface Energy-Driven Preferential Grain Growth of Metal Halide Perovskites: Effects of Nanoimprint Lithography Beyond Direct Patterning. ACS Applied Materials & Samp; Interfaces, 2021, 13, 5368-5378.	4.0	26

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55	Selective-Area Remote Epitaxy of ZnO Microrods Using Multilayer–Monolayer-Patterned Graphene for Transferable and Flexible Device Fabrications. ACS Applied Nano Materials, 2020, 3, 8920-8930.	2.4	25
56	Effect of diamond surface chemistry and structure on the interfacial microstructure and properties of Al/diamond composites. RSC Advances, 2016, 6, 67252-67259.	1.7	24
57	MoS ₂ for Enhanced Electrical Performance of Ultrathin Copper Films. ACS Applied Materials & Samp; Interfaces, 2019, 11, 28345-28351.	4.0	24
58	Engineering the Palladium–WSe2 Interface Chemistry for Field Effect Transistors with High-Performance Hole Contacts. ACS Applied Nano Materials, 2019, 2, 75-88.	2.4	24
59	Atomic Layer Deposition of Layered Boron Nitride for Large-Area 2D Electronics. ACS Applied Materials & Lamp; Interfaces, 2020, 12, 36688-36694.	4.0	22
60	Enhancement in external quantum efficiency of AlGalnP red \hat{l}_4 -LED using chemical solution treatment process. Scientific Reports, 2021, 11, 4535.	1.6	22
61	Creating a single twin boundary between two CdTe (111) wafers with controlled rotation angle by wafer bonding. Applied Physics Letters, 2013, 103 , .	1.5	21
62	HIGHLY REPRODUCIBLE SINGLE POLYANILINE NANOWIRE USING ELECTROPHORESIS METHOD. Nano, 2008, 03, 75-82.	0.5	19
63	Metal-organic chemical vapor deposition of high quality, high indium composition N-polar InGaN layers for tunnel devices. Journal of Applied Physics, 2017, 121, 185707.	1.1	18
64	Stable and Bright Electroluminescent Devices utilizing Emissive OD Perovskite Nanocrystals Incorporated in a 3D CsPbBr ₃ Matrix. Advanced Materials, 2022, 34, .	11.1	18
65	Formation of hexagonal boron nitride on graphene-covered copper surfaces. Journal of Materials Research, 2016, 31, 945-958.	1.2	17
66	Metal–Organic–Inorganic Nanocomposite Thermal Interface Materials with Ultralow Thermal Resistances. ACS Applied Materials & Samp; Interfaces, 2017, 9, 10120-10127.	4.0	17
67	Metal-organic chemical vapor deposition of N-polar InN quantum dots and thin films on vicinal GaN. Journal of Applied Physics, 2018, 123, .	1.1	17
68	Stiffness measurement of nanosized liposomes using solidâ€state nanopore sensor with automated recapturing platform. Electrophoresis, 2019, 40, 1337-1344.	1.3	17
69	Epitaxial, electroâ€optically active barium titanate thin films on silicon by chemical solution deposition. Journal of the American Ceramic Society, 2020, 103, 1209-1218.	1.9	17
70	Sequential Plasma-Activated Bonding Mechanism of Silicon/Silicon Wafers. Journal of Microelectromechanical Systems, 2010, 19, 840-848.	1.7	16
71	Multiple consecutive recapture of rigid nanoparticles using a solidâ€state nanopore sensor. Electrophoresis, 2018, 39, 833-843.	1.3	16
72	Aluminum carbide hydrolysis induced degradation of thermal conductivity and tensile strength in diamond/aluminum composite. Journal of Composite Materials, 2018, 52, 2709-2717.	1.2	14

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73	Deformation behavior of nanocrystalline and ultrafine-grained CoCrCuFeNi high-entropy alloys. Journal of Materials Research, 2019, 34, 720-731.	1.2	14
74	Engineering Multilayered Nanocrystal Solids with Enhanced Optical Properties Using Metal Oxides for Photonic Applications. ACS Applied Nano Materials, 2018, 1, 6782-6789.	2.4	13
75	Piezoelectric modulation of nonlinear optical response in BaTiO3 thin film. Applied Physics Letters, 2018, 113, 132902.	1.5	13
76	Fabrication of hexagonal boron nitride based 2D nanopore sensor for the assessment of electroâ€chemical responsiveness of human serum transferrin protein. Electrophoresis, 2020, 41, 630-637.	1.3	13
77	Dielectric dipole mitigated Schottky barrier height tuning using atomic layer deposited aluminum oxide for contact resistance reduction. Applied Physics Letters, 2011, 99, 102108.	1.5	12
78	Pd–Ru Bimetallic Nanocrystals with a Porous Structure and Their Enhanced Catalytic Properties. Particle and Particle Systems Characterization, 2018, 35, 1700386.	1.2	12
79	Quasi-CW Lasing from Directly Patterned and Encapsulated Perovskite Cavity at 260 K. ACS Photonics, 2022, 9, 1984-1991.	3.2	12
80	Al2O3 on WSe2 by ozone based atomic layer deposition: Nucleation and interface study. APL Materials, 2017, 5, .	2.2	11
81	Controllable Ferromagnetism in Super-tetragonal PbTiO ₃ through Strain Engineering. Nano Letters, 2020, 20, 881-886.	4.5	11
82	Modification of the Electronic Transport in Atomically Thin WSe ₂ by Oxidation. Advanced Materials Interfaces, 2020, 7, 2000422.	1.9	11
83	Quantitative Experimental Analysis of Schottky Barriers and Poole–Frenkel Emission in Carbon Nanotube Devices. IEEE Nanotechnology Magazine, 2009, 8, 355-360.	1.1	10
84	Annealing Temperature-Dependent Interfacial Behavior of Sequentially Plasma-Activated Silicon Bonded Wafers. Journal of Microelectromechanical Systems, 2011, 20, 17-20.	1.7	10
85	Low temperature (100 °C) atomic layer deposited-ZrO2 for recessed gate GaN HEMTs on Si. Applied Physics Letters, 2017, 111, .	1.5	10
86	Cubic crystalline erbium oxide growth on $GaN(0001)$ by atomic layer deposition. Journal of Applied Physics, 2017, 122, .	1.1	10
87	Stabilization of a monolayer tellurene phase at CdTe interfaces. Nanoscale, 2019, 11, 14698-14706.	2.8	10
88	Detection of nucleotides in hydrated ssDNA via 2D hâ€BN nanopore with ionicâ€liquid/salt–water interface. Electrophoresis, 2021, 42, 991-1002.	1.3	10
89	Hexagonal to monoclinic phase transformation in Eu2O3 thin films grown on GaN (0001). Applied Physics Letters, 2017, 111 , .	1.5	9
90	Composition and annealing effects on the linear electroâ€optic response of solutionâ€deposited barium strontium titanate. Journal of the American Ceramic Society, 2020, 103, 5700-5705.	1.9	9

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91	Aqueous Synthesis of Pd–M (M = Pd, Pt, and Au) Decahedra with Concave Facets for Catalytic Applications. Topics in Catalysis, 2020, 63, 664-672.	1.3	9
92	Current anisotropy of carbon nanotube diodes: Voltage and work function dependence. Applied Physics Letters, 2010, 96, 263107.	1.5	8
93	Hydrogenated amorphous silicon nanowire transistors with Schottky barrier source/drain junctions. Applied Physics Letters, 2010, 97, .	1.5	8
94	Luminescent LaF3:Ce-doped organically modified nanoporous silica xerogels. Journal of Applied Physics, 2013, 113, .	1.1	8
95	Inter-level carrier dynamics and photocurrent generation in large band gap quantum dot solar cell by multistep growth. Solar Energy Materials and Solar Cells, 2017, 171, 142-147.	3.0	8
96	Parallel Nanoimprint Forming of One-Dimensional Chiral Semiconductor for Strain-Engineered Optical Properties. Nano-Micro Letters, 2020, 12, 160.	14.4	8
97	Electro-optic response in epitaxially stabilized orthorhombic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>m</mml:mi><mml:mi>mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:mrow></mml:math> . Physical Review Materials, 2021, 5	<mml:mn< td=""><td>>2</td></mml:mn<>	>2
98	Position-controlled remote epitaxy of ZnO for mass-transfer of as-deployed semiconductor microarrays. APL Materials, 2021, 9, .	2,2	8
99	Monolithic integration of transition metal oxide multiple quantum wells on silicon (001). Journal of Applied Physics, 2019, 125, 155302.	1.1	7
100	Three-Dimensional Integration of Functional Oxides and Crystalline Silicon for Optical Neuromorphic Computing Using Nanometer-Scale Oxygen Scavenging Barriers. ACS Applied Nano Materials, 2021, 4, 2153-2159.	2.4	7
101	Facet-selective morphology-controlled remote epitaxy of ZnO microcrystals via wet chemical synthesis. Scientific Reports, 2021, 11, 22697.	1.6	7
102	Role of template layers for heteroepitaxial growth of lanthanum oxide on GaN(0001) via atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	5
103	Understanding the Impact of Wall Thickness on Thermal Stability of Silver–Gold Nanocages. Journal of Physical Chemistry C, 2022, 126, 7337-7345.	1.5	5
104	Thickness and Sphericity Control of Hollow Hard Silica Shells through Iron (III) Doping: Low Threshold Ultrasound Contrast Agents. Advanced Functional Materials, 2019, 29, 1900893.	7.8	4
105	Growth and Structure of Strong Pockels Material Strontium Barium Niobate on SrTiO 3 and Si by Molecular Beam Epitaxy. Advanced Photonics Research, 2021, 2, 2100111.	1.7	4
106	DIRECT TWO-DIMENSIONAL ELECTRICAL MEASUREMENT USING POINT PROBING FOR DOPING AREA IDENTIFICATION OF NANODEVICE IN TEM. Nano, 2010, 05, 61-66.	0.5	3
107	Formation of graphene atop a Si adlayer on the C-face of SiC. Physical Review Materials, 2019, 3, .	0.9	3
108	Atomic Scale Study of Lomer-Cottrell and Hirth Lock Dislocations in CdTe. Microscopy and Microanalysis, 2015, 21, 2087-2088.	0.2	2

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109	In Situ Heating Study of 2H-MoTe2 to Mo6Te6 Nanowire Phase Transition. Microscopy and Microanalysis, 2017, 23, 1764-1765.	0.2	2
110	Atomic-Resolution Study of Grain Boundaries in CdTe Using Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 102-103.	0.2	2
111	Indocyanine green modified silica shells for colon tumor marking. Applied Surface Science, 2020, 499, 143885.	3.1	2
112	Optimization of Digital Growth of Thick N-Polar InGaN by MOCVD. Journal of Electronic Materials, 2020, 49, 3450-3454.	1.0	2
113	Novel Polymorphic Phase of BaCu2As2: Impact of Flux for New Phase Formation in Crystal Growth. Crystal Growth and Design, 2020, 20, 5922-5930.	1.4	2
114	Surface energy induced patterning of polymer nanostructures for cancer diagnosis and therapy. , 2007, , .		1
115	Creating Single Boundary between Two CdTe (111) Wafers with Controlled Orientation by Wafer Bonding. Microscopy and Microanalysis, 2014, 20, 516-517.	0.2	1
116	Aberration Corrected High Angle Annular Dark Field (HAADF) Scanning Transmission Electron Microscopy (STEM) and In Situ Transmission Electron Microscopy (TEM) Study of Transition Metal Dichalcogenides (TMDs). Microscopy and Microanalysis, 2015, 21, 431-432.	0.2	1
117	Simple Specimen Preparation Method for In Situ Heating Experiments. Microscopy and Microanalysis, 2016, 22, 132-133.	0.2	1
118	Leveraging First Principles Modeling and Machine Learning for Microscopy Data Inversion. Microscopy and Microanalysis, 2017, 23, 178-179.	0.2	1
119	A Method to Prepare TEM Specimens by Focused Ion Beam Milling for Cu/diamond Composites. Microscopy and Microanalysis, 2018, 24, 838-839.	0.2	1
120	InAs/AlGaAs quantum dots grown by a novel molecular beam epitaxy multistep design for intermediate band solar cells: physical insight into the structure, composition, strain and optical properties. CrystEngComm, 2019, 21, 4644-4652.	1.3	1
121	Thermal mapping of Delphi thermal test dies. , 2011, , .		0
122	Characterization of Poly-Crystalline CdTe Solar Cells Using Aberration-Corrected Transmission Electron Microscope. Microscopy and Microanalysis, 2014, 20, 522-523.	0.2	0
123	In-Situ Studies of Thermal Stability of Core–Frame Cubic Pd–Rh Nanocrystals at Elevated Temperatures. Microscopy and Microanalysis, 2014, 20, 1632-1633.	0.2	0
124	Growth Morphology and Defects in 2D Heterostructures and Interfaces. Microscopy and Microanalysis, 2015, 21, 101-102.	0.2	0
125	A fundamental study of the effects of grain boundaries on performance of poly-crystalline thin film CdTe solar cells. , 2015, , .		0
126	Aberration-Corrected STEM and Tomography of Pd-Pt Nanoparticles: Core-Shell Cubic and Core-Frame Concave Structures. Microscopy and Microanalysis, 2015, 21, 1731-1732.	0.2	0

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#	ARTICLE	IF	CITATION
127	Aberration-Corrected STEM Study of Shape Controlled Metallic Core-Shell Nanoparticles for Catalytic Applications. Microscopy and Microanalysis, 2017, 23, 1852-1853.	0.2	O
128	Probing Nanoscale Local Lattice Strains in Semiconductor Nanostructures and Devices by Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 972-973.	0.2	0
129	Growth and Structure of Strong Pockels Material Strontium Barium Niobate on SrTiO ₃ and Si by Molecular Beam Epitaxy. Advanced Photonics Research, 2021, 2, 2170035.	1.7	O