

Bowei Dong

List of Publications by Year in descending order

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71
papers

3,572
citations

147801

31
h-index

197818

49
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71
all docs

71
docs citations

71
times ranked

2535
citing authors

#	ARTICLE	IF	CITATIONS
1	Progress in wearable electronics/photronicsâ€”Moving toward the era of artificial intelligence and internet of things. InformaÃ—MateriÃ—ly, 2020, 2, 1131-1162.	17.3	343
2	Silicon photonic platforms for mid-infrared applications [Invited]. Photonics Research, 2017, 5, 417.	7.0	229
3	Development Trends and Perspectives of Future Sensors and MEMS/NEMS. Micromachines, 2020, 11, 7.	2.9	216
4	Deep learning-enabled triboelectric smart socks for IoT-based gait analysis and VR applications. Npj Flexible Electronics, 2020, 4, .	10.7	213
5	Progress in<scp>TENG</scp>technologyâ€”A journey from energy harvesting to nanoenergy and nanosystem. EcoMat, 2020, 2, e12058.	11.9	194
6	Technology evolution from self-powered sensors to AIoT enabled smart homes. Nano Energy, 2021, 79, 105414.	16.0	177
7	Waveguide-Integrated Black Phosphorus Photodetector for Mid-Infrared Applications. ACS Nano, 2019, 13, 913-921.	14.6	164
8	Leveraging of MEMS Technologies for Optical Metamaterials Applications. Advanced Optical Materials, 2020, 8, 1900653.	7.3	144
9	Wearable Triboelectricâ€”Humanâ€”Machine Interface (THMI) Using Robust Nanophotonic Readout. ACS Nano, 2020, 14, 8915-8930.	14.6	121
10	Zero-bias mid-infrared graphene photodetectors with bulk photoresponse and calibration-free polarization detection. Nature Communications, 2020, 11, 6404.	12.8	111
11	Mid-infrared semimetal polarization detectors with configurable polarity transition. Nature Photonics, 2021, 15, 614-621.	31.4	97
12	All-Dielectric Surface-Enhanced Infrared Absorption-Based Gas Sensor Using Guided Resonance. ACS Applied Materials & Interfaces, 2018, 10, 38272-38279.	8.0	89
13	Self-powered multifunctional monitoring system using hybrid integrated triboelectric nanogenerators and piezoelectric microsensors. Nano Energy, 2019, 58, 612-623.	16.0	83
14	Progress of infrared guided-wave nanophotonic sensors and devices. Nano Convergence, 2020, 7, 12.	12.1	79
15	Highâ€”Responsivity Midâ€”Infrared Black Phosphorus Slow Light Waveguide Photodetector. Advanced Optical Materials, 2020, 8, 2000337.	7.3	75
16	Artificial intelligence of toilet (AI-Toilet) for an integrated health monitoring system (IHMS) using smart triboelectric pressure sensors and image sensor. Nano Energy, 2021, 90, 106517.	16.0	74
17	Infrared Black Phosphorus Phototransistor with Tunable Responsivity and Low Noise Equivalent Power. ACS Applied Materials & Interfaces, 2017, 9, 36130-36136.	8.0	73
18	Wearable Triboelectric/Aluminum Nitride Nanoâ€”Energyâ€”Nanoâ€”System with Selfâ€”Sustainable Photonic Modulation and Continuous Force Sensing. Advanced Science, 2020, 7, 1903636.	11.2	66

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19	Progress of optomechanical micro/nano sensors: a review. International Journal of Optomechatronics, 2021, 15, 120-159.	6.6	58
20	Nanometer-Scale Heterogeneous Interfacial Sapphire Wafer Bonding for Enabling Plasmonic-Enhanced Nanofluidic Mid-Infrared Spectroscopy. ACS Nano, 2020, 14, 12159-12172.	14.6	54
21	Silicon-on-Insulator Waveguide Devices for Broadband Mid-Infrared Photonics. IEEE Photonics Journal, 2017, 9, 1-10.	2.0	52
22	Ultrasensitive Transmissive Infrared Spectroscopy via Loss Engineering of Metallic Nanoantennas for Compact Devices. ACS Applied Materials & Interfaces, 2019, 11, 47270-47278.	8.0	52
23	Progress in micro/nano sensors and nanoenergy for future AIoT-based smart home applications. Nano Express, 2021, 2, 022005.	2.4	50
24	Dispersion engineering and thermo-optic tuning in mid-infrared photonic crystal slow light waveguides on silicon-on-insulator. Optics Letters, 2018, 43, 5504.	3.3	44
25	Suspended silicon waveguide platform with subwavelength grating metamaterial cladding for long-wave infrared sensing applications. Nanophotonics, 2021, 10, 1861-1870.	6.0	43
26	Wavelength-multiplexed hook nanoantennas for machine learning enabled mid-infrared spectroscopy. Nature Communications, 2022, 13, .	12.8	43
27	Wavelength-Flattened Directional Coupler Based Mid-Infrared Chemical Sensor Using Bragg Wavelength in Subwavelength Grating Structure. Nanomaterials, 2018, 8, 893.	4.1	42
28	Biometrics-protected optical communication enabled by deep learning-enhanced triboelectric/photonic synergistic interface. Science Advances, 2022, 8, eabl9874.	10.3	42
29	Recent progress in nanoplasmonics-based integrated optical micro/nano-systems. Journal Physics D: Applied Physics, 2020, 53, 213001.	2.8	41
30	Aluminum nitride on insulator (AlNOI) platform for mid-infrared photonics. Optics Letters, 2019, 44, 73.	3.3	41
31	Heterogeneously Integrated Graphene/Silicon/Halide Waveguide Photodetectors toward Chip-Scale Zero-Bias Long-Wave Infrared Spectroscopic Sensing. ACS Nano, 2021, 15, 10084-10094.	14.6	40
32	Larger-Than-Unity External Optical Field Confinement Enabled by Metamaterial-Assisted Comb Waveguide for Ultrasensitive Long-Wave Infrared Gas Spectroscopy. Nano Letters, 2022, 22, 6112-6120.	9.1	33
33	Integration of MEMS IR detectors with MIR waveguides for sensing applications. Optics Express, 2020, 28, 11524.	3.4	32
34	Efficient and broadband subwavelength grating coupler for 37 μ m mid-infrared silicon photonics integration. Optics Express, 2018, 26, 26242.	3.4	30
35	Vernier effect-based tunable mid-infrared sensor using silicon-on-insulator cascaded rings. Optics Express, 2020, 28, 6251.	3.4	30
36	Deterministic aperiodic photonic crystal nanobeam supporting adjustable multiple mode-matched resonances. Optics Letters, 2018, 43, 5407.	3.3	29

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37	MEMS-Enabled On-Chip Computational Mid-Infrared Spectrometer Using Silicon Photonics. ACS Photonics, 2022, 9, 2367-2377.	6.6	26
38	Compact Low Loss Mid-Infrared Wavelength-Flattened Directional Coupler (WFDC) for Arbitrary Power Splitting Ratio Enabled by Rib Waveguide Dispersion Engineering. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	2.9	25
39	Development of triboelectric-enabled tunable Fabry-Pérot photonic-crystal-slab filter towards wearable mid-infrared computational spectrometer. Nano Energy, 2021, 89, 106446.	16.0	25
40	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. ACS Applied Materials & Interfaces, 2021, 13, 8518-8527.	8.0	23
41	Coexistence of air and dielectric modes in single nanocavity. Optics Express, 2019, 27, 14085.	3.4	22
42	Mid-Infrared Slow Light Engineering and Tuning in 1-D Grating Waveguide. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	2.9	21
43	Multifunctional mid-infrared photonic switch using a MEMS-based tunable waveguide coupler. Optics Letters, 2020, 45, 5620.	3.3	21
44	Thermal annealing study of the mid-infrared aluminum nitride on insulator (AlNOI) photonics platform. Optics Express, 2019, 27, 19815.	3.4	19
45	Demonstration of mid-infrared slow light one-dimensional photonic crystal ring resonator with high-order photonic bandgap. Optics Express, 2020, 28, 30736.	3.4	19
46	Subwavelength on-chip light focusing with bigradient all-dielectric metamaterials for dense photonic integration. Informa Mater, 2022, 4, .	17.3	19
47	Towards low-loss waveguides in SOI and Ge-on-SOI for mid-IR sensing. Journal of Physics Communications, 2018, 2, 045029.	1.2	16
48	Suspended Silicon Waveguide with Sub-Wavelength Grating Cladding for Optical MEMS in Mid-Infrared. Micromachines, 2021, 12, 1311.	2.9	8
49	Triboelectric Sensors for IoT and Wearable Applications. , 2023, , 235-257.		6
50	Nanoplasmonics Enhanced Broadband Ultra-Sensitive Mid-Ir Sensor Array Integrated with Microfluidics. , 2019, , .		3
51	Black Phosphorus Based Photodetectors. ACS Symposium Series, 2019, , 135-153.	0.5	3
52	Integration of 2D Black Phosphorus Phototransistor and Silicon Photonics Waveguide System Towards Mid-Infrared On-Chip Sensing Applications. , 2018, , .		2
53	Mid-Infrared Slow Light Engineered One-Dimensional Grating Waveguide. , 2018, , .		2
54	Surface-Enhanced Infrared Absorption-Based CO2 Sensor using Photonic Crystal Slab. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
55	First Demonstration of Waveguide-Integrated Black Phosphorus Electro-Optic Modulator for Mid-Infrared Beyond 4 μm . , 2019, , .		2
56	Development of Mid-IR Ring Resonators Using Vernier Effect. , 2018, , .		1
57	Mid-Infrared Aluminum Nitride on Insulator (AlNOI) Platform. , 2019, , .		1
58	Characterization of Aluminum Nitride (AlN) Photonic Modulator as Function of High Voltage from Textile Triboelectric Nanogenerator (TENG). , 2019, , .		1
59	Mid-Infrared Waveguide-Integrated Dielectric Metasens by Bigradient Slots on Silicon. , 2021, , .		1
60	Compact low loss silicon-on-insulator waveguide for broadband mid-infrared photonics. , 2017, , .		0
61	Mid-IR waveguides in SOI platform. , 2017, , .		0
62	Broadband mid-infrared silicon-on-insulator waveguide devices. , 2017, , .		0
63	Systematic Engineering of Mid-Infrared Flat Band Slow Light in One-Dimensional Grating Waveguide. , 2018, , .		0
64	Wavelength-Insensitive Mid-IR Directional Coupler. , 2018, , .		0
65	Rib Waveguide Dispersion Engineered Mid- Infrared Wavelength-Flattened Directional Coupler (WFDC). , 2018, , .		0
66	Engineering and Tuning of Slow Light in Mid-Infrared Silicon-on-Insulator Photonic Crystal Waveguides. , 2019, , .		0
67	Dual Mode Mid-Infrared Chemical Sensor Using Bragg Wavelength in Subwavelength Grating Incorporated Broadband Directional Coupler. , 2019, , .		0
68	Mid-Infrared Aluminum Nitride on Insulator (AlNOI) Platform. , 2019, , .		0
69	Zero-Bias Long-Wave Infrared Waveguide Photodetector via Graphene/Silicon/Halide Heterogeneous Integration. , 2021, , .		0
70	Integrated Mid-Infrared Photonics Toward Chip-Scale Sensing Systems. , 2021, , .		0
71	Evolution of Wafer Bonding Technology and Applications from Wafer-Level Packaging to Micro/Nanofluidics-Enhanced Sensing. , 2022, , 187-215.		0