

Heon Lee

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

2,990
citations

28
h-index

51
g-index

120
ext. papers

3,906
ext. citations

8
avg, IF

5.67
L-index

#	Paper	IF	Citations
111	Selectively emissive fluoropolymer film for passive daytime radiative cooling. <i>Optical Materials</i> , 2022 , 128, 112273	3.3	0
110	Development of a device for characterizing radiative cooling performance. <i>Applied Thermal Engineering</i> , 2022 , 118744	5.8	0
109	Highly suppressed solar absorption in a daytime radiative cooler designed by genetic algorithm. <i>Nanophotonics</i> , 2021 ,	6.3	3
108	Periodic Micropillar-Patterned FTO/BiVO with Superior Light Absorption and Separation Efficiency for Efficient PEC Performance. <i>Small</i> , 2021 , 17, e2006558	11	5
107	Visibly Transparent Radiative Cooler under Direct Sunlight. <i>Advanced Optical Materials</i> , 2021 , 9, 2002226	8.1	23
106	Spectrally Selective Nanoparticle Mixture Coating for Passive Daytime Radiative Cooling. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 21119-21126	9.5	17
105	Holographic metasurface gas sensors for instantaneous visual alarms. <i>Science Advances</i> , 2021 , 7,	14.3	54
104	High thermoelectric figure of merit of porous Si nanowires from 300 to 700 K. <i>Nature Communications</i> , 2021 , 12, 3926	17.4	6
103	Colored emitters with silica-embedded perovskite nanocrystals for efficient daytime radiative cooling. <i>Nano Energy</i> , 2021 , 79, 105461	17.1	29
102	Sub-ambient daytime radiative cooling by silica-coated porous anodic aluminum oxide. <i>Nano Energy</i> , 2021 , 79, 105426	17.1	41
101	Optimization and performance analysis of a multilayer structure for daytime radiative cooling. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021 , 260, 107475	2.1	5
100	Broadband Meta-Absorber with Au/Ni Core-Shell Nanowires for Solar Vapor Generator. <i>Advanced Sustainable Systems</i> , 2021 , 5, 2000217	5.9	2
99	Magnetic Control and Real-Time Monitoring of Stem Cell Differentiation by the Ligand Nanoassembly. <i>Small</i> , 2021 , 17, e2102892	11	4
98	Ultra-thin and near-unity selective emitter for efficient cooling. <i>Optics Express</i> , 2021 , 29, 31364-31375	3.3	4
97	Three-dimensional electronic microfliers inspired by wind-dispersed seeds. <i>Nature</i> , 2021 , 597, 503-510	50.4	28
96	Colloidal deposition of colored daytime radiative cooling films using nanoparticle-based inks. <i>Materials Today Physics</i> , 2021 , 21, 100510	8	4
95	Printable Nanocomposite Metalens for High-Contrast Near-Infrared Imaging. <i>ACS Nano</i> , 2021 , 15, 698-706	6.7	32

94	Single-step manufacturing of hierarchical dielectric metalens in the visible. <i>Nature Communications</i> , 2020 , 11, 2268	17.4	76
93	Triple layered Ga ₂ O ₃ /Cu ₂ O/Au photoanodes with enhanced photoactivity and stability prepared using iron nickel oxide catalysts. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 10966-10972	13	2
92	Highly Efficient Tandem White OLED Using a Hollow Structure. <i>Advanced Materials Interfaces</i> , 2020 , 7, 1901509	4.6	5
91	Spectrally Selective Inorganic-Based Multilayer Emitter for Daytime Radiative Cooling. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 8073-8081	9.5	77
90	Acrylic membrane doped with Al ₂ O ₃ nanoparticle resonators for zero-energy consuming radiative cooling. <i>Solar Energy Materials and Solar Cells</i> , 2020 , 213, 110561	6.4	23
89	Fabrication of perovskite solar cell with high short-circuit current density (JSC) using moth-eye structure of SiO _x . <i>Nano Research</i> , 2020 , 13, 1156-1161	10	9
88	Deep Q-network to produce polarization-independent perfect solar absorbers: a statistical report. <i>Nano Convergence</i> , 2020 , 7, 26	9.2	6
87	Fully blossomed WO ₃ /BiVO ₄ structure obtained via active facet engineering of patterned FTO for highly efficient Water splitting. <i>Applied Catalysis B: Environmental</i> , 2020 , 263, 118362	21.8	26
86	Design of high transmission color filters for solar cells directed by deep Q-learning. <i>Solar Energy</i> , 2020 , 195, 670-676	6.8	17
85	Structured BiVO ₄ Photoanode Fabricated via Sputtering for Large Areas and Enhanced Photoelectrochemical Performance. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 17923-17932	8.3	2
84	Multifunctional Daytime Radiative Cooling Devices with Simultaneous Light-Emitting and Radiative Cooling Functional Layers. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 54763-54772	9.5	18
83	A emitter for passive heat release from enclosures. <i>Science Advances</i> , 2020 , 6,	14.3	43
82	High-Performance Daytime Radiative Cooler and Near-Ideal Selective Emitter Enabled by Transparent Sapphire Substrate. <i>Advanced Science</i> , 2020 , 7, 2001577	13.6	21
81	Cross-Linked Porous Polymeric Coating without a Metal-Reflective Layer for Sub-Ambient Radiative Cooling. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 57832-57839	9.5	17
80	A review on the fabrication and applications of sub-wavelength anti-reflective surfaces based on biomimetics. <i>Applied Spectroscopy Reviews</i> , 2019 , 54, 719-735	4.5	8
79	Improvement of perovskite crystallinity by omnidirectional heat transfer radiative thermal annealing.. <i>RSC Advances</i> , 2019 , 9, 14868-14875	3.7	4
78	Solution-Processable Nanocrystal-Based Broadband Fabry-Perot Absorber for Reflective Vivid Color Generation. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 7280-7287	9.5	22
77	Double-deep Q-learning to increase the efficiency of metasurface holograms. <i>Scientific Reports</i> , 2019 , 9, 10899	4.9	34

76	Enhanced long-term stability of perovskite solar cells by passivating grain boundary with polydimethylsiloxane (PDMS). <i>Journal of Materials Chemistry A</i> , 2019 , 7, 20832-20839	13	19
75	Methylammonium Chloride Induces Intermediate Phase Stabilization for Efficient Perovskite Solar Cells. <i>Joule</i> , 2019 , 3, 2179-2192	27.8	780
74	Facile Nanocasting of Dielectric Metasurfaces with Sub-100 nm Resolution. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 26109-26115	9.5	40
73	Simultaneous Improvement of Absorption and Separation Efficiencies of Mo:BiVO ₄ Photoanodes via Nanopatterned SnO ₂ /Au Hybrid Layers. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 17000-17007	8.3	2
72	Generation of highly integrated multiple vivid colours using a three-dimensional broadband perfect absorber. <i>Scientific Reports</i> , 2019 , 9, 14859	4.9	8
71	Design of a Broadband Solar Thermal Absorber Using a Deep Neural Network and Experimental Demonstration of Its Performance. <i>Scientific Reports</i> , 2019 , 9, 15028	4.9	9
70	Selectively patterned TiO ₂ nanorods as electron transport pathway for high performance perovskite solar cells. <i>Nano Research</i> , 2019 , 12, 601-606	10	10
69	Long-term analysis of PV module with large-area patterned anti-reflective film. <i>Renewable Energy</i> , 2019 , 135, 525-528	8.1	13
68	Dual pattern for enhancing light extraction efficiency of white organic light-emitting diodes. <i>Organic Electronics</i> , 2018 , 57, 201-205	3.5	11
67	Hexagonal array micro-convex patterned substrate for improving diffused transmittance in perovskite solar cells. <i>Thin Solid Films</i> , 2018 , 660, 682-687	2.2	4
66	Enhanced blue responses in nanostructured Si solar cells by shallow doping. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 125102	3	5
65	Nano- and Micro-Sized Fe ₂ O ₃ Structures Fabricated by UV Imprint Lithography. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018 , 215, 1700948	1.6	3
64	Spontaneous Registration of Sub-10 nm Features Based on Subzero Celsius Spin-Casting of Self-Assembling Building Blocks Directed by Chemically Encoded Surfaces. <i>ACS Nano</i> , 2018 , 12, 8224-8233	16.7	5
63	Chemically Engineered Au-Ag Plasmonic Nanostructures to Realize Large Area and Flexible Metamaterials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 25652-25659	9.5	11
62	Realization of Wafer-Scale Hyperlens Device for Sub-diffractive Biomolecular Imaging. <i>ACS Photonics</i> , 2018 , 5, 2549-2554	6.3	41
61	Fabrication of Al ₂ O ₃ nano-micro patterns by Al ₂ O ₃ dispersion resin using UV imprint lithography. <i>Thin Solid Films</i> , 2018 , 660, 428-433	2.2	3
60	Demonstration of nanoimprinted hyperlens array for high-throughput sub-diffraction imaging. <i>Scientific Reports</i> , 2017 , 7, 46314	4.9	38
59	Electrochemically Induced Shape-Memory Behavior of Si Nanopillar-Patterned Electrode for Li Ion Batteries. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2100-2106	6.4	3

58	High-Temperature-Short-Time Annealing Process for High-Performance Large-Area Perovskite Solar Cells. <i>ACS Nano</i> , 2017 , 11, 6057-6064	16.7	99
57	Air void optical scattering structure for high-brightness organic light emitting diodes. <i>Ceramics International</i> , 2017 , 43, S455-S459	5.1	4
56	Analysis of long-term monitoring data of PV module with SiO _x -based anti-reflective patterned protective glass. <i>Solar Energy Materials and Solar Cells</i> , 2017 , 170, 33-38	6.4	14
55	Metal-Organic Framework-Templated PdO-CoO Nanocubes Functionalized by SWCNTs: Improved NO Reaction Kinetics on Flexible Heating Film. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 40593-40603	8.5	37
54	Fabrication of parabolic Si nanostructures by nanosphere lithography and its application for solar cells. <i>Scientific Reports</i> , 2017 , 7, 7336	4.9	17
53	Microwave welding of silver nanowires for highly transparent conductive electrodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1600908	1.6	3
52	Effect of Si nanostructures on PEDOT:PSS Si hybrid solar cells. <i>Thin Solid Films</i> , 2016 , 616, 335-338	2.2	8
51	Fabrication of a transparent conducting Ni-nanomesh-embedded film using template-assisted Ni electrodeposition and hot transfer process. <i>RSC Advances</i> , 2016 , 6, 81814-81817	3.7	3
50	Hierarchical ZnO Nanowires-loaded Sb-doped SnO ₂ -ZnO Micrograting Pattern via Direct Imprinting-assisted Hydrothermal Growth and Its Selective Detection of Acetone Molecules. <i>Scientific Reports</i> , 2016 , 6, 18731	4.9	29
49	Scattering Optical Elements: Stand-Alone Optical Elements Exploiting Multiple Light Scattering. <i>ACS Nano</i> , 2016 , 10, 6871-6	16.7	9
48	Direct patterning process for tungsten trioxide nano-to-micro structures. <i>Applied Spectroscopy Reviews</i> , 2016 , 51, 582-591	4.5	4
47	High Performance of Planar Perovskite Solar Cells Produced from PbI ₂ (DMSO) and PbI ₂ (NMP) Complexes by Intramolecular Exchange. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500768	4.6	165
46	Two-dimensional metal-dielectric hybrid-structured film with titanium oxide for enhanced visible light absorption and photo-catalytic application. <i>Nano Energy</i> , 2016 , 21, 115-122	17.1	19
45	Preparation of Nanostructured SnO ₂ Thick Films Onto Patterned Pt Electrodes by Ink Dropping and Plasma Surface Treatment for CO Gas Sensor. <i>Journal of Nanoscience and Nanotechnology</i> , 2016 , 16, 11292-11297	16.3	17
44	Broadband Solar Thermal Absorber Based on Optical Metamaterials for High-Temperature Applications. <i>Advanced Optical Materials</i> , 2016 , 4, 1265-1273	8.1	51
43	Parallel Aligned Mesopore Arrays in Pyramidal-Shaped Gallium Nitride and Their Photocatalytic Applications. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 18201-7	9.5	18
42	Locally placed nanoscale gold islands film within a TiO photoanode for enhanced plasmon light absorption in dye sensitized solar cells. <i>Nano Convergence</i> , 2016 , 3, 33	9.2	2
41	Formation of Magnetic Anisotropy by Lithography. <i>Scientific Reports</i> , 2016 , 6, 26709	4.9	5

40	Highly Bendable In-Ga-ZnO Thin Film Transistors by Using a Thermally Stable Organic Dielectric Layer. <i>Scientific Reports</i> , 2016 , 6, 37764	4.9	31
39	InGaN-based photoanode with ZnO nanowires for water splitting. <i>Nano Convergence</i> , 2016 , 3, 34	9.2	7
38	A transparent embedded Cu/Au-nanomesh electrode on flexible polymer film substrates. <i>RSC Advances</i> , 2016 , 6, 92970-92974	3.7	6
37	Fabrication of rigid stamp on a cylindrical substrate using hydrogen silsesquioxane/ZrO ₂ nanoparticle composite material for roll-to-roll nanoimprinting process. <i>Journal of Sol-Gel Science and Technology</i> , 2015 , 73, 628-633	2.3	2
36	Enhancement in performance of optoelectronic devices by optical-functional patterns. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 121, 377-386	2.6	2
35	Fabrication of superhydrophobic surfaces with nano-in-micro structures using UV-nanoimprint lithography and thermal shrinkage films. <i>Applied Surface Science</i> , 2015 , 349, 169-173	6.7	61
34	Structural Evolution of Chemically-Driven RuO ₂ Nanowires and 3-Dimensional Design for Photo-Catalytic Applications. <i>Scientific Reports</i> , 2015 , 5, 11933	4.9	16
33	Effect of the Shape of Nanometer-scaled Patterns on Sapphire Substrate on the Efficiency of Light Emitting Diode. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2015 , 28, 541-545	0.7	2
32	In Situ Nanolithography with Sub-10 nm Resolution Realized by Thermally Assisted Spin-Casting of a Self-Assembling Polymer. <i>Advanced Materials</i> , 2015 , 27, 4814-22	24	18
31	Palladium Nanoribbon Array for Fast Hydrogen Gas Sensing with Ultrahigh Sensitivity. <i>Advanced Materials</i> , 2015 , 27, 6945-52	24	37
30	Improvement of light out-coupling efficiency in organic light-emitting diodes with variable nanopatterns. <i>Electronic Materials Letters</i> , 2014 , 10, 27-29	2.9	14
29	Enhanced light absorption of silicon nanotube arrays for organic/inorganic hybrid solar cells. <i>Advanced Materials</i> , 2014 , 26, 3445-50	24	69
28	Hybrid Solar Cells: Enhanced Light Absorption of Silicon Nanotube Arrays for Organic/Inorganic Hybrid Solar Cells (Adv. Mater. 21/2014). <i>Advanced Materials</i> , 2014 , 26, 3567-3567	24	1
27	Fabrication of functional nanosized patterns with UV-curable polysilsesquioxane on photovoltaic protective glass substrates using hybrid nano-imprint lithography. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 5864-5869	7.1	16
26	Fabrication of transparent and flexible Ag three-dimensional mesh electrode by thermal roll-to-roll imprint lithography. <i>Journal of Nanoparticle Research</i> , 2014 , 16, 1	2.3	7
25	Fabrication of nano-structures on glass substrate by modified nano-imprint patterning with a plasma-induced surface-oxidized Cr mask. <i>Electronic Materials Letters</i> , 2014 , 10, 351-355	2.9	2
24	Replication of rose-petal surface structure using UV-nanoimprint lithography. <i>Materials Letters</i> , 2014 , 121, 170-173	3.3	36
23	Fabrication of a roll imprint stamp using zirconia for the UV roll imprinting process. <i>RSC Advances</i> , 2014 , 4, 52620-52623	3.7	3

22	Improved conversion efficiency of amorphous Si solar cells using a mesoporous ZnO pattern. <i>Nanoscale Research Letters</i> , 2014 , 9, 486	5	5
21	Nanosized patterned protective glass exhibiting high transmittance and self-cleaning effects for photovoltaic systems. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 1822-1827	1.6	12
20	Novel patterned layer to enhance conversion efficiency of amorphous silicon thin-film solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 1493-1498	1.6	3
19	Replication of surface nano-structure of the wing of dragonfly (<i>Pantala Flavescens</i>) using nano-molding and UV nanoimprint lithography. <i>Electronic Materials Letters</i> , 2013 , 9, 523-526	2.9	11
18	Fabrication of TiO ₂ nano-to-microscale structures using UV nanoimprint lithography. <i>Nanotechnology</i> , 2013 , 24, 195301	3.4	17
17	Fabrication of Superhydrophobic and Oleophobic Surfaces with Overhang Structure by Reverse Nanoimprint Lithography. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 24354-24359	3.8	115
16	Microstructure refinement of pulsed laser deposited La _{0.6} Sr _{0.4} CoO ₃ thin-film cathodes for solid oxide fuel cell. <i>Metals and Materials International</i> , 2013 , 19, 1347-1349	2.4	
15	A tunable method for nonwetting surfaces based on nanoimprint lithography and hydrothermal growth. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 8417	13	16
14	High-Brightness Vertical GaN-Based Light-Emitting Diodes With Hexagonally Close-Packed Micrometer Array Structures. <i>IEEE Photonics Journal</i> , 2013 , 5, 8200708-8200708	1.8	10
13	Large-area, scalable fabrication of conical TiN/GST/TiN nanoarray for low-power phase change memory. <i>Journal of Materials Chemistry</i> , 2012 , 22, 1347-1351		9
12	Fabrication of ZnO nano-structures using UV nanoimprint lithography of a ZnO nano-particle dispersion resin. <i>Journal of Materials Chemistry</i> , 2012 , 22, 20742		23
11	Fabrication of highly transparent self-cleaning protection films for photovoltaic systems. <i>Progress in Photovoltaics: Research and Applications</i> , 2012 , 21, n/a-n/a	6.8	10
10	Fabrication of photonic crystal structure on indium tin oxide electrode of GaN-based light-emitting diodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 480-483	1.6	14
9	Anti-reflection and hydrophobic characteristics of M-PDMS based moth-eye nano-patterns on protection glass of photovoltaic systems. <i>Progress in Photovoltaics: Research and Applications</i> , 2011 , 19, 339-344	6.8	45
8	Effect of the top electrode materials on the resistive switching characteristics of TiO ₂ thin film. <i>Journal of Applied Physics</i> , 2011 , 109, 124511	2.5	17
7	A Three-Dimensional Nanostructured Array of Protein Nanoparticles. <i>Advanced Functional Materials</i> , 2010 , 20, 4055-4061	15.6	18
6	Fabrication of moth-eye structure on p-GaN layer of GaN-based LEDs for improvement of light extraction. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009 , 163, 170-173	3.1	32
5	Physical and Microstructural Properties of NiO- and Ni-YSZ Composite Thin Films Fabricated by Pulsed-Laser Deposition at T ₇₀₀ °C. <i>Journal of the American Ceramic Society</i> , 2009 , 92, 3059-3064	3.8	42

4	Imprinted moth-eye antireflection patterns on glass substrate. <i>Electronic Materials Letters</i> , 2009 , 5, 39-42.9	43
3	Fabrication of sub-50 nm Au nanowires using thermally curing nanoimprint lithography. <i>Electronic Materials Letters</i> , 2009 , 5, 139-143	2.9 14
2	Switching behavior of indium selenide-based phase-change memory cell. <i>IEEE Transactions on Magnetics</i> , 2005 , 41, 1034-1036	2 42
1	Transparent, Flexible, and Low-Operating-Voltage Resistive Switching Memory Based on Al ₂ O ₃ /IZO Multilayer. <i>Global Challenges</i> , 2100118	4.3 0