Moon Kim

List of Publications by Year
in descending order

129 papers	8,251 citations	87888 38 h-index	48315 88 g-index
131 all docs	131 docs citations	131 times ranked	13082 citing authors

#	Article	IF	Citations
1	Understanding the Impact of Wall Thickness on Thermal Stability of Silverâ€“Gold Nanocages. Journal of Physical Chemistry C, 2022, 126, 7337-7345.	3.1	5
2	Quasi-CW Lasing from Directly Patterned and Encapsulated Perovskite Cavity at 260 K. ACS Photonics, 2022, 9, 1984-1991.	6.6	12
3	Stable and Bright Electroluminescent Devices utilizing Emissive 0D Perovskite Nanocrystals Incorporated in a 3D CsPbBr₃ Matrix. Advanced Materials, 2022, 34, .	21.0	18
4	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.	5.0	7
5	Enhancement in external quantum efficiency of AlGaInP red Î¼-LED using chemical solution treatment process. Scientific Reports, 2021, 11, 4535.	3.3	22
6	Detection of nucleotides in hydrated ssDNA via 2D hâ€BN nanopore with ionicâ€liquid/saltâ€“water interface. Electrophoresis, 2021, 42, 991-1002.	2.4	10
7	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>m</mml:mi><mml:mn>2</mml:mn><mml:mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Materials, 2021, 5, .	2.4	8
8	Position-controlled remote epitaxy of ZnO for mass-transfer of as-deployed semiconductor microarrays. APL Materials, 2021, 9, .	5.1	8
9	Transferable, flexible white light-emitting diodes of GaN pâ€“n junction microcrystals fabricated by remote epitaxy. Nano Energy, 2021, 86, 106075.	16.0	27
10	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.	3.6	4
11	Nickelâ€“Platinum Nanoparticles as Peroxidase Mimics with a Record High Catalytic Efficiency. Journal of the American Chemical Society, 2021, 143, 2660-2664.	13.7	124
12	Morphology-Invariant Metallic Nanoparticles with Tunable Plasmonic Properties. ACS Nano, 2021, 15, 2428-2438.	14.6	44
13	Surface Energy-Driven Preferential Grain Growth of Metal Halide Perovskites: Effects of Nanoimprint Lithography Beyond Direct Patterning. ACS Applied Materials & Interfaces, 2021, 13, 5368-5378.	8.0	26
14	Growth and Structure of Strong Pockels Material Strontium Barium Niobate on SrTiO₃ and Si by Molecular Beam Epitaxy. Advanced Photonics Research, 2021, 2, 2170035.	3.6	0
15	Facet-selective morphology-controlled remote epitaxy of ZnO microcrystals via wet chemical synthesis. Scientific Reports, 2021, 11, 22697.	3.3	7
16	Indocyanine green modified silica shells for colon tumor marking. Applied Surface Science, 2020, 499, 143885.	6.1	2
17	Epitaxial, electroâ€optically active barium titanate thin films on silicon by chemical solution deposition. Journal of the American Ceramic Society, 2020, 103, 1209-1218.	3.8	17
18	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.	2.4	13

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19	Optimization of Digital Growth of Thick N-Polar InGaN by MOCVD. Journal of Electronic Materials, 2020, 49, 3450-3454.	2.2	2
20	Controllable Ferromagnetism in Super-tetragonal PbTiO₃ through Strain Engineering. Nano Letters, 2020, 20, 881-886.	9.1	11
21	Atomic Layer Deposition of Layered Boron Nitride for Large-Area 2D Electronics. ACS Applied Materials & Interfaces, 2020, 12, 36688-36694.	8.0	22
22	Modification of the Electronic Transport in Atomically Thin WSe₂ by Oxidation. Advanced Materials Interfaces, 2020, 7, 2000422.	3.7	11
23	Selective-Area Remote Epitaxy of ZnO Microrods Using Multilayerâ€“Monolayer-Patterned Graphene for Transferable and Flexible Device Fabrications. ACS Applied Nano Materials, 2020, 3, 8920-8930.	5.0	25
24	Novel Polymorphic Phase of BaCu2As2: Impact of Flux for New Phase Formation in Crystal Growth. Crystal Growth and Design, 2020, 20, 5922-5930.	3.0	2
25	Parallel Nanoimprint Forming of One-Dimensional Chiral Semiconductor for Strain-Engineered Optical Properties. Nano-Micro Letters, 2020, 12, 160.	27.0	8
26	Atomically Controlled Tunable Doping in Highâ€Performance WSe₂ Devices. Advanced Electronic Materials, 2020, 6, 1901304.	5.1	46
27	Remote heteroepitaxy of GaN microrod heterostructures for deformable light-emitting diodes and wafer recycle. Science Advances, 2020, 6, eaaz5180.	10.3	80
28	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.	3.8	9
29	Strainâ€Engineered Anisotropic Optical and Electrical Properties in 2D Chiralâ€Chain Tellurium. Advanced Materials, 2020, 32, e2002342.	21.0	40
30	Strong Second Harmonic Generation in a Tungsten Bronze Oxide by Enhancing Local Structural Distortion. Journal of the American Chemical Society, 2020, 142, 7480-7486.	13.7	33
31	Raman response and transport properties of tellurium atomic chains encapsulated in nanotubes. Nature Electronics, 2020, 3, 141-147.	26.0	126
32	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, .	2.1	5
33	Template Regeneration in Galvanic Replacement: A Route to Highly Diverse Hollow Nanostructures. ACS Nano, 2020, 14, 791-801.	14.6	38
34	Aqueous Synthesis of Pdâ€“M (Mâ€‰=â€‰Pd, Pt, and Au) Decahedra with Concave Facets for Catalytic Applications. Topics in Catalysis, 2020, 63, 664-672.	2.8	9
35	MoS₂ for Enhanced Electrical Performance of Ultrathin Copper Films. ACS Applied Materials & Interfaces, 2019, 11, 28345-28351.	8.0	24
36	Regulated Interfacial Thermal Conductance between Cu and Diamond by a TiC Interlayer for Thermal Management Applications. ACS Applied Materials & Interfaces, 2019, 11, 26507-26517.	8.0	41

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37	Stabilization of a monolayer tellurene phase at CdTe interfaces. Nanoscale, 2019, 11, 14698-14706.	5.6	10
38	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.	2.6	1
39	High stability of ultra-small and isolated gold nanoparticles in metalâ€“organic framework materials. Journal of Materials Chemistry A, 2019, 7, 17536-17546.	10.3	41
40	Deformation behavior of nanocrystalline and ultrafine-grained CoCrCuFeNi high-entropy alloys. Journal of Materials Research, 2019, 34, 720-731.	2.6	14
41	Stiffness measurement of nanosized liposomes using solidâ€state nanopore sensor with automated recapturing platform. Electrophoresis, 2019, 40, 1337-1344.	2.4	17
42	Stable and Active Oxidation Catalysis by Cooperative Lattice Oxygen Redox on SmMn₂O₅ Mullite Surface. Journal of the American Chemical Society, 2019, 141, 10722-10728.	13.7	64
43	Thickness and Sphericity Control of Hollow Hard Silica Shells through Iron (III) Doping: Low Threshold Ultrasound Contrast Agents. Advanced Functional Materials, 2019, 29, 1900893.	14.9	4
44	Enhancing Interconnect Reliability and Performance by Converting Tantalum to 2D Layered Tantalum Sulfide at Low Temperature. Advanced Materials, 2019, 31, e1902397.	21.0	35
45	Monolithic integration of transition metal oxide multiple quantum wells on silicon (001). Journal of Applied Physics, 2019, 125, 155302.	2.5	7
46	Kinetic Stability of Bulk LiNiO₂ and Surface Degradation by Oxygen Evolution in LiNiO₂â€Based Cathode Materials. Advanced Energy Materials, 2019, 9, 1802586.	19.5	160
47	Engineering the Palladiumâ€“WSe2 Interface Chemistry for Field Effect Transistors with High-Performance Hole Contacts. ACS Applied Nano Materials, 2019, 2, 75-88.	5.0	24
48	Formation of graphene atop a Si adlayer on the C-face of SiC. Physical Review Materials, 2019, 3, .	2.4	3
49	Field-effect transistors made from solution-grown two-dimensional tellurene. Nature Electronics, 2018, 1, 228-236.	26.0	591
50	Metal-organic chemical vapor deposition of N-polar InN quantum dots and thin films on vicinal GaN. Journal of Applied Physics, 2018, 123, .	2.5	17
51	Aluminum carbide hydrolysis induced degradation of thermal conductivity and tensile strength in diamond/aluminum composite. Journal of Composite Materials, 2018, 52, 2709-2717.	2.4	14
52	Structural effect of two-dimensional BNNS on grain growth suppressing behaviors in Al-matrix nanocomposites. Scientific Reports, 2018, 8, 1614.	3.3	33
53	Pdâ€“Ru Bimetallic Nanocrystals with a Porous Structure and Their Enhanced Catalytic Properties. Particle and Particle Systems Characterization, 2018, 35, 1700386.	2.3	12
54	Multiple consecutive recapture of rigid nanoparticles using a solidâ€state nanopore sensor. Electrophoresis, 2018, 39, 833-843.	2.4	16

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55	Probing Nanoscale Local Lattice Strains in Semiconductor Nanostructures and Devices by Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 972-973.	0.4	0
56	Engineering Multilayered Nanocrystal Solids with Enhanced Optical Properties Using Metal Oxides for Photonic Applications. ACS Applied Nano Materials, 2018, 1, 6782-6789.	5.0	13
57	A Method to Prepare TEM Specimens by Focused Ion Beam Milling for Cu/diamond Composites. Microscopy and Microanalysis, 2018, 24, 838-839.	0.4	1
58	Piezoelectric modulation of nonlinear optical response in BaTiO3 thin film. Applied Physics Letters, 2018, 113, 132902.	3.3	13
59	Atomic-Resolution Study of Grain Boundaries in CdTe Using Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 102-103.	0.4	2
60	Tailoring MWCNTs and Î²-Cyclodextrin for Sensitive Detection of Acetaminophen and Estrogen. ACS Applied Materials & Interfaces, 2018, 10, 21411-21427.	8.0	66
61	Highâ€Mobility Helical Tellurium Fieldâ€Effect Transistors Enabled by Transferâ€Free, Lowâ€Temperature Direct Growth. Advanced Materials, 2018, 30, e1803109.	21.0	71
62	Fermi Level Manipulation through Native Doping in the Topological Insulator Bi₂Se₃. ACS Nano, 2018, 12, 6310-6318.	14.6	37
63	Giant polarization in super-tetragonal thin films through interphase strain. Science, 2018, 361, 494-497.	12.6	173
64	Solution synthesis of few-layer 2H MX₂ (M = Mo, W; X = S, Se). Journal of Materials Chemistry C, 2017, 5, 2859-2864.	5.5	32
65	New Mo₆Te₆ Subâ€Nanometerâ€Diameter Nanowire Phase from 2Hâ€MoTe₂. Advanced Materials, 2017, 29, 1606264.	21.0	64
66	Metalâ€“Organicâ€“Inorganic Nanocomposite Thermal Interface Materials with Ultralow Thermal Resistances. ACS Applied Materials & Interfaces, 2017, 9, 10120-10127.	8.0	17
67	Indium segregation in N-polar InGaN quantum wells evidenced by energy dispersive X-ray spectroscopy and atom probe tomography. Applied Physics Letters, 2017, 110, .	3.3	34
68	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.	2.5	18
69	Coherent Interlayer Tunneling and Negative Differential Resistance with High Current Density in Double Bilayer Grapheneâ€“WSe₂ Heterostructures. Nano Letters, 2017, 17, 3919-3925.	9.1	53
70	Interface Chemistry of Contact Metals and Ferromagnets on the Topological Insulator Bi₂Se₃. Journal of Physical Chemistry C, 2017, 121, 23551-23563.	3.1	71
71	Harvesting electrical energy from carbon nanotube yarn twist. Science, 2017, 357, 773-778.	12.6	306
72	Low temperature (100â€‰Â°C) atomic layer deposited-ZrO2 for recessed gate GaN HEMTs on Si. Applied Physics Letters, 2017, 111, .	3.3	10

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73	Sub-10 nm Tunable Hybrid Dielectric Engineering on MoS₂ for Two-Dimensional Material-Based Devices. ACS Nano, 2017, 11, 10243-10252.	14.6	28
74	Al2O3 on WSe2 by ozone based atomic layer deposition: Nucleation and interface study. APL Materials, 2017, 5, .	5.1	11
75	In Situ Heating Study of 2H-MoTe2 to Mo6Te6 Nanowire Phase Transition. Microscopy and Microanalysis, 2017, 23, 1764-1765.	0.4	2
76	Studies of two-dimensional h-BN and MoS2 for potential diffusion barrier application in copper interconnect technology. Npj 2D Materials and Applications, 2017, 1, .	7.9	57
77	Cubic crystalline erbium oxide growth on GaN(0001) by atomic layer deposition. Journal of Applied Physics, 2017, 122, .	2.5	10
78	Hexagonal to monoclinic phase transformation in Eu2O3 thin films grown on GaN (0001). Applied Physics Letters, 2017, 111, .	3.3	9
79	Aberration-Corrected STEM Study of Shape Controlled Metallic Core-Shell Nanoparticles for Catalytic Applications. Microscopy and Microanalysis, 2017, 23, 1852-1853.	0.4	0
80	Defects and Surface Structural Stability of MoTe₂ Under Vacuum Annealing. ACS Nano, 2017, 11, 11005-11014.	14.6	117
81	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.	6.2	8
82	Leveraging First Principles Modeling and Machine Learning for Microscopy Data Inversion. Microscopy and Microanalysis, 2017, 23, 178-179.	0.4	1
83	Ptâ€“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.	10.3	103
84	Effect of diamond surface chemistry and structure on the interfacial microstructure and properties of Al/diamond composites. RSC Advances, 2016, 6, 67252-67259.	3.6	24
85	Simple Specimen Preparation Method for In Situ Heating Experiments. Microscopy and Microanalysis, 2016, 22, 132-133.	0.4	1
86	Atomic and electronic structure of Lomer dislocations at CdTe bicrystal interface. Scientific Reports, 2016, 6, 27009.	3.3	35
87	Formation of hexagonal boron nitride on graphene-covered copper surfaces. Journal of Materials Research, 2016, 31, 945-958.	2.6	17
88	Synthesis of Ptâ€“Ni Octahedra in Continuous-Flow Droplet Reactors for the Scalable Production of Highly Active Catalysts toward Oxygen Reduction. Nano Letters, 2016, 16, 3850-3857.	9.1	86
89	MoS ₂ transistors with 1-nanometer gate lengths. Science, 2016, 354, 99-102.	12.6	1,140
90	Covalent Nitrogen Doping and Compressive Strain in MoS₂ by Remote N₂ Plasma Exposure. Nano Letters, 2016, 16, 5437-5443.	9.1	323

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91	Tailoring Renal Clearance and Tumor Targeting of Ultrasmall Metal Nanoparticles with Particle Density. Angewandte Chemie - International Edition, 2016, 55, 16039-16043.	13.8	92
92	Tailoring Renal Clearance and Tumor Targeting of Ultrasmall Metal Nanoparticles with Particle Density. Angewandte Chemie, 2016, 128, 16273-16277.	2.0	28
93	Controllable growth of layered selenide and telluride heterostructures and superlattices using molecular beam epitaxy. Journal of Materials Research, 2016, 31, 900-910.	2.6	85
94	Ru Nanoframes with an fcc Structure and Enhanced Catalytic Properties. Nano Letters, 2016, 16, 2812-2817.	9.1	187
95	Growth Morphology and Defects in 2D Heterostructures and Interfaces. Microscopy and Microanalysis, 2015, 21, 101-102.	0.4	0
96	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.	0.4	1
97	A fundamental study of the effects of grain boundaries on performance of poly-crystalline thin film CdTe solar cells. , 2015, , .		0
98	Photochemical Deposition of Highly Dispersed Pt Nanoparticles on Porous CeO₂ Nanofibers for the Waterâ€Gas Shift Reaction. Advanced Functional Materials, 2015, 25, 4153-4162.	14.9	75
99	Atomic Scale Study of Lomer-Cottrell and Hirth Lock Dislocations in CdTe. Microscopy and Microanalysis, 2015, 21, 2087-2088.	0.4	2
100	Aberration-Corrected STEM and Tomography of Pd-Pt Nanoparticles: Core-Shell Cubic and Core-Frame Concave Structures. Microscopy and Microanalysis, 2015, 21, 1731-1732.	0.4	0
101	Atomic Layer-by-Layer Deposition of Platinum on Palladium Octahedra for Enhanced Catalysts toward the Oxygen Reduction Reaction. ACS Nano, 2015, 9, 2635-2647.	14.6	209
102	Highly Scalable, Atomically Thin WSe₂ Grown via Metalâ€“Organic Chemical Vapor Deposition. ACS Nano, 2015, 9, 2080-2087.	14.6	339
103	Atomically thin resonant tunnel diodes built from synthetic van der Waals heterostructures. Nature Communications, 2015, 6, 7311.	12.8	382
104	Low temperature synthesis of graphite on Ni films using inductively coupled plasma enhanced CVD. Journal of Materials Chemistry C, 2015, 3, 5192-5198.	5.5	34
105	Manganese Doping of Monolayer MoS₂: The Substrate Is Critical. Nano Letters, 2015, 15, 6586-6591.	9.1	357
106	Pdâ€“Ir Coreâ€“Shell Nanocubes: A Type of Highly Efficient and Versatile Peroxidase Mimic. ACS Nano, 2015, 9, 9994-10004.	14.6	254
107	MoS2 functionalization for ultra-thin atomic layer deposited dielectrics. Applied Physics Letters, 2014, 104, .	3.3	171
108	Direct Synthesis of van der Waals Solids. ACS Nano, 2014, 8, 3715-3723.	14.6	253

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109	Aberration Corrected Electron Microscopy Study of Bimetallic Pdâ€“Pt Nanocrystal: Coreâ€“Shell Cubic and Coreâ€“Frame Concave Structures. Journal of Physical Chemistry C, 2014, 118, 28876-28882.	3.1	26
110	Atomically Thin Heterostructures Based on Single-Layer Tungsten Diselenide and Graphene. Nano Letters, 2014, 14, 6936-6941.	9.1	132
111	Creating Single Boundary between Two CdTe (111) Wafers with Controlled Orientation by Wafer Bonding. Microscopy and Microanalysis, 2014, 20, 516-517.	0.4	1
112	Characterization of Poly-Crystalline CdTe Solar Cells Using Aberration-Corrected Transmission Electron Microscope. Microscopy and Microanalysis, 2014, 20, 522-523.	0.4	0
113	In-Situ Studies of Thermal Stability of Coreâ€“Frame Cubic Pdâ€“Rh Nanocrystals at Elevated Temperatures. Microscopy and Microanalysis, 2014, 20, 1632-1633.	0.4	0
114	Luminescent LaF3:Ce-doped organically modified nanoporous silica xerogels. Journal of Applied Physics, 2013, 113, .	2.5	8
115	Rapid Selective Etching of PMMA Residues from Transferred Graphene by Carbon Dioxide. Journal of Physical Chemistry C, 2013, 117, 23000-23008.	3.1	89
116	Creating a single twin boundary between two CdTe (111) wafers with controlled rotation angle by wafer bonding. Applied Physics Letters, 2013, 103, .	3.3	21
117	A Mechanistic Study on the Nucleation and Growth of Au on Pd Seeds with a Cubic or Octahedral Shape. ChemCatChem, 2012, 4, 1668-1674.	3.7	28
118	Thermal mapping of Delphi thermal test dies. , 2011, , .		0
119	Annealing Temperature-Dependent Interfacial Behavior of Sequentially Plasma-Activated Silicon Bonded Wafers. Journal of Microelectromechanical Systems, 2011, 20, 17-20.	2.5	10
120	Dielectric dipole mitigated Schottky barrier height tuning using atomic layer deposited aluminum oxide for contact resistance reduction. Applied Physics Letters, 2011, 99, 102108.	3.3	12
121	DIRECT TWO-DIMENSIONAL ELECTRICAL MEASUREMENT USING POINT PROBING FOR DOPING AREA IDENTIFICATION OF NANODEVICE IN TEM. Nano, 2010, 05, 61-66.	1.0	3
122	Current anisotropy of carbon nanotube diodes: Voltage and work function dependence. Applied Physics Letters, 2010, 96, 263107.	3.3	8
123	Hydrogenated amorphous silicon nanowire transistors with Schottky barrier source/drain junctions. Applied Physics Letters, 2010, 97, .	3.3	8
124	Sequential Plasma-Activated Bonding Mechanism of Silicon/Silicon Wafers. Journal of Microelectromechanical Systems, 2010, 19, 840-848.	2.5	16
125	Quantitative Experimental Analysis of Schottky Barriers and Pooleâ€“Frenkel Emission in Carbon Nanotube Devices. IEEE Nanotechnology Magazine, 2009, 8, 355-360.	2.0	10
126	Conformal Al2O3 dielectric layer deposited by atomic layer deposition for graphene-based nanoelectronics. Applied Physics Letters, 2008, 92, .	3.3	245

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127	HIGHLY REPRODUCIBLE SINGLE POLYANILINE NANOWIRE USING ELECTROPHORESIS METHOD. Nano, 2008, 03, 75-82.	1.0	19
128	Surface energy induced patterning of polymer nanostructures for cancer diagnosis and therapy. , 2007, , .		1
129	Cowpea Mosaic Virus as a Scaffold for 3-D Patterning of Gold Nanoparticles. Nano Letters, 2004, 4, 867-870.	9.1	209