

Chang-Yong Nam

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6746841/publications.pdf>

Version: 2024-02-01

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	Conjugated polyelectrolytes for stable perovskite solar cells based on methylammonium lead triiodide. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3321-3329.	10.3	1
2	Selective sequential infiltration synthesis of ZnO in the liquid crystalline phase of silicon-containing rod-coil block copolymers. <i>Nanoscale</i> , 2022, 14, 1807-1813.	5.6	6
3	Reduced Stochastic Resistive Switching in Organic-Inorganic Hybrid Memristors by Vapor-Phase Infiltration. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	5
4	Potentiometric Biosensors Based on Molecular-Imprinted Self-Assembled Monolayer Films for Rapid Detection of Influenza A Virus and SARS-CoV-2 Spike Protein. <i>ACS Applied Nano Materials</i> , 2022, 5, 5045-5055.	5.0	22
5	In Situ Growth of Crystalline and Polymer-Incorporated Amorphous ZIFs in Polybenzimidazole Achieving Hierarchical Nanostructures for Carbon Capture. <i>Small</i> , 2022, 18, e2201982.	10.0	9
6	Understanding the "Anti-Catalyst" Effect with Added CoO _x Water Oxidation Catalyst in Dye-Sensitized Photoelectrolysis Cells: Carbon Impurities in Nanostructured SnO ₂ Are the Culprit. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 25326-25336.	8.0	3
7	Thermo-mechanical modeling and experimental validation for multilayered metallic microstructures. <i>Microsystem Technologies</i> , 2021, 27, 2579-2587.	2.0	15
8	Current divisions and distributed Joule heating of two-dimensional grid microstructures. <i>Microsystem Technologies</i> , 2021, 27, 3339-3347.	2.0	11
9	Electro-thermal modeling and experimental validation for multilayered metallic microstructures. <i>Microsystem Technologies</i> , 2021, 27, 2041-2048.	2.0	16
10	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 . <i>Sustainable Energy and Fuels</i> , 2021, 5, 5257-5269.	4.9	4
11	Optical simulation of ultimate performance enhancement in ultrathin Si solar cells by semiconductor nanocrystal energy transfer sensitization. <i>Nanoscale Advances</i> , 2021, 3, 991-996.	4.6	1
12	Hybrid resist synthesis by ex-situ vapor-phase infiltration of metal oxides into conventional organic resists. , 2021, , .		4
13	Correlation between ferroelectricity and ferroelectric orthorhombic phase of Hf _x Zr _{1-x} O ₂ thin films using synchrotron x-ray analysis. <i>APL Materials</i> , 2021, 9, .	5.1	9
14	Ferroelectric polarization retention with scaling of Hf _{0.5} Zr _{0.5} O ₂ on silicon. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	19
15	The Role of Titania Surface Coating by Atomic Layer Deposition in Improving Osteogenic Differentiation and Hard Tissue Formation of Dental Pulp Stem Cells. <i>Advanced Engineering Materials</i> , 2021, 23, 2100097.	3.5	5
16	Improving Thermal Stability of Perovskite Solar Cells by Suppressing Ion Migration Using Copolymer Grain Encapsulation. <i>Chemistry of Materials</i> , 2021, 33, 6120-6135.	6.7	22
17	Quantum-Well Bound States in Graphene Heterostructure Interfaces. <i>Physical Review Letters</i> , 2021, 127, 086805.	7.8	5
18	Combination of 3D Printing and ALD for Dentin Fabrication from Dental Pulp Stem Cell Culture. <i>ACS Applied Bio Materials</i> , 2021, 4, 7422-7430.	4.6	1

#	ARTICLE	IF	CITATIONS
19	Photochemical study of metal infiltrated e-beam resist using vapor-phase infiltration for EUV applications. , 2021, , .		1
20	Effects of polymer grain boundary passivation on organic-inorganic hybrid perovskite field-effect transistors. Applied Physics Letters, 2021, 119, 183303.	3.3	4
21	Templating Functional Materials Using Self-Assembled Block Copolymer Thin-Film for Nanodevices. Frontiers in Nanotechnology, 2021, 3, .	4.8	7
22	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
23	Nanosecond laser scribing for see-through CIGS thin film solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 135-147.	8.1	10
24	Large mobility modulation in ultrathin amorphous titanium oxide transistors. Communications Materials, 2020, 1, .	6.9	10
25	Conformal Coating of Freestanding Particles by Vapor-Phase Infiltration. Advanced Materials Interfaces, 2020, 7, 2001323.	3.7	8
26	Perovskite-sensitized $\text{In}^{2+}\text{-Ga}_2\text{O}_3$ nanorod arrays for highly selective and sensitive NO_2 detection at high temperature. Journal of Materials Chemistry A, 2020, 8, 10845-10854.	10.3	21
27	Resolving Triblock Terpolymer Morphologies by Vapor-Phase Infiltration. Chemistry of Materials, 2020, 32, 5309-5316.	6.7	14
28	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
29	Enhancing Chemical Stability and Suppressing Ion Migration in $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Solar Cells via Direct Backbone Attachment of Polyesters on Grain Boundaries. Chemistry of Materials, 2020, 32, 5104-5117.	6.7	64
30	(Invited) Nanopatterning Functional Metal Oxide Nanostructures By Vapor-Phase Infiltration in Polymer Templates. ECS Meeting Abstracts, 2020, MA2020-01, 1035-1035.	0.0	0
31	Infiltration synthesis of hybrid nanocomposite resists for advanced nanolithography. , 2020, , .		1
32	Advancing next generation nanolithography with infiltration synthesis of hybrid nanocomposite resists. Journal of Materials Chemistry C, 2019, 7, 8803-8812.	5.5	30
33	Structurally Neutral-Densely Packed Homopolymer-Adsorbed Chains for Directed Self-Assembly of Block Copolymer Thin Films. Macromolecules, 2019, 52, 5157-5167.	4.8	12
34	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
35	Alkali-metal poisoning effect of total CO and propane oxidation over Co_3O_4 nanocatalysts. Applied Catalysis B: Environmental, 2019, 256, 117859.	20.2	78
36	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

#	ARTICLE	IF	CITATIONS
37	Top-down fabrication of high-uniformity nanodiamonds by self-assembled block copolymer masks. <i>Scientific Reports</i> , 2019, 9, 6914.	3.3	12
38	Three-dimensional electroactive ZnO nanomesh directly derived from hierarchically self-assembled block copolymer thin films. <i>Nanoscale</i> , 2019, 11, 9533-9546.	5.6	51
39	Infiltration Synthesis of Diverse Metal Oxide Nanostructures from Epoxidized Diene- σ -Styrene Block Copolymer Templates. <i>ACS Applied Polymer Materials</i> , 2019, 1, 672-683.	4.4	34
40	ipso σ -Arylative Ring-Opening Polymerization as a Route to Electron-Deficient Conjugated Polymers. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 288-291.	13.8	4
41	Designing Nanoplatelet Alloy/Nafion Catalytic Interface for Optimization of PEMFCs: Performance, Durability, and CO Resistance. <i>ACS Catalysis</i> , 2019, 9, 1446-1456.	11.2	29
42	Ceria-based nanoflake arrays integrated on 3D cordierite honeycombs for efficient low-temperature diesel oxidation catalyst. <i>Applied Catalysis B: Environmental</i> , 2019, 245, 623-634.	20.2	28
43	ipso σ -Arylative Ring-Opening Polymerization as a Route to Electron-Deficient Conjugated Polymers. <i>Angewandte Chemie</i> , 2019, 131, 294-297.	2.0	1
44	Review of Recent Advances in Applications of Vapor-Phase Material Infiltration Based on Atomic Layer Deposition. <i>Jom</i> , 2019, 71, 185-196.	1.9	43
45	High performance diesel oxidation catalysts using ultra-low Pt loading on titania nanowire array integrated cordierite honeycombs. <i>Catalysis Today</i> , 2019, 320, 2-10.	4.4	28
46	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. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3058-3067.	3.1	15
47	Improved Stability and Performance of Visible Photoelectrochemical Water Splitting on Solution-Processed Organic Semiconductor Thin Films by Ultrathin Metal Oxide Passivation. <i>Chemistry of Materials</i> , 2018, 30, 324-335.	6.7	29
48	Self-Organization of Triblock Copolymer Melt Chains Physisorbed on Non-neutral Surfaces. <i>ACS Omega</i> , 2018, 3, 17805-17813.	3.5	6
49	Distinct Optoelectronic Signatures for Charge Transfer and Energy Transfer in Quantum Dot-MoS ₂ Hybrid Photodetectors Revealed by Photocurrent Imaging Microscopy. <i>Advanced Functional Materials</i> , 2018, 28, 1707558.	14.9	63
50	Roles of Interfacial Tension in Regulating Internal Organization of Low Bandgap Polymer Bulk Heterojunction Solar Cells by Polymer Additives. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800435.	3.7	11
51	Hybrid Photodetectors: Distinct Optoelectronic Signatures for Charge Transfer and Energy Transfer in Quantum Dot-MoS ₂ Hybrid Photodetectors Revealed by Photocurrent Imaging Microscopy (Adv.) <i>Tj ETQq1 1 0.7843 14 rgBT /Overl</i>	14.9	63
52	Light-Activated Hybrid Nanocomposite Film for Water and Oxygen Sensing. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 31745-31754.	8.0	12
53	Aberration-Corrected Electron Beam Lithography at the One Nanometer Length Scale. <i>Nano Letters</i> , 2017, 17, 4562-4567.	9.1	80
54	Effects of Residual Solvent Molecules Facilitating the Infiltration Synthesis of ZnO in a Nonreactive Polymer. <i>Chemistry of Materials</i> , 2017, 29, 4535-4545.	6.7	24

#	ARTICLE	IF	CITATIONS
55	Ultrahigh Elastic Strain Energy Storage in Metal-Oxide-Infiltrated Patterned Hybrid Polymer Nanocomposites. <i>Nano Letters</i> , 2017, 17, 7416-7423.	9.1	38
56	A new strategy to engineer polymer bulk heterojunction solar cells with thick active layers via self-assembly of the tertiary columnar phase. <i>Nanoscale</i> , 2017, 9, 11511-11522.	5.6	9
57	Stand-alone polarization-modulation infrared reflection absorption spectroscopy instrument optimized for the study of catalytic processes at elevated pressures. <i>Review of Scientific Instruments</i> , 2017, 88, 105109.	1.3	8
58	Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallel- α -Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis. <i>Advanced Optical Materials</i> , 2017, 5, 1700807.	7.3	17
59	Photodetectors: Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallel- α -Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis (<i>Advanced</i>) Tj ETQq1 1 07384314 rgBT /Over	7.3	17
60	Hybrid quantum dot-tin disulfide field-effect transistors with improved photocurrent and spectral responsivity. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	23
61	Perovskite Nanoparticle-Sensitized Ga ₂ O ₃ Nanorod Arrays for CO Detection at High Temperature. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 8880-8887.	8.0	65
62	Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies $\geq 10\%$. <i>Advanced Energy Materials</i> , 2016, 6, 1600660.	19.5	46
63	Novel Effects of Compressed CO ₂ Molecules on Structural Ordering and Charge Transport in Conjugated Poly(3-hexylthiophene) Thin Films. <i>Langmuir</i> , 2016, 32, 10851-10860.	3.5	9
64	Solar Cells: Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies $> 10\%$ (<i>Adv. Energy Mater.</i> 21/2016). <i>Advanced Energy Materials</i> , 2016, 6, .	19.5	1
65	Enhanced photovoltaic performance of ultrathin Si solar cells via semiconductor nanocrystal sensitization: energy transfer vs. optical coupling effects. <i>Nanoscale</i> , 2016, 8, 5873-5883.	5.6	11
66	Direct fabrication of high aspect-ratio metal oxide nanopatterns via sequential infiltration synthesis in lithographically defined SU-8 templates. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015, 33, 06F201.	1.2	37
67	Electrical and structural properties of ZnO synthesized via infiltration of lithographically defined polymer templates. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	31
68	Seedless Growth of Bismuth Nanowire Array via Vacuum Thermal Evaporation. <i>Journal of Visualized Experiments</i> , 2015, , e53396.	0.3	1
69	Molecular Orientation and Performance of Nanoimprinted Polymer-Based Blend Thin Film Solar Cells. <i>Chemistry of Materials</i> , 2015, 27, 60-66.	6.7	23
70	Nanofabrication on unconventional substrates using transferred hard masks. <i>Scientific Reports</i> , 2015, 5, 7802.	3.3	50
71	Molecular helices as electron acceptors in high-performance bulk heterojunction solar cells. <i>Nature Communications</i> , 2015, 6, 8242.	12.8	525
72	Low-Voltage Organic Electronics Based on a Gate-Tunable Injection Barrier in Vertical graphene-organic Semiconductor Heterostructures. <i>Nano Letters</i> , 2015, 15, 69-74.	9.1	105

#	ARTICLE	IF	CITATIONS
73	Characterization of plasmonic hole arrays as transparent electrical contacts for organic photovoltaics using high-brightness Fourier transform methods. <i>Journal of Modern Optics</i> , 2014, 61, 1735-1742.	1.3	4
74	Ambient Air Processing Causes Light Soaking Effects in Inverted Organic Solar Cells Employing Conjugated Polyelectrolyte Electron Transfer Layer. <i>Journal of Physical Chemistry C</i> , 2014, 118, 27219-27225.	3.1	14
75	Low-power organic electronics based on gate-tunable injection barrier in vertical graphene-organic semiconductor heterostructures. , 2014, , .		2
76	Effects of heteroatom substitution in conjugated heterocyclic compounds on photovoltaic performance: from sulfur to tellurium. <i>Chemical Communications</i> , 2014, 50, 7964-7967.	4.1	56
77	Polymerization of Tellurophene Derivatives by Microwave-Assisted Palladium-Catalyzed <i>ipso</i> -Arylative Polymerization. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 10691-10695.	13.8	61
78	Efficient Organic Solar Cells with Helical Perylene Diimide Electron Acceptors. <i>Journal of the American Chemical Society</i> , 2014, 136, 15215-15221.	13.7	414
79	Surface-Energy Induced Formation of Single Crystalline Bismuth Nanowires over Vanadium Thin Film at Room Temperature. <i>Nano Letters</i> , 2014, 14, 5630-5635.	9.1	23
80	TiO ₂ nanofiber solid-state dye sensitized solar cells with thin TiO ₂ hole blocking layer prepared by atomic layer deposition. <i>Thin Solid Films</i> , 2013, 536, 275-279.	1.8	10
81	Controlling morphology and molecular packing of alkane substituted phthalocyanine blend bulk heterojunction solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 1557-1565.	10.3	27
82	Enhancing Water Splitting Activity and Chemical Stability of Zinc Oxide Nanowire Photoanodes with Ultrathin Titania Shells. <i>Journal of Physical Chemistry C</i> , 2013, 117, 13396-13402.	3.1	164
83	Chemically Enhancing Block Copolymers for Block-Selective Synthesis of Self-Assembled Metal Oxide Nanostructures. <i>ACS Nano</i> , 2013, 7, 339-346.	14.6	90
84	Examining Nanoscale Photovoltaics with High Brightness Fourier Transform Measurements. , 2013, , .		0
85	Facile Determination of Bulk Charge Carrier Concentration in Organic Semiconductors: Out-of-Plane Orientation Hopping Conduction Characteristics in Semicrystalline Polythiophene. <i>Journal of Physical Chemistry C</i> , 2012, 116, 23951-23956.	3.1	10
86	One-Volt Operation of High-Current Vertical Channel Polymer Semiconductor Field-Effect Transistors. <i>Nano Letters</i> , 2012, 12, 4181-4186.	9.1	36
87	Water-Vapor-Assisted Nanoimprinting of PEDOT:PSS Thin Films. <i>Small</i> , 2012, 8, 3443-3447.	10.0	14
88	Photo-Cross-Linkable Azide-Functionalized Polythiophene for Thermally Stable Bulk Heterojunction Solar Cells. <i>Macromolecules</i> , 2012, 45, 2338-2347.	4.8	85
89	Implementing nanometer-scale confinement in organic semiconductor bulk heterojunction solar cells. <i>Journal of Photonics for Energy</i> , 2012, 2, 021008.	1.3	2
90	Enhanced charge collection in confined bulk heterojunction organic solar cells. <i>Applied Physics Letters</i> , 2011, 99, 163301.	3.3	27

#	ARTICLE	IF	CITATIONS
91	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
92	Hafnium (IV) and zirconium (IV) porphyrinoid diacetate complexes as new dyes for solar cells. , 2010, , .		0
93	Growth and electronic properties of GaN/ZnO solid solution nanowires. Applied Physics Letters, 2010, 97, .	3.3	33
94	Phthalocyanine Blends Improve Bulk Heterojunction Solar Cells. Journal of the American Chemical Society, 2010, 132, 2552-2554.	13.7	102
95	Thermal crosslinking of organic semiconducting polythiophene improves transverse hole conductivity. Applied Physics Letters, 2009, 95, 173307.	3.3	22
96	High-Performance Air-Processed Polymer-Fullerene Bulk Heterojunction Solar Cells. Advanced Functional Materials, 2009, 19, 3552-3559.	14.9	80
97	Synthesis and characterization of V ₂ O ₃ nanorods. Physical Chemistry Chemical Physics, 2009, 11, 3718.	2.8	35
98	Unusually low thermal conductivity of gallium nitride nanowires. Journal of Applied Physics, 2008, 103, 064319.	2.5	89
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	Diameter-Dependent Electromechanical Properties of GaN Nanowires. Nano Letters, 2006, 6, 153-158.	9.1	259
101	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
102	Applications of electron microscopy to the characterization of semiconductor nanowires. Applied Physics A: Materials Science and Processing, 2006, 85, 227-231.	2.3	7
103	Defects in GaN Nanowires. Advanced Functional Materials, 2006, 16, 1197-1202.	14.9	94
104	Microstructure and Composition of Focused-Ion-Beam-Deposited Pt Contacts to GaN Nanowires. Advanced Materials, 2006, 18, 290-294.	21.0	63
105	Focused-ion-beam platinum nanopatterning for GaN nanowires: Ohmic contacts and patterned growth. Applied Physics Letters, 2005, 86, 193112.	3.3	55
106	Disorder Effects in Focused-Ion-Beam-Deposited Pt Contacts on GaN Nanowires. Nano Letters, 2005, 5, 2029-2033.	9.1	105
107	Effect of the polar surface on GaN nanostructure morphology and growth orientation. Materials Research Society Symposia Proceedings, 2004, 831, 260.	0.1	0
108	Effect of the polar surface on GaN nanostructure morphology and growth orientation. Applied Physics Letters, 2004, 85, 5676-5678.	3.3	85

#	ARTICLE	IF	CITATIONS
109	Effect of precipitates on microstructural evolution of 7050 Al alloy sheet during equal channel angular rolling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 347, 253-257.	5.6	88
110	Microstructure and toughness of nitrogen-doped TiAl alloys. <i>Intermetallics</i> , 2002, 10, 113-127.	3.9	23
111	Effect of nitrogen on the mean lamellar thickness of fully lamellar TiAl alloys. <i>Scripta Materialia</i> , 2002, 46, 441-446.	5.2	23