Heon Lee

List of Publications by Year in descending order

118 papers	4,972 citations	134610 34 h-index	111975 67 g-index
120 all docs	120 docs citations	120 times ranked	7057 citing authors

#	Article	IF	Citations
1	Highly suppressed solar absorption in a daytime radiative cooler designed by genetic algorithm. Nanophotonics, 2022, 11, 2107-2115.	2.9	29
2	Selectively emissive fluoropolymer film for passive daytime radiative cooling. Optical Materials, 2022, 128, 112273.	1.7	13
3	Development of a device for characterizing radiative cooling performance. Applied Thermal Engineering, 2022, 213, 118744.	3.0	7
4	CaCO3 micro particle-based radiative cooling device without metal reflector for entire day. Materials Today Communications, 2022, 32, 103990.	0.9	7
5	Colored emitters with silica-embedded perovskite nanocrystals for efficient daytime radiative cooling. Nano Energy, 2021, 79, 105461.	8.2	82
6	Sub-ambient daytime radiative cooling by silica-coated porous anodic aluminum oxide. Nano Energy, 2021, 79, 105426.	8.2	113
7	Optimization and performance analysis of a multilayer structure for daytime radiative cooling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 260, 107475.	1.1	16
8	Broadband Metaâ€Absorber with Au/Ni Coreâ€“Shell Nanowires for Solar Vapor Generator. Advanced Sustainable Systems, 2021, 5, 2000217.	2.7	4
9	Periodic Micropillarâ€Patterned FTO/BiVO₄ with Superior Light Absorption and Separation Efficiency for Efficient PEC Performance. Small, 2021, 17, e2006558.	5.2	19
10	Visibly Transparent Radiative Cooler under Direct Sunlight. Advanced Optical Materials, 2021, 9, 2002226.	3.6	66
11	Spectrally Selective Nanoparticle Mixture Coating for Passive Daytime Radiative Cooling. ACS Applied Materials & Interfaces, 2021, 13, 21119-21126.	4.0	71
12	Holographic metasurface gas sensors for instantaneous visual alarms. Science Advances, 2021, 7, .	4.7	149
13	High thermoelectric figure of merit of porous Si nanowires from 300 to 700â€‰K. Nature Communications, 2021, 12, 3926.	5.8	26
14	Ultra-thin and high selective emission with additional lossless layer. , 2021, , .		0
15	Magnetic Control and Realâ€Time Monitoring of Stem Cell Differentiation by the Ligand Nanoassembly. Small, 2021, 17, e2102892.	5.2	22
16	Ultra-thin and near-unity selective emitter for efficient cooling. Optics Express, 2021, 29, 31364.	1.7	10
17	Three-dimensional electronic microfliers inspired by wind-dispersed seeds. Nature, 2021, 597, 503-510.	13.7	120
18	Colloidal deposition of colored daytime radiative cooling films using nanoparticle-based inks. Materials Today Physics, 2021, 21, 100510.	2.9	22

#	Article	IF	Citations
19	Printable Nanocomposite Metalens for High-Contrast Near-Infrared Imaging. ACS Nano, 2021, 15, 698-706.	7.3	89
20	Fully blossomed WO3/BiVO4 structure obtained via active facet engineering of patterned FTO for highly efficient Water splitting. Applied Catalysis B: Environmental, 2020, 263, 118362.	10.8	44
21	Design of high transmission color filters for solar cells directed by deep Q-learning. Solar Energy, 2020, 195, 670-676.	2.9	28
22	Structured BiVO₄ Photoanode Fabricated via Sputtering for Large Areas and Enhanced Photoelectrochemical Performance. ACS Sustainable Chemistry and Engineering, 2020, 8, 17923-17932.	3.2	15
23	Multifunctional Daytime Radiative Cooling Devices with Simultaneous Light-Emitting and Radiative Cooling Functional Layers. ACS Applied Materials & Interfaces, 2020, 12, 54763-54772.	4.0	60
24	A Janus emitter for passive heat release from enclosures. Science Advances, 2020, 6, .	4.7	116
25	Highâ€Performance Daytime Radiative Cooler and Nearâ€Ideal Selective Emitter Enabled by Transparent Sapphire Substrate. Advanced Science, 2020, 7, 2001577.	5.6	42
26	Cross-Linked Porous Polymeric Coating without a Metal-Reflective Layer for Sub-Ambient Radiative Cooling. ACS Applied Materials & Interfaces, 2020, 12, 57832-57839.	4.0	56
27	Single-step manufacturing of hierarchical dielectric metalens in the visible. Nature Communications, 2020, 11, 2268.	5.8	172
28	Triple layered Ga₂O₃/Cu₂O/Au photoanodes with enhanced photoactivity and stability prepared using iron nickel oxide catalysts. Journal of Materials Chemistry A, 2020, 8, 10966-10972.	5.2	5
29	Highly Efficient Tandem White OLED Using a Hollow Structure. Advanced Materials Interfaces, 2020, 7, 1901509.	1.9	15
30	Spectrally Selective Inorganic-Based Multilayer Emitter for Daytime Radiative Cooling. ACS Applied Materials & Interfaces, 2020, 12, 8073-8081.	4.0	195
31	Acrylic membrane doped with Al2O3 nanoparticle resonators for zero-energy consuming radiative cooling. Solar Energy Materials and Solar Cells, 2020, 213, 110561.	3.0	58
32	Fabrication of perovskite solar cell with high short-circuit current density (JSC) using moth-eye structure of SiOX. Nano Research, 2020, 13, 1156-1161.	5.8	17
33	Deep Q-network to produce polarization-independent perfect solar absorbers: a statistical report. Nano Convergence, 2020, 7, 26.	6.3	16
34	Double-deep Q-learning to increase the efficiency of metasurface holograms. Scientific Reports, 2019, 9, 10899.	1.6	64
35	Enhanced long-term stability of perovskite solar cells by passivating grain boundary with polydimethylsiloxane (PDMS). Journal of Materials Chemistry A, 2019, 7, 20832-20839.	5.2	31
36	Methylammonium Chloride Induces Intermediate Phase Stabilization for Efficient Perovskite Solar Cells. Joule, 2019, 3, 2179-2192.	11.7	1,228

#	Article	IF	Citations
37	Facile Nanocasting of Dielectric Metasurfaces with Sub-100 nm Resolution. ACS Applied Materials & Interfaces, 2019, 11, 26109-26115.	4.0	57
38	Simultaneous Improvement of Absorption and Separation Efficiencies of Mo:BiVO₄ Photoanodes via Nanopatterned SnO₂/Au Hybrid Layers. ACS Sustainable Chemistry and Engineering, 2019, 7, 17000-17007.	3.2	7
39	Generation of highly integrated multiple vivid colours using a three-dimensional broadband perfect absorber. Scientific Reports, 2019, 9, 14859.	1.6	11
40	Design of a Broadband Solar Thermal Absorber Using a Deep Neural Network and Experimental Demonstration of Its Performance. Scientific Reports, 2019, 9, 15028.	1.6	17
41	A review on the fabrication and applications of sub-wavelength anti-reflective surfaces based on biomimetics. Applied Spectroscopy Reviews, 2019, 54, 719-735.	3.4	16
42	Improvement of perovskite crystallinity by omnidirectional heat transfer via radiative thermal annealing. RSC Advances, 2019, 9, 14868-14875.	1.7	6
43	Solution-Processable Nanocrystal-Based Broadband Fabryâ€“Perot Absorber for Reflective Vivid Color Generation. ACS Applied Materials & Interfaces, 2019, 11, 7280-7287.	4.0	37
44	Selectively patterned TiO2 nanorods as electron transport pathway for high performance perovskite solar cells. Nano Research, 2019, 12, 601-606.	5.8	14
45	Long-term analysis of PV module with large-area patterned anti-reflective film. Renewable Energy, 2019, 135, 525-528.	4.3	20
46	Dual pattern for enhancing light extraction efficiency of white organic light-emitting diodes. Organic Electronics, 2018, 57, 201-205.	1.4	14
47	Hexagonal array micro-convex patterned substrate for improving diffused transmittance in perovskite solar cells. Thin Solid Films, 2018, 660, 682-687.	0.8	6
48	Enhanced blue responses in nanostructured Si solar cells by shallow doping. Journal Physics D: Applied Physics, 2018, 51, 125102.	1.3	5
49	Nanoâ€•and Microâ€Sized Fe₂O₃ Structures Fabricated by UV Imprint Lithography. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700948.	0.8	3
50	Realization of Wafer-Scale Hyperlens Device for Sub-diffractional Biomolecular Imaging. ACS Photonics, 2018, 5, 2549-2554.	3.2	50
51	A galvanically replaced composite nanocrystal based metamaterials for plasmonic applications â€“ Metamaterials 2018. , 2018, , .		0
52	Fabrication of Al2O3 nano-micro patterns by Al2O3 dispersion resin using UV imprint lithography. Thin Solid Films, 2018, 660, 428-433.	0.8	5
53	Spontaneous Registration of Sub-10 nm Features Based on Subzero Celsius Spin-Casting of Self-Assembling Building Blocks Directed by Chemically Encoded Surfaces. ACS Nano, 2018, 12, 8224-8233.	7.3	6
54	Chemically Engineered Auâ€“Ag Plasmonic Nanostructures to Realize Large Area and Flexible Metamaterials. ACS Applied Materials & Interfaces, 2018, 10, 25652-25659.	4.0	14

#	Article	IF	Citations
55	Demonstration of nanoimprinted hyperlens array for high-throughput sub-diffraction imaging. Scientific Reports, 2017, 7, 46314.	1.6	40
56	Electrochemically Induced Shape-Memory Behavior of Si Nanopillar-Patterned Electrode for Li Ion Batteries. Journal of Physical Chemistry Letters, 2017, 8, 2100-2106.	2.1	5
57	High-Temperatureâ€“Short-Time Annealing Process for High-Performance Large-Area Perovskite Solar Cells. ACS Nano, 2017, 11, 6057-6064.	7.3	142
58	Air void optical scattering structure for high-brightness organic light emitting diodes. Ceramics International, 2017, 43, S455-S459.	2.3	5
59	Analysis of long-term monitoring data of PV module with SiOx-based anti-reflective patterned protective glass. Solar Energy Materials and Solar Cells, 2017, 170, 33-38.	3.0	17
60	Metalâ€“Organic Framework-Templated PdO-Co₃O₄ Nanocubes Functionalized by SWCNTs: Improved NO₂ Reaction Kinetics on Flexible Heating Film. ACS Applied Materials & Interfaces, 2017, 9, 40593-40603.	4.0	55
61	Fabrication of parabolic Si nanostructures by nanosphere lithography and its application for solar cells. Scientific Reports, 2017, 7, 7336.	1.6	26
62	Microwave welding of silver nanowires for highly transparent conductive electrodes. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600908.	0.8	8
63	Preparation of Nanostructured SnO2 Thick Films Onto Patterned Pt Electrodes by Ink Dropping and Plasma Surface Treatment for CO Gas Sensor. Journal of Nanoscience and Nanotechnology, 2016, 16, 11292-11297.	0.9	1
64	Broadband Solar Thermal Absorber Based on Optical Metamaterials for Highâ€Temperature Applications. Advanced Optical Materials, 2016, 4, 1265-1273.	3.6	69
65	Parallel Aligned Mesopore Arrays in Pyramidal-Shaped Gallium Nitride and Their Photocatalytic Applications. ACS Applied Materials & Interfaces, 2016, 8, 18201-18207.	4.0	18
66	Locally placed nanoscale gold islands film within a TiO2 photoanode for enhanced plasmon light absorption in dye sensitized solar cells. Nano Convergence, 2016, 3, 33.	6.3	5
67	Formation of Magnetic Anisotropy by Lithography. Scientific Reports, 2016, 6, 26709.	1.6	6
68	Highly Bendable In-Ga-ZnO Thin Film Transistors by Using a Thermally Stable Organic Dielectric Layer. Scientific Reports, 2016, 6, 37764.	1.6	35
69	InGaN-based photoanode with ZnO nanowires for water splitting. Nano Convergence, 2016, 3, 34.	6.3	7
70	A transparent embedded Cu/Au-nanomesh electrode on flexible polymer film substrates. RSC Advances, 2016, 6, 92970-92974.	1.7	8
71	Effect of Si nanostructures on PEDOT:PSS Si hybrid solar cells. Thin Solid Films, 2016, 616, 335-338.	0.8	10
72	Fabrication of a transparent conducting Ni-nanomesh-embedded film using template-assisted Ni electrodeposition and hot transfer process. RSC Advances, 2016, 6, 81814-81817.	1.7	3

#	Article	IF	Citations
73	Hierarchical ZnO Nanowires-loaded Sb-doped SnO2-ZnO Micrograting Pattern via Direct Imprinting-assisted Hydrothermal Growth and Its Selective Detection of Acetone Molecules. Scientific Reports, 2016, 6, 18731.	1.6	32
74	Scattering Optical Elements: Stand-Alone Optical Elements Exploiting Multiple Light Scattering. ACS Nano, 2016, 10, 6871-6876.	7.3	15
75	Direct patterning process for tungsten trioxide nano-to-micro structures. Applied Spectroscopy Reviews, 2016, 51, 582-591.	3.4	4
76	High Performance of Planar Perovskite Solar Cells Produced from PbI₂(DMSO) and PbI₂(NMP) Complexes by Intramolecular Exchange. Advanced Materials Interfaces, 2016, 3, 1500768.	1.9	206
77	Two-dimensional metal-dielectric hybrid-structured film with titanium oxide for enhanced visible light absorption and photo-catalytic application. Nano Energy, 2016, 21, 115-122.	8.2	21
78	Structural Evolution of Chemically-Driven RuO2 Nanowires and 3-Dimensional Design for Photo-Catalytic Applications. Scientific Reports, 2015, 5, 11933.	1.6	19
79	Effect of the Shape of Nanometer-scaled Patterns on Sapphire Substrate on the Efficiency of Light Emitting Diode. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2015, 28, 541-545.	0.1	2
80	In Situ Nanolithography with Subâ€10 nm Resolution Realized by Thermally Assisted Spinâ€Casting of a Selfâ€Assembling Polymer. Advanced Materials, 2015, 27, 4814-4822.	11.1	20
81	Palladium Nanoribbon Array for Fast Hydrogen Gas Sensing with Ultrahigh Sensitivity. Advanced Materials, 2015, 27, 6945-6952.	11.1	50
82	Fabrication of rigid stamp on a cylindrical substrate using hydrogen silsesquioxane/ZrO2 nanoparticle composite material for roll-to-roll nanoimprinting process. Journal of Sol-Gel Science and Technology, 2015, 73, 628-633.	1.1	3
83	Enhancement in performance of optoelectronic devices by optical-functional patterns. Applied Physics A: Materials Science and Processing, 2015, 121, 377-386.	1.1	2
84	Fabrication of superhydrophobic surfaces with nano-in-micro structures using UV-nanoimprint lithography and thermal shrinkage films. Applied Surface Science, 2015, 349, 169-173.	3.1	70
85	Improved conversion efficiency of amorphous Si solar cells using a mesoporous ZnO pattern. Nanoscale Research Letters, 2014, 9, 486.	3.1	5
86	Nanosized patterned protective glass exhibiting high transmittance and self-cleaning effects for photovoltaic systems. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1822-1827.	0.8	14
87	Novel patterned layer to enhance conversion efficiency of amorphous silicon thinâ€film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1493-1498.	0.8	3
88	Improvement of light out-coupling efficiency in organic light-emitting diodes with variable nanopatterns. Electronic Materials Letters, 2014, 10, 27-29.	1.0	16
89	Enhanced Light Absorption of Silicon Nanotube Arrays for Organic/Inorganic Hybrid Solar Cells. Advanced Materials, 2014, 26, 3445-3450.	11.1	72
90	Hybrid Solar Cells: Enhanced Light Absorption of Silicon Nanotube Arrays for Organic/Inorganic Hybrid Solar Cells (Adv. Mater. 21/2014). Advanced Materials, 2014, 26, 3567-3567.	11.1	2

#	Article	IF	Citations
91	Fabrication of functional nanosized patterns with UV-curable polysilsesquioxane on photovoltaic protective glass substrates using hybrid nano-imprint lithography. Journal of Materials Chemistry C, 2014, 2, 5864-5869.	2.7	17
92	Fabrication of transparent and flexible Ag three-dimensional mesh electrode by thermal roll-to-roll imprint lithography. Journal of Nanoparticle Research, 2014, 16, 1.	0.8	7
93	Fabrication of nano-structures on glass substrate by modified nano-imprint patterning with a plasma-induced surface-oxidized Cr mask. Electronic Materials Letters, 2014, 10, 351-355.	1.0	3
94	Replication of rose-petal surface structure using UV-nanoimprint lithography. Materials Letters, 2014, 121, 170-173.	1.3	51
95	Fabrication of a roll imprint stamp using zirconia for the UV roll imprinting process. RSC Advances, 2014, 4, 52620-52623.	1.7	3
96	Fabrication of highly transparent selfâ€cleaning protection films for photovoltaic systems. Progress in Photovoltaics: Research and Applications, 2013, 21, 1056-1062.	4.4	14
97	Replication of surface nano-structure of the wing of dragonfly (Pantala Flavescens) using nano-molding and UV nanoimprint lithography. Electronic Materials Letters, 2013, 9, 523-526.	1.0	12
98	Fabrication of TiO₂nano-to-microscale structures using UV nanoimprint lithography. Nanotechnology, 2013, 24, 195301.	1.3	19
99	Fabrication of Superhydrophobic and Oleophobic Surfaces with Overhang Structure by Reverse Nanoimprint Lithography. Journal of Physical Chemistry C, 2013, 117, 24354-24359.	1.5	140
100	Microstructure refinement of pulsed laser deposited La0.6Sr0.4CoO3â^'Î´ thin-film cathodes for solid oxide fuel cell. Metals and Materials International, 2013, 19, 1347-1349.	1.8	0
101	A tunable method for nonwetting surfaces based on nanoimprint lithography and hydrothermal growth. Journal of Materials Chemistry A, 2013, 1, 8417.	5.2	17
102	High-Brightness Vertical GaN-Based Light-Emitting Diodes With Hexagonally Close-Packed Micrometer Array Structures. IEEE Photonics Journal, 2013, 5, 8200708-8200708.	1.0	11
103	Large-area, scalable fabrication of conical TiN/GST/TiN nanoarray for low-power phase change memory. Journal of Materials Chemistry, 2012, 22, 1347-1351.	6.7	9
104	Fabrication of ZnO nano-structures using UV nanoimprint lithography of a ZnO nano-particle dispersion resin. Journal of Materials Chemistry, 2012, 22, 20742.	6.7	26
105	Fabrication of photonic crystal structure on indium tin oxide electrode of GaNâ€based lightâ€emitting diodes. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 480-483.	0.8	17
106	Antiâ€reflection and hydrophobic characteristics of Mâ€PDMS based mothâ€eye nanoâ€patterns on protection glass of photovoltaic systems. Progress in Photovoltaics: Research and Applications, 2011, 19, 339-344.	4.4	48
107	Effect of the top electrode materials on the resistive switching characteristics of TiO2 thin film. Journal of Applied Physics, 2011, 109, 124511.	1.1	20
108	A Threeâ€Dimensional Nanostructured Array of Protein Nanoparticles. Advanced Functional Materials, 2010, 20, 4055-4061.	7.8	18

#	Article	IF	Citations
109	Fabrication of moth-eye structure on p-GaN layer of GaN-based LEDs for improvement of light extraction. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 163, 170-173.	1.7	37
110	Physical and Microstructural Properties of NiOâ€•and Niâ€YSZ Composite Thin Films Fabricated by Pulsedâ€Laser Deposition at Tâ‰700Â°C. Journal of the American Ceramic Society, 2009, 92, 3059-3064.	1.9	45
111	Imprinted Moth-Eye Antireflection Patterns on Glass Substrate. Electronic Materials Letters, 2009, 5, 39-42.	1.0	49
112	Fabrication of Sub-50 nm Au Nanowires using Thermally Curing Nanoimprint Lithography. Electronic Materials Letters, 2009, 5, 139-143.	1.0	18
113	Enhanced light extraction of light-emitting diodes with photonic crystal pattern fabricated by nanoimprint. , 2008, , .		0
114	Sub-50nm featured polymer stamp fabrication for UV nanoimprint lithography. , 2007, , .		0
115	Fabrication of photonic crystal-patterned light emitting diodes using nanoimprint lithography. , 2007, , .		0
116	Switching behavior of indium selenide-based phase-change memory cell. IEEE Transactions on Magnetics, 2005, 41, 1034-1036.	1.2	53
117	Fabrication of Nanosize Patterned Substrates using Nano Imprinting Lithography. , 0, , .		0
118	Transparent, Flexible, and Lowâ€Operatingâ€Voltage Resistive Switching Memory Based on Al ₂ O ₃ /IZO Multilayer. Global Challenges, 0, , 2100118.	1.8	5