Jonghwa Shin

List of Publications by Year in descending order

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74 papers	2,974 citations	159525 30 h-index	161767 54 g-index
75 all docs	75 docs citations	75 times ranked	4086 citing authors

#	Article	IF	Citations
1	A terahertz metamaterial with unnaturally high refractive index. Nature, 2011, 470, 369-373.	13.7	551
2	Subwavelength light focusing using random nanoparticles. Nature Photonics, 2013, 7, 454-458.	15.6	160
3	Highly tunable refractive index visible-light metasurface from block copolymer self-assembly. Nature Communications, 2016, 7, 12911.	5.8	143
4	Auâ€“Ag Coreâ€“Shell Nanoparticle Array by Block Copolymer Lithography for Synergistic Broadband Plasmonic Properties. ACS Nano, 2015, 9, 5536-5543.	7.3	130
5	Three-Dimensional Metamaterials with an Ultrahigh Effective Refractive Index over a Broad Bandwidth. Physical Review Letters, 2009, 102, 093903.	2.9	128
6	One-Dimensional Metal Nanowire Assembly via Block Copolymer Soft Graphoepitaxy. Nano Letters, 2010, 10, 3500-3505.	4.5	102
7	Multicomponent Nanopatterns by Directed Block Copolymer Self-Assembly. ACS Nano, 2013, 7, 8899-8907.	7.3	99
8	Synergistic Concurrent Enhancement of Charge Generation, Dissociation, and Transport in Organic Solar Cells with Plasmonic Metalâ€“Carbon Nanotube Hybrids. Advanced Materials, 2015, 27, 1519-1525.	11.1	85
9	Aluminum Nanoarrays for Plasmon-Enhanced Light Harvesting. ACS Nano, 2015, 9, 6206-6213.	7.3	82
10	Full-Field Subwavelength Imaging Using a Scattering Superlens. Physical Review Letters, 2014, 113, 113901.	2.9	81
11	Directional Photofluidization Lithography for Nanoarchitectures with Controlled Shapes and Sizes. Nano Letters, 2010, 10, 296-304.	4.5	72
12	Musselâ€Inspired Plasmonic Nanohybrids for Light Harvesting. Advanced Materials, 2014, 26, 4463-4468.	11.1	72
13	Ultralarge Area Sub-10 nm Plasmonic Nanogap Array by Block Copolymer Self-Assembly for Reliable High-Sensitivity SERS. ACS Applied Materials & Interfaces, 2018, 10, 44660-44667.	4.0	59
14	Flexible Near-Field Nanopatterning with Ultrathin, Conformal Phase Masks on Nonplanar Substrates for Biomimetic Hierarchical Photonic Structures. ACS Nano, 2016, 10, 4609-4617.	7.3	58
15	Laser Synthesis of MOF-Derived Ni@Carbon for High-Performance Pseudocapacitors. ACS Applied Materials & Interfaces, 2020, 12, 39154-39162.	4.0	56
16	Fabrication of the Funnel-Shaped Three-Dimensional Plasmonic Tip Arrays by Directional Photofluidization Lithography. ACS Nano, 2010, 4, 7175-7184.	7.3	52
17	Cut-Through Metal Slit Array as an Anisotropic Metamaterial Film. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1116-1122.	1.9	51
18	Broadband giant-refractive-index material based on mesoscopic space-filling curves. Nature Communications, 2016, 7, 12661.	5.8	51

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19	Extraordinary Magnetic Field Enhancement with Metallic Nanowire: Role of Surface Impedance in Babinetâ€™s Principle for Sub-Skin-Depth Regime. Physical Review Letters, 2009, 103, 263901.	2.9	49
20	Broadband metamaterials and metasurfaces: a review from the perspectives of materials and devices. Nanophotonics, 2020, 9, 3165-3196.	2.9	49
21	Designing air-core photonic-bandgap fibers free of surface modes. IEEE Journal of Quantum Electronics, 2004, 40, 551-556.	1.0	44
22	Deterministic Nanotexturing by Directional Photofluidization Lithography. Advanced Materials, 2011, 23, 3244-3250.	11.1	37
23	Optical vortex arrays from smectic liquid crystals. Optics Express, 2014, 22, 4699.	1.7	37
24	Anomalous Rapid Defect Annihilation in Self-Assembled Nanopatterns by Defect Melting. Nano Letters, 2015, 15, 1190-1196.	4.5	37
25	Self-aligned deterministic coupling of single quantum emitter to nanofocused plasmonic modes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5280-5285.	3.3	36
26	Highâ€Contrast Optical Modulation from Strainâ€Induced Nanogaps at 3D Heterogeneous Interfaces. Advanced Science, 2020, 7, 1903708.	5.6	36
27	Simple geometric criterion to predict the existence of surface modes in air-core photonic-bandgap fibers. Optics Express, 2004, 12, 1864.	1.7	34
28	Conditions for self-collimation in three-dimensional photonic crystals. Optics Letters, 2005, 30, 2397.	1.7	34
29	Direct Chemical Synthesis of Plasmonic Black Colloidal Gold Superparticles with Broadband Absorption Properties. Nano Letters, 2018, 18, 5927-5932.	4.5	34
30	Metal Nanoparticle Array as a Tunable Refractive Index Material over Broad Visible and Infrared Wavelengths. ACS Photonics, 2018, 5, 1188-1195.	3.2	32
31	Three-dimensional electromagnetic metamaterials that homogenize to uniform non-Maxwellian media. Physical Review B, 2007, 76, .	1.1	31
32	Optical effective media with independent control of permittivity and permeability based on conductive particles. Applied Physics Letters, 2016, 109, .	1.5	27
33	Complex Highâ€Aspectâ€Ratio Metal Nanostructures by Secondary Sputtering Combined with Block Copolymer Selfâ€Assembly. Advanced Materials, 2016, 28, 8439-8445.	11.1	26
34	Simulations of the effect of the core ring on surface and air-core modes in photonic bandgap fibers. Optics Express, 2004, 12, 3436.	1.7	24
35	Machine learning assisted synthesis of lithium-ion batteries cathode materials. Nano Energy, 2022, 98, 107214.	8.2	24
36	Transferrable Plasmonic Au Thin Film Containing Sub-20 nm Nanohole Array Constructed via High-Resolution Polymer Self-Assembly and Nanotransfer Printing. ACS Applied Materials & Interfaces, 2018, 10, 2216-2223.	4.0	22

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37	Colloidal deposition of colored daytime radiative cooling films using nanoparticle-based inks. Materials Today Physics, 2021, 21, 100510.	2.9	22
38	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
39	Extreme anti-reflection enhanced magneto-optic Kerr effect microscopy. Nature Communications, 2020, 11, 5937.	5.8	21
40	All-Color Sub-ambient Radiative Cooling Based on Photoluminescence. ACS Photonics, 2022, 9, 1196-1205.	3.2	21
41	Fast and bright spontaneous emission of Er3+ ions in metallic nanocavity. Nature Communications, 2015, 6, 7080.	5.8	19
42	Nanodomain Swelling Block Copolymer Lithography for Morphology Tunable Metal Nanopatterning. Small, 2014, 10, 3742-3749.	5.2	18
43	Bimodal phase separated block copolymer/homopolymer blends self-assembly for hierarchical porous metal nanomesh electrodes. Nanoscale, 2018, 10, 100-108.	2.8	17
44	Directional radiation for optimal radiative cooling. Optics Express, 2021, 29, 8376.	1.7	17
45	Ideal spectral emissivity for radiative cooling of earthbound objects. Scientific Reports, 2020, 10, 13038.	1.6	15
46	Ultrawideband electromagnetic metamaterial absorber utilizing coherent absorptions and surface plasmon polaritons based on double layer carbon metapatterns. Scientific Reports, 2021, 11, 23045.	1.6	15
47	Mechanoresponsive scatterers for high-contrast optical modulation. Nanophotonics, 2022, 11, 2737-2762.	2.9	14
48	Two-dimensionally relocatable microfiber-coupled photonic crystal resonator. Optics Express, 2009, 17, 13009.	1.7	13
49	Photolithographic realization of target nanostructures in 3D space by inverse design of phase modulation. Science Advances, 2022, 8, .	4.7	12
50	One-way optical modal transition based on causality in momentum space. Optics Express, 2015, 23, 24997.	1.7	11
51	Bright and vivid plasmonic color filters having dual resonance modes with proper orthogonality. Optics Express, 2018, 26, 27403.	1.7	9
52	Signal self-enhancement by coordinated assembly of gold nanoparticles enables accurate one-step-immunoassays. Nanoscale, 2017, 9, 16476-16484.	2.8	8
53	Self-Assembled Nanoâ€“Lotus Pod Metasurface for Light Trapping. ACS Photonics, 2021, 8, 1616-1622.	3.2	8
54	Finite-difference time-domain analysis of increased penetration depth in optical coherence tomography by wavefront shaping. Biomedical Optics Express, 2018, 9, 3883.	1.5	7

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55	A General Recipe for Nondispersive Optical Activity in Bilayer Chiral Metamaterials. Advanced Optical Materials, 2019, 7, 1801729.	3.6	7
56	Conditions for designing single-mode air-core waveguides in three-dimensional photonic crystals. Applied Physics Letters, 2006, 89, 161103.	1.5	6
57	Negativeâ€Tone Block Copolymer Lithography by In Situ Surface Chemical Modification. Small, 2014, 10, 4207-4212.	5.2	6
58	Mimicking bio-mechanical principles in photonic metamaterials for giant broadband nonlinearity. Communications Physics, 2020, 3, .	2.0	6
59	Fabrication and characterization of resistive double square loop arrays for ultra-wide bandwidth microwave absorption. Scientific Reports, 2021, 11, 12767.	1.6	6
60	Optical recoil of asymmetric nano-optical antenna. Optics Express, 2011, 19, 14929.	1.7	5
61	Pyramidal Metalâ€“dielectric hybrid-structure geometry with an asymmetric TiO2 layer for broadband light absorption and photocatalytic applications. Nano Energy, 2018, 53, 468-474.	8.2	5
62	Photo-stimulated charge transfer in contact electrification coupled with plasmonic excitations. Nano Energy, 2019, 65, 104031.	8.2	5
63	Data-driven concurrent nanostructure optimization based on conditional generative adversarial networks. Nanophotonics, 2022, 11, 2865-2873.	2.9	4
64	Transmission Through a Scalar Wave Three-Dimensional Electromagnetic Metamaterial and the Implication for Polarization Control. Journal of Nanoscience and Nanotechnology, 2010, 10, 1737-1740.	0.9	3
65	Frequency selective heterojunction metal-insulator-metal mirror for surface plasmons. Physical Review B, 2011, 83, .	1.1	3
66	Near-atomically flat, chemically homogeneous, electrically conductive optical metasurface. Nanoscale, 2019, 11, 9580-9586.	2.8	2
67	Spectrally sharp metasurfaces for wide-angle high extinction of green lasers. Optics Express, 2020, 28, 22121.	1.7	2
68	Photonic topological Lifshitz interfaces. Nanophotonics, 2022, 11, 1211-1217.	2.9	1
69	Photofluidic Nanotexturing: Deterministic Nanotexturing by Directional Photofluidization Lithography (Adv. Mater. 29/2011). Advanced Materials, 2011, 23, 3243-3243.	11.1	0
70	Nanostructures: Musselâ€Inspired Plasmonic Nanohybrids for Light Harvesting (Adv. Mater. 26/2014). Advanced Materials, 2014, 26, 4596-4596.	11.1	0
71	Anisotropic dielectric metamaterial slab as a single-material large-acceptance-angle anti-reflection layer for high-temperature applications. , 2015, , .		0
72	Metamaterial-based light diffuser with deep-subwavelength thickness. , 2015, , .		0

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73	Mie resonator method for reliable permittivity measurement of loss-less ceramics in microwave frequency at high temperature. Journal of Applied Physics, 2019, 126, 094101.	1.1	0
74	Subwavelength Light Control via Wavefront Shaping in Complex Media. , 2013, , .		0