Chang-Yong Nam

List of Publications by Year
in descending order

111 papers	4,269 citations	126907 33 h-index	114465 63 g-index
113 all docs	113 docs citations	113 times ranked	6681 citing authors

#	Article	IF	Citations
1	Molecular helices as electron acceptors in high-performance bulk heterojunction solar cells. Nature Communications, 2015, 6, 8242.	12.8	525
2	Efficient Organic Solar Cells with Helical Perylene Diimide Electron Acceptors. Journal of the American Chemical Society, 2014, 136, 15215-15221.	13.7	414
3	Diameter-Dependent Electromechanical Properties of GaN Nanowires. Nano Letters, 2006, 6, 153-158.	9.1	259
4	Enhancing Water Splitting Activity and Chemical Stability of Zinc Oxide Nanowire Photoanodes with Ultrathin Titania Shells. Journal of Physical Chemistry C, 2013, 117, 13396-13402.	3.1	164
5	Disorder Effects in Focused-Ion-Beam-Deposited Pt Contacts on GaN Nanowires. Nano Letters, 2005, 5, 2029-2033.	9.1	105
6	Low-Voltage Organic Electronics Based on a Gate-Tunable Injection Barrier in Vertical graphene-organic Semiconductor Heterostructures. Nano Letters, 2015, 15, 69-74.	9.1	105
7	Phthalocyanine Blends Improve Bulk Heterojunction Solar Cells. Journal of the American Chemical Society, 2010, 132, 2552-2554.	13.7	102
8	Defects in GaN Nanowires. Advanced Functional Materials, 2006, 16, 1197-1202.	14.9	94
9	Chemically Enhancing Block Copolymers for Block-Selective Synthesis of Self-Assembled Metal Oxide Nanostructures. ACS Nano, 2013, 7, 339-346.	14.6	90
10	Unusually low thermal conductivity of gallium nitride nanowires. Journal of Applied Physics, 2008, 103, 064319.	2.5	89
11	Effect of precipitates on microstructural evolution of 7050 Al alloy sheet during equal channel angular rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 347, 253-257.	5.6	88
12	Effect of the polar surface on GaN nanostructure morphology and growth orientation. Applied Physics Letters, 2004, 85, 5676-5678.	3.3	85
13	Photo-Cross-Linkable Azide-Functionalized Polythiophene for Thermally Stable Bulk Heterojunction Solar Cells. Macromolecules, 2012, 45, 2338-2347.	4.8	85
14	Highâ€Performance Airâ€Processed Polymerâ€“Fullerene Bulk Heterojunction Solar Cells. Advanced Functional Materials, 2009, 19, 3552-3559.	14.9	80
15	Aberration-Corrected Electron Beam Lithography at the One Nanometer Length Scale. Nano Letters, 2017, 17, 4562-4567.	9.1	80
16	Alkali-metal poisoning effect of total CO and propane oxidation over Co3O4 nanocatalysts. Applied Catalysis B: Environmental, 2019, 256, 117859.	20.2	78
17	Perovskite Nanoparticle-Sensitized Ga₂O₃ Nanorod Arrays for CO Detection at High Temperature. ACS Applied Materials & Interfaces, 2016, 8, 8880-8887.	8.0	65
18	Enhancing Chemical Stability and Suppressing Ion Migration in CH₃NH₃PbI₃ Perovskite Solar Cells via Direct Backbone Attachment of Polyesters on Grain Boundaries. Chemistry of Materials, 2020, 32, 5104-5117.	6.7	64

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19	Microstructure and Composition of Focused-Ion-Beam-Deposited Pt Contacts to GaN Nanowires. Advanced Materials, 2006, 18, 290-294.	21.0	63
20	Distinct Optoelectronic Signatures for Charge Transfer and Energy Transfer in Quantum Dotâ€“MoS₂ Hybrid Photodetectors Revealed by Photocurrent Imaging Microscopy. Advanced Functional Materials, 2018, 28, 1707558.	14.9	63
21	Polymerization of Tellurophene Derivatives by Microwaveâ€Assisted Palladiumâ€Catalyzed ipsoâ€Arylative Polymerization. Angewandte Chemie - International Edition, 2014, 53, 10691-10695.	13.8	61
22	Effects of heteroatom substitution in conjugated heterocyclic compounds on photovoltaic performance: from sulfur to tellurium. Chemical Communications, 2014, 50, 7964-7967.	4.1	56
23	Focused-ion-beam platinum nanopatterning for GaN nanowires: Ohmic contacts and patterned growth. Applied Physics Letters, 2005, 86, 193112.	3.3	55
24	Three-dimensional electroactive ZnO nanomesh directly derived from hierarchically self-assembled block copolymer thin films. Nanoscale, 2019, 11, 9533-9546.	5.6	51
25	Nanofabrication on unconventional substrates using transferred hard masks. Scientific Reports, 2015, 5, 7802.	3.3	50
26	Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies >10%. Advanced Energy Materials, 2016, 6, 1600660.	19.5	46
27	Highly stable inverted methylammonium lead tri-iodide perovskite solar cells achieved by surface re-crystallization. Energy and Environmental Science, 2020, 13, 840-847.	30.8	44
28	Simultaneous in Situ X-ray Scattering and Infrared Imaging of Polymer Extrusion in Additive Manufacturing. ACS Applied Polymer Materials, 2019, 1, 1559-1567.	4.4	43
29	Review of Recent Advances in Applications of Vapor-Phase Material Infiltration Based on Atomic Layer Deposition. Jom, 2019, 71, 185-196.	1.9	43
30	Ultrahigh Elastic Strain Energy Storage in Metal-Oxide-Infiltrated Patterned Hybrid Polymer Nanocomposites. Nano Letters, 2017, 17, 7416-7423.	9.1	38
31	Direct fabrication of high aspect-ratio metal oxide nanopatterns via sequential infiltration synthesis in lithographically defined SU-8 templates. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 06F201.	1.2	37
32	One-Volt Operation of High-Current Vertical Channel Polymer Semiconductor Field-Effect Transistors. Nano Letters, 2012, 12, 4181-4186.	9.1	36
33	Synthesis and characterization of V2O3 nanorods. Physical Chemistry Chemical Physics, 2009, 11, 3718.	2.8	35
34	Infiltration Synthesis of Diverse Metal Oxide Nanostructures from Epoxidized Dieneâ€“Styrene Block Copolymer Templates. ACS Applied Polymer Materials, 2019, 1, 672-683.	4.4	34
35	Growth and electronic properties of GaN/ZnO solid solution nanowires. Applied Physics Letters, 2010, 97, .	3.3	33
36	Electrical and structural properties of ZnO synthesized via infiltration of lithographically defined polymer templates. Applied Physics Letters, 2015, 107, .	3.3	31

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37	Advancing next generation nanolithography with infiltration synthesis of hybrid nanocomposite resists. Journal of Materials Chemistry C, 2019, 7, 8803-8812.	5.5	30
38	Improved Stability and Performance of Visible Photoelectrochemical Water Splitting on Solution-Processed Organic Semiconductor Thin Films by Ultrathin Metal Oxide Passivation. Chemistry of Materials, 2018, 30, 324-335.	6.7	29
39	Designing Nanoplatelet Alloy/Nafion Catalytic Interface for Optimization of PEMFCs: Performance, Durability, and CO Resistance. ACS Catalysis, 2019, 9, 1446-1456.	11.2	29
40	Suppression of Carbon Monoxide Poisoning in Proton Exchange Membrane Fuel Cells via Gold Nanoparticle/Titania Ultrathin Film Heterogeneous Catalysts. ACS Applied Energy Materials, 2019, 2, 3479-3487.	5.1	28
41	Ceria-based nanoflake arrays integrated on 3D cordierite honeycombs for efficient low-temperature diesel oxidation catalyst. Applied Catalysis B: Environmental, 2019, 245, 623-634.	20.2	28
42	High performance diesel oxidation catalysts using ultra-low Pt loading on titania nanowire array integrated cordierite honeycombs. Catalysis Today, 2019, 320, 2-10.	4.4	28
43	Enhanced charge collection in confined bulk heterojunction organic solar cells. Applied Physics Letters, 2011, 99, 163301.	3.3	27
44	Controlling morphology and molecular packing of alkane substituted phthalocyanine blend bulk heterojunction solar cells. Journal of Materials Chemistry A, 2013, 1, 1557-1565.	10.3	27
45	Effects of Residual Solvent Molecules Facilitating the Infiltration Synthesis of ZnO in a Nonreactive Polymer. Chemistry of Materials, 2017, 29, 4535-4545.	6.7	24
46	Microstructure and toughness of nitrogen-doped TiAl alloys. Intermetallics, 2002, 10, 113-127.	3.9	23
47	Effect of nitrogen on the mean lamellar thickness of fully lamellar TiAl alloys. Scripta Materialia, 2002, 46, 441-446.	5.2	23
48	Surface-Energy Induced Formation of Single Crystalline Bismuth Nanowires over Vanadium Thin Film at Room Temperature. Nano Letters, 2014, 14, 5630-5635.	9.1	23
49	Molecular Orientation and Performance of Nanoimprinted Polymer-Based Blend Thin Film Solar Cells. Chemistry of Materials, 2015, 27, 60-66.	6.7	23
50	Hybrid quantum dot-tin disulfide field-effect transistors with improved photocurrent and spectral responsivity. Applied Physics Letters, 2016, 108, .	3.3	23
51	Enhanced Hybridization and Nanopatterning via Heated Liquid-Phase Infiltration into Self-Assembled Block Copolymer Thin Films. ACS Applied Materials & Interfaces, 2020, 12, 1444-1453.	8.0	23
52	Thermal crosslinking of organic semiconducting polythiophene improves transverse hole conductivity. Applied Physics Letters, 2009, 95, 173307.	3.3	22
53	Improving Thermal Stability of Perovskite Solar Cells by Suppressing Ion Migration Using Copolymer Grain Encapsulation. Chemistry of Materials, 2021, 33, 6120-6135.	6.7	22
54	Potentiometric Biosensors Based on Molecular-Imprinted Self-Assembled Monolayer Films for Rapid Detection of Influenza A Virus and SARS-CoV-2 Spike Protein. ACS Applied Nano Materials, 2022, 5, 5045-5055.	5.0	22

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55	Perovskite-sensitized Î²-Ga₂O₃ nanorod arrays for highly selective and sensitive NO₂ detection at high temperature. Journal of Materials Chemistry A, 2020, 8, 10845-10854.	10.3	21
56	Ferroelectric polarization retention with scaling of Hf0.5Zr0.5O2 on silicon. Applied Physics Letters, 2021, 118, .	3.3	19
57	Nanostructured electrodes for organic bulk heterojunction solar cells: Model study using carbon nanotube dispersed polythiophene-fullerene blend devices. Journal of Applied Physics, 2011, 110, .	2.5	17
58	Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallelâ€Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis. Advanced Optical Materials, 2017, 5, 1700807.	7.3	17
59	Electro-thermal modeling and experimental validation for multilayered metallic microstructures. Microsystem Technologies, 2021, 27, 2041-2048.	2.0	16
60	Electrospun Conjugated Polymer/Fullerene Hybrid Fibers: Photoactive Blends, Conductivity through Tunneling-AFM, Light Scattering, and Perspective for Their Use in Bulk-Heterojunction Organic Solar Cells. Journal of Physical Chemistry C, 2018, 122, 3058-3067.	3.1	15
61	Thermo-mechanical modeling and experimental validation for multilayered metallic microstructures. Microsystem Technologies, 2021, 27, 2579-2587.	2.0	15
62	Waterâ€Vaporâ€Assisted Nanoimprinting of PEDOT:PSS Thin Films. Small, 2012, 8, 3443-3447.	10.0	14
63	Ambient Air Processing Causes Light Soaking Effects in Inverted Organic Solar Cells Employing Conjugated Polyelectrolyte Electron Transfer Layer. Journal of Physical Chemistry C, 2014, 118, 27219-27225.	3.1	14
64	Resolving Triblock Terpolymer Morphologies by Vapor-Phase Infiltration. Chemistry of Materials, 2020, 32, 5309-5316.	6.7	14
65	Light-Activated Hybrid Nanocomposite Film for Water and Oxygen Sensing. ACS Applied Materials & Interfaces, 2018, 10, 31745-31754.	8.0	12
66	â€œStructurally Neutralâ€•Densely Packed Homopolymer-Adsorbed Chains for Directed Self-Assembly of Block Copolymer Thin Films. Macromolecules, 2019, 52, 5157-5167.	4.8	12
67	Top-down fabrication of high-uniformity nanodiamonds by self-assembled block copolymer masks. Scientific Reports, 2019, 9, 6914.	3.3	12
68	Enhanced photovoltaic performance of ultrathin Si solar cells via semiconductor nanocrystal sensitization: energy transfer vs. optical coupling effects. Nanoscale, 2016, 8, 5873-5883.	5.6	11
69	Roles of Interfacial Tension in Regulating Internal Organization of Low Bandgap Polymer Bulk Heterojunction Solar Cells by Polymer Additives. Advanced Materials Interfaces, 2018, 5, 1800435.	3.7	11
70	Current divisions and distributed Joule heating of two-dimensional grid microstructures. Microsystem Technologies, 2021, 27, 3339-3347.	2.0	11
71	Facile Determination of Bulk Charge Carrier Concentration in Organic Semiconductors: Out-of-Plane Orientation Hopping Conduction Characteristics in Semicrystalline Polythiophene. Journal of Physical Chemistry C, 2012, 116, 23951-23956.	3.1	10
72	TiO2 nanofiber solid-state dye sensitized solar cells with thin TiO2 hole blocking layer prepared by atomic layer deposition. Thin Solid Films, 2013, 536, 275-279.	1.8	10

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73	Nanosecond laser scribing for seeâ€through CIGS thin film solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 135-147.	8.1	10
74	Large mobility modulation in ultrathin amorphous titanium oxide transistors. Communications Materials, 2020, 1, .	6.9	10
75	Novel Effects of Compressed CO₂ Molecules on Structural Ordering and Charge Transport in Conjugated Poly(3-hexylthiophene) Thin Films. Langmuir, 2016, 32, 10851-10860.	3.5	9
76	A new strategy to engineer polymer bulk heterojunction solar cells with thick active layers via self-assembly of the tertiary columnar phase. Nanoscale, 2017, 9, 11511-11522.	5.6	9
77	Correlation between ferroelectricity and ferroelectric orthorhombic phase of HfxZr1â^'xO2 thin films using synchrotron x-ray analysis. APL Materials, 2021, 9, .	5.1	9
78	In Situ Growth of Crystalline and Polymerâ€Incorporated Amorphous ZIFs in Polybenzimidazole Achieving Hierarchical Nanostructures for Carbon Capture. Small, 2022, 18, e2201982.	10.0	9
79	Stand-alone polarization-modulation infrared reflection absorption spectroscopy instrument optimized for the study of catalytic processes at elevated pressures. Review of Scientific Instruments, 2017, 88, 105109.	1.3	8
80	Conformal Coating of Freestanding Particles by Vaporâ€Phase Infiltration. Advanced Materials Interfaces, 2020, 7, 2001323.	3.7	8
81	Applications of electron microscopy to the characterization of semiconductor nanowires. Applied Physics A: Materials Science and Processing, 2006, 85, 227-231.	2.3	7
82	Templating Functional Materials Using Self-Assembled Block Copolymer Thin-Film for Nanodevices. Frontiers in Nanotechnology, 2021, 3, .	4.8	7
83	Photodetectors: Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallelâ€Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis (Advanced) Tj ETQq1 1 0.784314 rgBT /Overlo	7.8	6
84	Self-Organization of Triblock Copolymer Melt Chains Physisorbed on Non-neutral Surfaces. ACS Omega, 2018, 3, 17805-17813.	3.5	6
85	Selective sequential infiltration synthesis of ZnO in the liquid crystalline phase of silicon-containing rod-coil block copolymers. Nanoscale, 2022, 14, 1807-1813.	5.6	6
86	The Role of Titania Surface Coating by Atomic Layer Deposition in Improving Osteogenic Differentiation and Hard Tissue Formation of Dental Pulp Stem Cells. Advanced Engineering Materials, 2021, 23, 2100097.	3.5	5
87	Quantum-Well Bound States in Graphene Heterostructure Interfaces. Physical Review Letters, 2021, 127, 086805.	7.8	5
88	Reduced Stochastic Resistive Switching in Organicâ€Inorganic Hybrid Memristors by Vaporâ€Phase Infiltration. Advanced Electronic Materials, 2022, 8, .	5.1	5
89	Characterization of plasmonic hole arrays as transparent electrical contacts for organic photovoltaics using high-brightness Fourier transform methods. Journal of Modern Optics, 2014, 61, 1735-1742.	1.3	4
90	Hybrid Photodetectors: Distinct Optoelectronic Signatures for Charge Transfer and Energy Transfer in Quantum Dot-MoS2 Hybrid Photodetectors Revealed by Photocurrent Imaging Microscopy (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	18.5	4

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91	ipso â€Arylative Ringâ€Opening Polymerization as a Route to Electronâ€Deficient Conjugated Polymers. Angewandte Chemie - International Edition, 2019, 58, 288-291.	13.8	4
92	Ultrathin alumina passivation for improved photoelectrochemical water oxidation catalysis of tin oxide sensitized by a phosphonate-functionalized perylene diimide first without, and then with, CoO_y. Sustainable Energy and Fuels, 2021, 5, 5257-5269.	4.9	4
93	Hybrid resist synthesis by ex-situ vapor-phase infiltration of metal oxides into conventional organic resists. , 2021, , .		4
94	Effects of polymer grain boundary passivation on organicâ€“inorganic hybrid perovskite field-effect transistors. Applied Physics Letters, 2021, 119, 183303.	3.3	4
95	Gallium nitride nanowires: polar surface controlled growth, ohmic contact patterning by focused ion-beam-induced direct Pt deposition and disorder effects, variable range hopping, and resonant electromechanical properties. , 2006, , .		3
96	Understanding the â€œAnti-Catalystâ€•Effect with Added CoO_x Water Oxidation Catalyst in Dye-Sensitized Photoelectrolysis Cells: Carbon Impurities in Nanostructured SnO₂ Are the Culprit. ACS Applied Materials & Interfaces, 2022, 14, 25326-25336.	8.0	3
97	Implementing nanometer-scale confinement in organic semiconductor bulk heterojunction solar cells. Journal of Photonics for Energy, 2012, 2, 021008.	1.3	2
98	Low-power organic electronics based on gate-tunable injection barrier in vertical graphene-organic semiconductor heterostructures. , 2014, , .		2
99	Self-branching in GaN Nanowires Induced by a Novel Vapor-Liquid-Solid Mechanism. Materials Research Society Symposia Proceedings, 2007, 1058, 1.	0.1	1
100	Seedless Growth of Bismuth Nanowire Array via Vacuum Thermal Evaporation. Journal of Visualized Experiments, 2015, , e53396.	0.3	1
101	Solar Cells: Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies >10% (Adv. Energy Mater. 21/2016). Advanced Energy Materials, 2016, 6, .	19.5	1
102	ipso â€Arylative Ringâ€Opening Polymerization as a Route to Electronâ€Deficient Conjugated Polymers. Angewandte Chemie, 2019, 131, 294-297.	2.0	1
103	Optical simulation of ultimate performance enhancement in ultrathin Si solar cells by semiconductor nanocrystal energy transfer sensitization. Nanoscale Advances, 2021, 3, 991-996.	4.6	1
104	Combination of 3D Printing and ALD for Dentin Fabrication from Dental Pulp Stem Cell Culture. ACS Applied Bio Materials, 2021, 4, 7422-7430.	4.6	1
105	Photochemical study of metal infiltrated e-beam resist using vapor-phase infiltration for EUV applications. , 2021, , .		1
106	Infiltration synthesis of hybrid nanocomposite resists for advanced nanolithography. , 2020, , .		1
107	Conjugated polyelectrolytes for stable perovskite solar cells based on methylammonium lead triiodide. Journal of Materials Chemistry A, 2022, 10, 3321-3329.	10.3	1
108	Effect of the polar surface on GaN nanostructure morphology and growth orientation. Materials Research Society Symposia Proceedings, 2004, 831, 260.	0.1	0

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109	Hafnium (IV) and zirconium (IV) porphyrinoid diacetate complexes as new dyes for solar cells. , 2010, , .		0
110	Examining Nanoscale Photovoltaics with High Brightness Fourier Transform Measurements. , 2013, , .		0
111	(Invited) Nanopatterning Functional Metal Oxide Nanostructures By Vapor-Phase Infiltration in Polymer Templates. ECS Meeting Abstracts, 2020, MA2020-01, 1035-1035.	0.0	0