

Qing Dai

List of Publications by Year in descending order

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138
papers

4,298
citations

109321

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138484

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139
docs citations

139
times ranked

5669
citing authors

#	ARTICLE	IF	CITATIONS
1	Substrate effects on the near-field radiative heat transfer between bi-planar graphene/hBN heterostructures. <i>International Journal of Thermal Sciences</i> , 2022, 176, 107493.	4.9	14
2	Engineering Interlayer Electron-Phonon Coupling in WS ₂ /BN Heterostructures. <i>Nano Letters</i> , 2022, 22, 2725-2733.	9.1	7
3	Thermoplasmonics in Solar Energy Conversion: Materials, Nanostructured Designs, and Applications. <i>Advanced Materials</i> , 2022, 34, e2107351.	21.0	45
4	Active control of micrometer plasmon propagation in suspended graphene. <i>Nature Communications</i> , 2022, 13, 1465.	12.8	31
5	Tunable Planar Focusing Based on Hyperbolic Phonon Polaritons in WSe_2 . <i>Advanced Materials</i> , 2022, 34, e2105590.	21.0	32
6	Few-layer hexagonal boron nitride as a shield of brittle materials for cryogenic s-SNOM exploration of phonon polaritons. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	2
7	Ultrasensitive Mid-Infrared Biosensing in Aqueous Solutions with Graphene Plasmons. <i>Advanced Materials</i> , 2022, 34, e2110525.	21.0	20
8	Studying Plasmon Dispersion of MXene for Enhanced Electromagnetic Absorption. <i>Advanced Materials</i> , 2022, 34, e2201120.	21.0	17
9	Saliva-based point-of-care testing techniques for COVID-19 detection. <i>Virologica Sinica</i> , 2022, 37, 472-476.	3.0	3
10	NiFe Nanoalloys Derived from Layered Double Hydroxides for Photothermal Synergistic Reforming of CH ₄ with CO ₂ . <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	35
11	Pixellated Perovskite Photodiode on IGZO Thin Film Transistor Backplane for Low Dose Indirect X-Ray Detection. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 96-101.	2.1	11
12	Direct observation of highly confined phonon polaritons in suspended monolayer hexagonal boron nitride. <i>Nature Materials</i> , 2021, 20, 43-48.	27.5	84
13	Anisotropic acoustic phonon polariton-enhanced infrared spectroscopy for single molecule detection. <i>Nanoscale</i> , 2021, 13, 12720-12726.	5.6	14
14	Four-dimensional vibrational spectroscopy for nanoscale mapping of phonon dispersion in BN nanotubes. <i>Nature Communications</i> , 2021, 12, 1179.	12.8	24
15	Anomalous contrast in broadband THz near-field imaging of gold microstructures. <i>Optics Express</i> , 2021, 29, 15190.	3.4	12
16	Ultrafast Electron Tunneling Devices-From Electric-Field Driven to Optical-Field Driven. <i>Advanced Materials</i> , 2021, 33, e2101449.	21.0	8
17	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. <i>ACS Photonics</i> , 2021, 8, 2320-2328.	6.6	11
18	Ghost hyperbolic surface polaritons in bulk anisotropic crystals. <i>Nature</i> , 2021, 596, 362-366.	27.8	102

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19	Anomalous Contrast in Broadband THz Near-Field Imaging of Gold Microstructures. , 2021, , .		0
20	Antifouling hydrogel film based on a sandwich array for salivary glucose monitoring. RSC Advances, 2021, 11, 27561-27569.	3.6	10
21	Low-fouling CNT-PEG-hydrogel coated quartz crystal microbalance sensor for saliva glucose detection. RSC Advances, 2021, 11, 22556-22564.	3.6	9
22	Opticalâ€Fieldâ€Driven Electron Tunneling in Metalâ€Insulatorâ€Metal Nanjunction. Advanced Science, 2021, , 2101572.	11.2	6
23	Nanocone-Shaped Carbon Nanotubes Field-Emitter Array Fabricated by Laser Ablation. Nanomaterials, 2021, 11, 3244.	4.1	5
24	Nanoimaging and Nanospectroscopy of Polaritons with Time Resolved <i>s</i> -NOM. Advanced Optical Materials, 2020, 8, 1901042.	7.3	22
25	Antenna-coupled vacuum channel nano-diode with high quantum efficiency. Nanoscale, 2020, 12, 1495-1499.	5.6	8
26	Narrowâ€Band QDâ€Enhanced PIN Metalâ€Oxide Heterostructure Phototransistor with the Assistance of Printing Processes. Advanced Optical Materials, 2020, 8, 1901472.	7.3	4
27	Probing Polaritons in 2D Materials. Advanced Optical Materials, 2020, 8, 1901416.	7.3	13
28	Observations of 3 nm Silk Nanofibrils Exfoliated from Natural Silkworm Silk Fibers. , 2020, 2, 153-160.		37
29	Insulating SiO ₂ under Centimeter-Scale, Single-Crystal Graphene Enables Electronic-Device Fabrication. Nano Letters, 2020, 20, 8584-8591.	9.1	19
30	The development of an antifouling interpenetrating polymer network hydrogel film for salivary glucose monitoring. Nanoscale, 2020, 12, 22787-22797.	5.6	10
31	A highly sensitive quartz crystal microbalance sensor modified with antifouling microgels for saliva glucose monitoring. Nanoscale, 2020, 12, 19317-19324.	5.6	17
32	Photovoltage-Coupled Dual-Gate InGaZnO Thin-Film Transistors Operated at the Subthreshold Region for Low-Power Photodetection. ACS Applied Electronic Materials, 2020, 2, 1745-1751.	4.3	4
33	Ultrasensitive Poly(boric acid) Hydrogel-Coated Quartz Crystal Microbalance Sensor by Using UV Pressing-Assisted Polymerization for Saliva Glucose Monitoring. ACS Applied Materials & Interfaces, 2020, 12, 34190-34197.	8.0	26
34	Electrical Control of Interband Resonant Nonlinear Optics in Monolayer MoS ₂ . ACS Nano, 2020, 14, 8442-8448.	14.6	34
35	Hybrid hydrogel films with graphene oxide for continuous saliva-level monitoring. Journal of Materials Chemistry C, 2020, 8, 9655-9662.	5.5	8
36	THz Near-Field Imaging of Extreme Subwavelength Metal Structures. ACS Photonics, 2020, 7, 687-694.	6.6	58

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37	Plasmonic Gas Sensing with Graphene Nanoribbons. <i>Physical Review Applied</i> , 2020, 13, .	3.8	25
38	Efficient All-Optical Plasmonic Modulators with Atomically Thin Van Der Waals Heterostructures. <i>Advanced Materials</i> , 2020, 32, e1907105.	21.0	44
39	Polaritons in Nanomaterials. <i>Advanced Optical Materials</i> , 2020, 8, 1902104.	7.3	0
40	Polariton Spectroscopy: Nanoimaging and Nanospectroscopy of Polaritons with Time Resolved s-SNOM (<i>Advanced Optical Materials</i> 5/2020). <i>Advanced Optical Materials</i> , 2020, 8, 2070019.	7.3	3
41	High-resolution integral imaging of micron-sized objects. , 2020, , .		0
42	Structural colouration in the Himalayan monal, hydrophobicity and refractive index modulated sensing. <i>Nanoscale</i> , 2020, 12, 21409-21419.	5.6	6
43	Towards optimal single-photon sources from polarized microcavities. <i>Nature Photonics</i> , 2019, 13, 770-775.	31.4	290
44	A Multibeam Interference Model for Analyzing Complex Near-Field Images of Polaritons in 2D van der Waals Microstructures. <i>Advanced Functional Materials</i> , 2019, 29, 1904662.	14.9	10
45	Extreme nonlinear strong-field photoemission from carbon nanotubes. <i>Nature Communications</i> , 2019, 10, 4891.	12.8	16
46	Reduced graphene oxide-induced crystallization of CuPc interfacial layer for high performance of perovskite photodetectors. <i>RSC Advances</i> , 2019, 9, 3800-3808.	3.6	14
47	High-efficiency modulation of coupling between different polaritons in an in-plane graphene/hexagonal boron nitride heterostructure. <i>Nanoscale</i> , 2019, 11, 2703-2709.	5.6	24
48	Tunable Modal Birefringence in a Low-Loss Van Der Waals Waveguide. <i>Advanced Materials</i> , 2019, 31, e1807788.	21.0	27
49	Strong and tunable interlayer coupling of infrared-active phonons to excitons in van der Waals heterostructures. <i>Physical Review B</i> , 2019, 99, .	3.2	17
50	On-Demand Semiconductor Source of Entangled Photons Which Simultaneously Has High Fidelity, Efficiency, and Indistinguishability. <i>Physical Review Letters</i> , 2019, 122, 113602.	7.8	219
51	Phase-Change Hyperbolic Heterostructures for Nanopolaritonics: A Case Study of hBN/VO ₂ . <i>Advanced Materials</i> , 2019, 31, e1900251.	21.0	43
52	Enhanced UV-CC Detection of Perovskite Photodetector Arrays via Inorganic CsPbBr ₃ Quantum Dot Down-Conversion Layer. <i>Advanced Optical Materials</i> , 2019, 7, 1801812.	7.3	55
53	Gas identification with graphene plasmons. <i>Nature Communications</i> , 2019, 10, 1131.	12.8	154
54	Photo-induced charge density distribution in metal surfaces and its extraction with apertureless near-field optics. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 24LT01.	1.8	6

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55	Modern Scattering-Type Scanning Near-Field Optical Microscopy for Advanced Material Research. <i>Advanced Materials</i> , 2019, 31, e1804774.	21.0	205
56	Ultrafast Field-Emission Electron Sources Based on Nanomaterials. <i>Advanced Materials</i> , 2019, 31, e1805845.	21.0	46
57	High detectivity ITO/organolead halide perovskite Schottky photodiodes. <i>Semiconductor Science and Technology</i> , 2019, 34, 074004.	2.0	13
58	SnO ₂ -rGO nanocomposite as an efficient electron transport layer for stable perovskite solar cells on AZO substrate. <i>Nanotechnology</i> , 2019, 30, 075202.	2.6	17
59	Photo-induced terahertz near-field dynamics of graphene/InAs heterostructures. <i>Optics Express</i> , 2019, 27, 13611.	3.4	25
60	Graphene plasmon enhanced infrared spectroscopy. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2019, 68, 148103.	0.5	7
61	Perfect-absorption graphene metamaterials for surface-enhanced molecular fingerprint spectroscopy. <i>Nanotechnology</i> , 2018, 29, 184004.	2.6	22
62	Structural Coloration in <i>Columba nicobarica</i> Pigeons and Refractive Index Modulated Sensing. <i>Advanced Optical Materials</i> , 2018, 6, 1701218.	7.3	7
63	Optically Unraveling the Edge Chirality-Dependent Band Structure and Plasmon Damping in Graphene Edges. <i>Advanced Materials</i> , 2018, 30, e1800367.	21.0	16
64	Nanomaterial-Based Plasmon-Enhanced Infrared Spectroscopy. <i>Advanced Materials</i> , 2018, 30, e1704896.	21.0	124
65	High Efficiency Light-Emitting Transistor with Vertical Metal-Oxide Heterostructure. <i>Small</i> , 2018, 14, e1800265.	10.0	17
66	Laser Interference Lithography for the Nanofabrication of Stimuli-Responsive Bragg Stacks. <i>Advanced Functional Materials</i> , 2018, 28, 1702715.	14.9	34
67	30 s Response Time of K ⁺ Ion-Selective Hydrogels Functionalized with 18-Crown-6 Ether Based on QCM Sensor. <i>Advanced Healthcare Materials</i> , 2018, 7, 1700873.	7.6	15
68	Cross-linked enzyme-polymer conjugates with excellent stability and detergent-enhanced activity for efficient organophosphate degradation. <i>Bioresources and Bioprocessing</i> , 2018, 5, .	4.2	13
69	Enhanced Detectivity and Suppressed Dark Current of Perovskite-InGaZnO Phototransistor via a PCBM Interlayer. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 44144-44151.	8.0	50
70	Ultra-compact graphene plasmonic filter integrated in a waveguide. <i>Chinese Physics B</i> , 2018, 27, 094101.	1.4	9
71	Ultrafast Lasers: Graphene Actively Mode-Locked Lasers (<i>Adv. Funct. Mater.</i> 28/2018). <i>Advanced Functional Materials</i> , 2018, 28, 1870194.	14.9	6
72	Graphene Actively Mode-Locked Lasers. <i>Advanced Functional Materials</i> , 2018, 28, 1801539.	14.9	39

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73	Terahertz Nanoimaging of Graphene. ACS Photonics, 2018, 5, 2645-2651.	6.6	78
74	Flexible and Electrically Tunable Plasmons in Graphene-Mica Heterostructures. Advanced Science, 2018, 5, 1800175.	11.2	38
75	Band Structure Perfection and Superconductivity in Type-II Dirac Semimetal Ir_3Te_2 . Advanced Materials, 2018, 30, e1801556.	21.0	47
76	Graphene actively Q-switched lasers. 2D Materials, 2017, 4, 025095.	4.4	34
77	Photon-Pair Generation with a 100 nm Thick Carbon Nanotube Film. Advanced Materials, 2017, 29, 1605978.	21.0	28
78	Large-Scale Suspended Graphene Used as a Transparent Substrate for Infrared Spectroscopy. Small, 2017, 13, 1603812.	10.0	13
79	Carbon Nanotubes as an Ultrafast Emitter with a Narrow Energy Spread at Optical Frequency. Advanced Materials, 2017, 29, 1701580.	21.0	37
80	Edge effect enhanced photo-thermionic emission from a carbon nanotubes array. Applied Physics Letters, 2017, 110, .	3.3	8
81	Quiver-quenched optical-field-emission from carbon nanotubes. Applied Physics Letters, 2017, 111, .	3.3	13
82	High performance boronic acid-containing hydrogel for biocompatible continuous glucose monitoring. RSC Advances, 2017, 7, 41384-41390.	3.6	24
83	Higher order Fano graphene metamaterials for nanoscale optical sensing. Nanoscale, 2017, 9, 14998-15004.	5.6	56
84	Rigorous numerical modeling of scattering-type scanning near-field optical microscopy and spectroscopy. Applied Physics Letters, 2017, 111, .	3.3	29
85	Probing optical anisotropy of nanometer-thin van der waals microcrystals by near-field imaging. Nature Communications, 2017, 8, 1471.	12.8	74
86	Carbon Nanotube Array Based Binary Gabor Zone Plate Lenses. Scientific Reports, 2017, 7, 15256.	3.3	2
87	Electrical Driven Light Emitting From a Tunneling Junction With Negative Resistance Effect. IEEE Journal of the Electron Devices Society, 2017, 5, 271-274.	2.1	0
88	Study of graphene plasmons in graphene-MoS ₂ heterostructures for optoelectronic integrated devices. Nanoscale, 2017, 9, 208-215.	5.6	36
89	Far-Field Spectroscopy and Near-Field Optical Imaging of Coupled Plasmon-Phonon Polaritons in 2D van der Waals Heterostructures. Advanced Materials, 2016, 28, 2931-2938.	21.0	77
90	Solution-processed perovskite for direct X-ray detection. , 2016, , .		5

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91	Multiwall carbon nanotube microcavity arrays. <i>Journal of Applied Physics</i> , 2016, 119, 113105.	2.5	13
92	Tunable Electronic Transport Properties of 2D Layered Double Hydroxide Crystalline Microsheets with Varied Chemical Compositions. <i>Small</i> , 2016, 12, 4471-4476.	10.0	27
93	Far-field nanoscale infrared spectroscopy of vibrational fingerprints of molecules with graphene plasmons. <i>Nature Communications</i> , 2016, 7, 12334.	12.8	237
94	Suppressed Hysteretic Field Emission from Polymer Encapsulated Silver Nanowires. <i>IEEE Nanotechnology Magazine</i> , 2016, , 1-1.	2.0	0
95	Tuning the Interfacial Mechanical Behaviors of Monolayer Graphene/PMMA Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 22554-22562.	8.0	84
96	Solution-processed photodetectors based on organic-inorganic hybrid perovskite and nanocrystalline graphite. <i>Nanotechnology</i> , 2016, 27, 175201.	2.6	38
97	Efficient photo-thermionic emission from carbon nanotube arrays. <i>Carbon</i> , 2016, 96, 641-646.	10.3	21
98	Enhanced Field Emission from a Carbon Nanotube Array Coated with a Hexagonal Boron Nitride Thin Film. <i>Small</i> , 2015, 11, 3710-3716.	10.0	38
99	Graphene plasmon propagation on corrugated silicon substrates. <i>Optics Letters</i> , 2015, 40, 1.	3.3	29
100	Graphene nanomesh photodetector with effective charge tunnelling from quantum dots. <i>Nanoscale</i> , 2015, 7, 4242-4249.	5.6	18
101	Graphene-Based Ultrathin Flat Lenses. <i>ACS Photonics</i> , 2015, 2, 200-207.	6.6	70
102	High-Performance Ge Quantum Dot Decorated Graphene/Zinc-Oxide Heterostructure Infrared Photodetector. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 2452-2458.	8.0	57
103	Carbon nanotube biconvex microcavities. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	22
104	High current field emission from individual non-linear resistor ballasted carbon nanotube cluster array. <i>Carbon</i> , 2015, 89, 1-7.	10.3	39
105	Broadly tunable graphene plasmons using an ion-gel top gate with low control voltage. <i>Nanoscale</i> , 2015, 7, 19493-19500.	5.6	90
106	Towards graphene field emitters. <i>RSC Advances</i> , 2015, 5, 105111-105118.	3.6	8
107	Substrate Phonon-Mediated Plasmon Hybridization in Coplanar Graphene Nanostructures for Broadband Plasmonic Circuits. <i>Small</i> , 2015, 11, 591-596.	10.0	11
108	Optical properties of graphene plasmons and their potential applications. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015, 64, 106801.	0.5	11

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109	Enhanced field emission properties of carbon nanotubes by coating diamond-like carbon layer. , 2014, , .		0
110	Field Emission Properties of Triode-Type Graphene Mesh Emitter Arrays. IEEE Electron Device Letters, 2014, 35, 786-788.	3.9	9
111	Enhanced reflection from inverse tapered nanocone arrays. Applied Physics Letters, 2014, 105, .	3.3	23
112	Tuning the peak position of subwavelength silica nanosphere broadband antireflection coatings. Nanoscale Research Letters, 2014, 9, 361.	5.7	11
113	Plasmonic extinction of gated graphene nanoribbon array analyzed by a scaled uniform Fermi level. Optics Letters, 2014, 39, 1345.	3.3	9
114	Photo-modulated thin film transistor based on dynamic charge transfer within quantum-dots-InGaZnO interface. Applied Physics Letters, 2014, 104, 113501.	3.3	21
115	Vertical CNT-Si Photodiode Array. Nano Letters, 2013, 13, 4131-4136.	9.1	11
116	Electrically Switchable Diffraction Grating Using a Hybrid Liquid Crystal and Carbon Nanotube-Based Nanophotonic Device. Advanced Optical Materials, 2013, 1, 368-373.	7.3	22
117	Liquid Crystals: Electrically Switchable Diffraction Grating Using a Hybrid Liquid Crystal and Carbon Nanotube-Based Nanophotonic Device (Advanced Optical Materials 5/2013). Advanced Optical Materials, 2013, 1, 367-367.	7.3	0
118	Cylindrical Fresnel lenses based on carbon nanotube forests. Applied Physics Letters, 2012, 101, .	3.3	26
119	Optimization of nanotube electrode geometry in a liquid crystal media from wavefront aberrations. Applied Optics, 2012, 51, 422.	1.8	7
120	Carbon Nanotube Based High Resolution Holograms. Advanced Materials, 2012, 24, OP331-6.	21.0	65
121	Negative index photonic crystal lenses based on carbon nanotube arrays. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 499-505.	2.0	7
122	Carbon Nanotubes: Carbon Nanotube Based High Resolution Holograms (Adv. Mater. 44/2012). Advanced Materials, 2012, 24, OP356.	21.0	1
123	Metamaterial filter for the near-visible spectrum. Applied Physics Letters, 2012, 101, 083106.	3.3	8
124	FABRICATION OF CARBON NANOTUBES ON INTER-DIGITATED METAL ELECTRODE FOR SWITCHABLE NANOPHOTONIC DEVICES. Progress in Electromagnetics Research, 2012, 127, 65-77.	4.4	3
125	Ultrasmall Microlens Array Based on Vertically Aligned Carbon Nanofibers. Small, 2012, 8, 2501-2504.	10.0	18
126	Can Nanotubes Make a Lens Array?. Advanced Materials, 2012, 24, OP170-3.	21.0	28

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127	Optical waveguides and switches based on periodic arrays of carbon nanotubes. , 2011, , .		0
128	Enhanced reflection from arrays of silicon based inverted nanocones. Applied Physics Letters, 2011, 99, 133105.	3.3	23
129	Nanophotonic Three-Dimensional Microscope. Nano Letters, 2011, 11, 2770-2773.	9.1	18
130	Plasmonic Band Gaps and Waveguide Effects in Carbon Nanotube Arrays Based Metamaterials. ACS Nano, 2011, 5, 9138-9143.	14.6	36
131	Transparent liquid-crystal-based microlens array using vertically aligned carbon nanofiber electrodes on quartz substrates. Nanotechnology, 2011, 22, 115201.	2.6	21
132	PHOTONIC CRYSTALS & METAMATERIAL FILTERS BASED ON 2D ARRAYS OF SILICON NANOPILLARS. Progress in Electromagnetics Research, 2011, 113, 179-194.	4.4	35
133	Adaptive lenticular lens array using a hybrid liquid crystalâ€“carbon nanotube nanophotonic device. Optical Engineering, 2011, 50, 054002.	1.0	8
134	3D modelling of carbon nanotubes and liquid crystal based nano-photonic device. Proceedings of SPIE, 2010, , .	0.8	0
135	Metamaterial high pass filter based on periodic wire arrays of multiwalled carbon nanotubes. Applied Physics Letters, 2010, 97, 163102.	3.3	53
136	Electrically reconfigurable nanophotonic hybrid grating lens array. Applied Physics Letters, 2010, 96, 233108.	3.3	21
137	Electro-optic characteristics of a transparent nanophotonic device based on carbon nanotubes and liquid crystals. Applied Optics, 2010, 49, 2099.	2.1	21
138	Modeling and characterization of tunable photonic crystal waveguides based on two-dimensional periodic arrays of silicon pillars. Proceedings of SPIE, 2010, , .	0.8	0