

Trevon Badloe

List of Publications by Year in descending order

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59
papers

3,825
citations

94269

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h-index

138251

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all docs

59
docs citations

59
times ranked

1914
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep learning enabled inverse design in nanophotonics. <i>Nanophotonics</i> , 2020, 9, 1041-1057.	2.9	295
2	Electromagnetic chirality: from fundamentals to nontraditional chiroptical phenomena. <i>Light: Science and Applications</i> , 2020, 9, 139.	7.7	231
3	Nanophotonics for light detection and ranging technology. <i>Nature Nanotechnology</i> , 2021, 16, 508-524.	15.6	213
4	Hyperbolic metamaterials: fusing artificial structures to natural 2D materials. <i>ELight</i> , 2022, 2, .	11.9	190
5	Pixelated bifunctional metasurface-driven dynamic vectorial holographic color prints for photonic security platform. <i>Nature Communications</i> , 2021, 12, 3614.	5.8	176
6	Holographic metasurface gas sensors for instantaneous visual alarms. <i>Science Advances</i> , 2021, 7, .	4.7	149
7	Metasurface-Driven Optically Variable Devices. <i>Chemical Reviews</i> , 2021, 121, 13013-13050.	23.0	125
8	Sub-ambient daytime radiative cooling by silica-coated porous anodic aluminum oxide. <i>Nano Energy</i> , 2021, 79, 105426.	8.2	113
9	Optimisation of colour generation from dielectric nanostructures using reinforcement learning. <i>Optics Express</i> , 2019, 27, 5874.	1.7	112
10	Tunable metasurfaces towards versatile metalenses and metaholograms: a review. <i>Advanced Photonics</i> , 2022, 4, .	6.2	108
11	Spectral Modulation through the Hybridization of Mie-Scatterers and Quasi-Guided Mode Resonances: Realizing Full and Gradients of Structural Color. <i>ACS Nano</i> , 2020, 14, 15317-15326.	7.3	98
12	A Spin-Encoded All-Dielectric Metahologram for Visible Light. <i>Laser and Photonics Reviews</i> , 2019, 13, 1900065.	4.4	95
13	Electrically Tunable Bifocal Metalens with Diffraction-Limited Focusing and Imaging at Visible Wavelengths. <i>Advanced Science</i> , 2021, 8, e2102646.	5.6	89
14	Photonic Encryption Platform via Dual-Band Vectorial Metaholograms in the Ultraviolet and Visible. <i>ACS Nano</i> , 2022, 16, 3546-3553.	7.3	87
15	Metamaterial-Based Radiative Cooling: Towards Energy-Free All-Day Cooling. <i>Energies</i> , 2019, 12, 89.	1.6	85
16	Optical spin-symmetry breaking for high-efficiency directional helicity-multiplexed metaholograms. <i>Microsystems and Nanoengineering</i> , 2021, 7, 5.	3.4	81
17	Liquid crystal-powered Mie resonators for electrically tunable photorealistic color gradients and dark blacks. <i>Light: Science and Applications</i> , 2022, 11, 118.	7.7	73
18	Giant chiro-optical responses in multipolar-resonances-based single-layer dielectric metasurfaces. <i>Photonics Research</i> , 2021, 9, 1667.	3.4	71

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19	Revealing Structural Disorder in Hydrogenated Amorphous Silicon for a Low-Loss Photonic Platform at Visible Frequencies. <i>Advanced Materials</i> , 2021, 33, e2005893.	11.1	69
20	Nanostructured chromium-based broadband absorbers and emitters to realize thermally stable solar thermophotovoltaic systems. <i>Nanoscale</i> , 2022, 14, 6425-6436.	2.8	69
21	Metasurfaces-Based Absorption and Reflection Control: Perfect Absorbers and Reflectors. <i>Journal of Nanomaterials</i> , 2017, 2017, 1-18.	1.5	65
22	Nanoimprint lithography for high-throughput fabrication of metasurfaces. <i>Frontiers of Optoelectronics</i> , 2021, 14, 229-251.	1.9	65
23	Novel Spin-Decoupling Strategy in Liquid Crystal-Integrated Metasurfaces for Interactive Metadisplays. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	65
24	Effect of temperature on the oxidation of Cu nanowires and development of an easy to produce, oxidation-resistant transparent conducting electrode using a PEDOT:PSS coating. <i>Scientific Reports</i> , 2018, 8, 10639.	1.6	59
25	Tunable Metasurfaces: The Path to Fully Active Nanophotonics. <i>Advanced Photonics Research</i> , 2021, 2, 2000205.	1.7	57
26	Biomimetic ultra-broadband perfect absorbers optimised with reinforcement learning. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2337-2342.	1.3	56
27	Geometric and physical configurations of meta-atoms for advanced metasurface holography. <i>Informa Mater</i> , 2021, 3, 739-754.	8.5	56
28	Near-zero reflection of all-dielectric structural coloration enabling polarization-sensitive optical encryption with enhanced switchability. <i>Nanophotonics</i> , 2020, 10, 919-926.	2.9	55
29	Metasurfaces-based imaging and applications: from miniaturized optical components to functional imaging platforms. <i>Nanoscale Advances</i> , 2020, 2, 605-625.	2.2	52
30	Single-Step Fabricable Flexible Metadisplays for Sensitive Chemical/Biomedical Packaging Security and Beyond. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 31194-31202.	4.0	52
31	Realization of Wafer-Scale Hyperlens Device for Sub-diffractive Biomolecular Imaging. <i>ACS Photonics</i> , 2018, 5, 2549-2554.	3.2	50
32	Structural color switching with a doped indium-gallium-zinc-oxide semiconductor. <i>Photonics Research</i> , 2020, 8, 1409.	3.4	46
33	Metasurface Holography Reaching the Highest Efficiency Limit in the Visible via One-Step Nanoparticle-Embedded Resin Printing. <i>Laser and Photonics Reviews</i> , 2022, 16, .	4.4	46
34	Nearly Perfect Transmissive Subtractive Coloration through the Spectral Amplification of Mie Scattering and Lattice Resonance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 26299-26307.	4.0	45
35	Moth-eye shaped on-demand broadband and switchable perfect absorbers based on vanadium dioxide. <i>Scientific Reports</i> , 2020, 10, 4522.	1.6	40
36	Dual-Band Operating Metaholograms with Heterogeneous Meta-Atoms in the Visible and Near-Infrared. <i>Advanced Optical Materials</i> , 2021, 9, 2100609.	3.6	40

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37	Chiroptical Metasurfaces: Principles, Classification, and Applications. <i>Sensors</i> , 2021, 21, 4381.	2.1	40
38	Full and gradient structural colouration by lattice amplified gallium nitride Mie-resonators. <i>Nanoscale</i> , 2020, 12, 21392-21400.	2.8	37
39	Vanadium Dioxide for Dynamically Tunable Photonics. <i>ChemNanoMat</i> , 2021, 7, 713-727.	1.5	35
40	Metasurface-empowered spectral and spatial light modulation for disruptive holographic displays. <i>Nanoscale</i> , 2022, 14, 4380-4410.	2.8	29
41	Emerging advanced metasurfaces: Alternatives to conventional bulk optical devices. <i>Microelectronic Engineering</i> , 2020, 220, 111146.	1.1	28
42	Employing vanadium dioxide nanoparticles for flexible metasurfaces with switchable absorption properties at near-infrared frequencies. <i>Journal of Optics (United Kingdom)</i> , 2020, 22, 114002.	1.0	26
43	Tutorial on metalenses for advanced flat optics: Design, fabrication, and critical considerations. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	23
44	Scalable and High-Throughput Top-Down Manufacturing of Optical Metasurfaces. <i>Sensors</i> , 2020, 20, 4108.	2.1	22
45	Inverse design of ultra-narrowband selective thermal emitters designed by artificial neural networks. <i>Optical Materials Express</i> , 2021, 11, 1863.	1.6	22
46	Three-dimensional artificial chirality towards low-cost and ultra-sensitive enantioselective sensing. <i>Nanoscale</i> , 2022, 14, 3720-3730.	2.8	20
47	Three-Dimensional Plasmonic Nanocluster-Driven Light-Matter Interaction for Photoluminescence Enhancement and Picomolar-Level Biosensing. <i>Nano Letters</i> , 2022, 22, 4702-4711.	4.5	20
48	Surface-enhanced spectroscopy: Toward practical analysis probe. <i>Applied Spectroscopy Reviews</i> , 2019, 54, 142-175.	3.4	19
49	All-dielectric metasurface imaging platform applicable to laser scanning microscopy with enhanced axial resolution and wavelength selection. <i>Optical Materials Express</i> , 2019, 9, 3248.	1.6	18
50	Dynamic Optical Spin Hall Effect in Chitosan-Coated All-Dielectric Metamaterials for a Biosensing Platform. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021, 27, 1-8.	1.9	17
51	Deep Q-network to produce polarization-independent perfect solar absorbers: a statistical report. <i>Nano Convergence</i> , 2020, 7, 26.	6.3	16
52	Thermally-curable nanocomposite printing for the scalable manufacturing of dielectric metasurfaces. <i>Microsystems and Nanoengineering</i> , 2022, 8, .	3.4	16
53	Unlocking the future of optical security with metasurfaces. <i>Light: Science and Applications</i> , 2021, 10, 144.	7.7	15
54	Gap-plasmon-driven spin angular momentum selection of chiral metasurfaces for intensity-tunable metaholography working at visible frequencies. <i>Nanophotonics</i> , 2022, 11, 4123-4133.	2.9	15

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55	Multilevel Absorbers via the Integration of Undoped and Tungsten-Doped Multilayered Vanadium Dioxide Thin Films. ACS Applied Materials & Interfaces, 2022, 14, 1404-1412.	4.0	14
56	Critical Layer Thickness Analysis of Vertically Stacked Hyperbolic Metamaterials for Effective Negative Refraction Generation. Advanced Theory and Simulations, 2020, 3, 2000138.	1.3	11
57	Enhancement of Luminous Intensity Emission from Incoherent LED Light Sources within the Detection Angle of 10° Using Metalenses. Nanomaterials, 2022, 12, 153.	1.9	3
58	Realization of Artificial Chirality in Micro-/Nano-Scale Three-Dimensional Plasmonic Structures. Topics in Applied Physics, 2021, , 241-263.	0.4	1
59	Dual-Band Operating Metaholograms with Heterogeneous Meta-Atoms in the Visible and Near-Infrared (Advanced Optical Materials 19/2021). Advanced Optical Materials, 2021, 9, 2170075.	3.6	0