Qiaoqiang Gan

List of Publications by Year
in descending order

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Version: 2024-02-01

145 papers	6,589 citations	76326 40 h-index	64796 79 g-index
151 all docs	151 docs citations	151 times ranked	7559 citing authors

#	Article	IF	Citations
1	A Compact Surface Plasmon Resonance Biosensor for Sensitive Detection of Exosomal Proteins for Cancer Diagnosis. Methods in Molecular Biology, 2022, 2393, 3-14.	0.9	3
2	A selfâ€saltâ€cleaning architecture in cold vapor generation system for hypersaline brines. EcoMat, 2022, 4, .	11.9	12
3	Correlate lightâ€“matter interactions in different spectral regimes. Light: Science and Applications, 2022, 11, 50.	16.6	1
4	Achieving maximum scattering circular dichroism through the excitation of anapole states within chiral Mie nanospheres. Physical Review B, 2022, 105, .	3.2	6
5	Super-Resolution Displacement Spectroscopic Sensing over a Surface â€œRainbowâ€• Engineering, 2022, 17, 75-81.	6.7	1
6	A double-sided radiative cooling architecture with a record local cooling power density of 270 W/m2. , 2021, , .		0
7	Hybrid concentrated radiative cooling and solar heating in a single system. Cell Reports Physical Science, 2021, 2, 100338.	5.6	33
8	Vapor condensation with daytime radiative cooling. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	86
9	Ultra-thin dark amorphous TiOx hollow nanotubes for full spectrum solar energy harvesting and conversionâ€¡. Nano Energy, 2021, 84, 105872.	16.0	21
10	Decomposition of dimethyl methylphosphonate vapor on ultrathin-film titania photocatalytic light absorber. Chemosphere, 2021, 274, 129719.	8.2	1
11	Multiple concentric rainbows induced by microscale concave interfaces for reflective displays. Applied Materials Today, 2021, 24, 101146.	4.3	4
12	Colorful surfaces for radiative cooling. Journal of Photonics for Energy, 2021, 11, .	1.3	21
13	Sustainable and Inexpensive Polydimethylsiloxane Sponges for Daytime Radiative Cooling. Advanced Science, 2021, 8, e2102502.	11.2	68
14	Largeâ€Scale Subâ€1â€nm Random Gaps Approaching the Quantum Upper Limit for Quantitative Chemical Sensing. Advanced Optical Materials, 2020, 8, 2001634.	7.3	3
15	Nanogap Structures: Largeâ€Scale Subâ€1â€nm Random Gaps Approaching the Quantum Upper Limit for Quantitative Chemical Sensing (Advanced Optical Materials 24/2020). Advanced Optical Materials, 2020, 8, 2070095.	7.3	0
16	Circulating exosomal CPNE3 as a diagnostic and prognostic biomarker for colorectal cancer. Journal of Cellular Physiology, 2019, 234, 1416-1425.	4.1	92
17	Plasmonic Interferometer Array Biochip as a New Mobile Medical Device for Cancer Detection. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-7.	2.9	21
18	Iridescence-controlled and flexibly tunable retroreflective structural color film for smart displays. Science Advances, 2019, 5, eaaw8755.	10.3	116

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19	Photopatternable Nanolayered Polymeric Films with Fast Tunable Color Responses Triggered by Humidity. Advanced Functional Materials, 2019, 29, 1904453.	14.9	61
20	Symmetric Metaâ€Absorberâ€Induced Superchirality. Advanced Optical Materials, 2019, 7, 1901038.	7.3	12
21	A polydimethylsiloxane-coated metal structure for all-day radiative cooling. Nature Sustainability, 2019, 2, 718-724.	23.7	379
22	Circular Dichroism Enhancement: Symmetric Metaâ€Absorberâ€Induced Superchirality (Advanced Optical) Tj ETQq0 0 0 rgBT /Overlock	7.3	2
23	Efficient generation of broadband short-wave infrared vector beams with arbitrary polarization. Applied Physics Letters, 2019, 114, .	3.3	5
24	Generation of a Nondiffracting Superchiral Optical Needle for Circular Dichroism Imaging of Sparse Subdiffraction Objects. Physical Review Letters, 2019, 122, 223901.	7.8	47
25	Intensity-modulated nanoplasmonic interferometric sensor for MMP-9 detection. Lab on A Chip, 2019, 19, 1267-1276.	6.0	13
26	Onâ€Chipâ€Integrated Methylammonium Halide Perovskite Optical Sensors. Advanced Optical Materials, 2019, 7, 1801308.	7.3	15
27	Accelerating vapor condensation with daytime radiative cooling. , 2019, , .		9
28	Smartphone-based cancer detection platform based on plasmonic interferometer array biochips. , 2019, , .		0
29	Near perfect solar energy conversion for vapor generation. , 2019, , .		0
30	Wearable and robust triboelectric nanogenerator based on crumpled gold films. Nano Energy, 2018, 46, 73-80.	16.0	86
31	Cold Vapor Generation beyond the Input Solar Energy Limit. Advanced Science, 2018, 5, 1800222.	11.2	228
32	Circular Nanoplasmonic Interferometer for Detection of Immune-Cell Secretion. , 2018, , .		0
33	Ultrathinâ€Film Titania Photocatalyst on Nanocavity for CO 2 Reduction with Boosted Catalytic Efficiencies. Global Challenges, 2018, 2, 1800032.	3.6	7
34	Enhanced Lightâ€“Matter Interaction: Lightâ€“Matter Interaction within Extreme Dimensions: From Nanomanufacturing to Applications (Advanced Optical Materials 18/2018). Advanced Optical Materials, 2018, 6, 1870072.	7.3	0
35	Lightâ€“Matter Interaction within Extreme Dimensions: From Nanomanufacturing to Applications. Advanced Optical Materials, 2018, 6, 1800444.	7.3	22
36	Sensitive Detection of Exosomal Proteins via a Compact Surface Plasmon Resonance Biosensor for Cancer Diagnosis. ACS Sensors, 2018, 3, 1471-1479.	7.8	116

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37	Sensors: Superabsorbing Metasurfaces with Hybrid Ag-Au Nanostructures for Surface-Enhanced Raman Spectroscopy Sensing of Drugs and Chemicals (Small Methods 7/2018). Small Methods, 2018, 2, 1800037.	8.6	0
38	Superabsorbing Metasurfaces with Hybrid Agâ€“Au Nanostructures for Surfaceâ€Enhanced Raman Spectroscopy Sensing of Drugs and Chemicals. Small Methods, 2018, 2, 1800045.	8.6	29
39	Nanocavity induced light concentration for energy efficient heat assisted magnetic recording media. Nano Energy, 2018, 50, 750-755.	16.0	9
40	Light-Matter Interactions within extreme dimensions: Strategies to surpassing conventional nanophotonics. , 2018, , .		0
41	The Super absorbing Ag-Au Metasurfaces for Surface-Enhanced Raman Spectroscopy Sensing of Drugs and Chemicals. , 2018, , .		0
42	Extremely small photonic strategies for boosted optoelectronics. , 2018, , .		0
43	An opposite approach to steam generation using solar power: cooler for more. , 2018, , .		0
44	Broadband absorption enhancement in organic solar cells using refractory plasmonic ceramics. Journal of Nanophotonics, 2017, 11, 016001.	1.0	7
45	Extremely Costâ€Effective and Efficient Solar Vapor Generation under Nonconcentrated Illumination Using Thermally Isolated Black Paper. Global Challenges, 2017, 1, 1600003.	3.6	311
46	Crumpled Graphene Triboelectric Nanogenerators: Smaller Devices with Higher Output Performance. Advanced Materials Technologies, 2017, 2, 1700044.	5.8	78
47	Dispersion Topological Darkness at Multiple Wavelengths and Polarization States. Advanced Optical Materials, 2017, 5, 1700166.	7.3	12
48	Spectrally selective solar absorber with sharp and temperature dependent cut-off based on semiconductor nanowire arrays. Applied Physics Letters, 2017, 110, 201108.	3.3	20
49	Synthesis of titanosilicate pillared MFI zeolite as an efficient photocatalyst. RSC Advances, 2017, 7, 3249-3256.	3.6	17
50	Frozen â€œTofuâ€•Effect: Engineered Pores of Hydrophilic Nanoporous Materials. ACS Omega, 2017, 2, 4838-4844.	3.5	7
51	Single-crystalline germanium nanomembrane photodetectors on foreign nanocavities. Science Advances, 2017, 3, e1602783.	10.3	76
52	Efficient Midâ€Infrared Light Confinement within Subâ€5â€nm Gaps for Extreme Field Enhancement. Advanced Optical Materials, 2017, 5, 1700223.	7.3	39
53	Triboelectrics: Crumpled Graphene Triboelectric Nanogenerators: Smaller Devices with Higher Output Performance (Adv. Mater. Technol. 6/2017). Advanced Materials Technologies, 2017, 2, .	5.8	0
54	Ultra-broadband enhancement of nonlinear optical processes from randomly patterned super absorbing metasurfaces. Scientific Reports, 2017, 7, 4346.	3.3	11

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55	Metasurfaces with random nanoantennas for ultra-broadband surface enhanced nonlinear optics. , 2017, , .		0
56	Engineered pores of hydrophilic nanoporous materials using wet-drying and freeze-drying. , 2017, , .		0
57	Publisherâ€™s note: Broadband absorption enhancement in organic solar cells using refractory plasmonic ceramics. Journal of Nanophotonics, 2017, 11, 019901.	1.0	0
58	Reversibly tunable coupled and decoupled super absorbing structures. Applied Physics Letters, 2016, 108, .	3.3	15
59	MoS ₂ monolayers on nanocavities: enhancement in lightâ€“matter interaction. 2D Materials, 2016, 3, 025017.	4.4	72
60	Flat metallic surface gratings with sub-10 nm gaps controlled by atomic-layer deposition. Nanotechnology, 2016, 27, 374003.	2.6	11
61	Self-assembly of highly efficient, broadband plasmonic absorbers for solar steam generation. Science Advances, 2016, 2, e1501227.	10.3	1,025
62	Erratum to â€œDielectric-Grating-Coupled Surface Plasmon Resonance From the Back Side of the Metal Film for Ultrasensitive Sensingâ€• IEEE Photonics Journal, 2016, 8, 1-1.	2.0	0
63	Thermally Diffused Al:ZnO Thin Films for Broadband Transparent Conductor. ACS Applied Materials & Interfaces, 2016, 8, 3985-3991.	8.0	41
64	Dielectric-Grating-Coupled Surface Plasmon Resonance From the Back Side of the Metal Film for Ultrasensitive Sensing. IEEE Photonics Journal, 2016, 8, 1-7.	2.0	22
65	Reversibly tunable hydrophilic nano/microporous polymer photonic crystal. , 2016, , .		0
66	Pore size manipulation of hydrophilic nano/microporous polymer photonic crystal. , 2016, , .		0
67	Phase change dispersion during surface plasmon coupling via nano-objects. , 2015, , .		0
68	Analog of superradiant emission in thermal emitters. Physical Review B, 2015, 92, .	3.2	23
69	Phase change dispersion of plasmonic nano-objects. Scientific Reports, 2015, 5, 12665.	3.3	8
70	Ultrabroadband Metasurface for Efficient Light Trapping and Localization: A Universal Surfaceâ€Enhanced Raman Spectroscopy Substrate for â€œAllâ€•Excitation Wavelengths. Advanced Materials Interfaces, 2015, 2, 1500142.	3.7	58
71	A universal Surface-Enhanced Raman Spectroscopy substrate for â€œallâ€•excitation wavelengths. , 2015, , .		0
72	Surface enhanced nonlinear optics via lithography-free metasurfaces. , 2015, , .		0

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73	Coupled and decoupled super absorbing metasurfaces depending on spacer thickness. , 2015, , .		0
74	Engineering optical properties of metal/porous anodic alumina films for refractometric sensing. Applied Surface Science, 2015, 355, 139-144.	6.1	13
75	Super Absorbing Ultraviolet Metasurface. IEEE Photonics Technology Letters, 2015, 27, 1539-1542.	2.5	18
76	Surface dispersion engineering of Agâ€“Au alloy films. Applied Physics Express, 2015, 8, 042601.	2.4	4
77	Nanocavity absorption enhancement for two-dimensional material monolayer systems. Optics Express, 2015, 23, 7120.	3.4	23
78	Spacer-dependent coupled and decoupled super absorbing metasurfaces. , 2015, , .		0
79	Flat metallic surface with sub-10-nm gaps using modified atomic-layer lithography. , 2015, , .		0
80	Surface enhanced nonlinear optics using lithography-free metasurfaces. , 2015, , .		0
81	Lithography-free visible metasurface absorbers with tunable dielectric spacers. , 2015, , .		0
82	Atomic-layer lithography of sub-10-nm plasmonic nanogaps on flat metallic surface. , 2015, , .		0
83	Breakthroughs in Photonics 2013: Research Highlights on Biosensors Based on Plasmonic Nanostructures. IEEE Photonics Journal, 2014, 6, 1-5.	2.0	7
84	Artificial birefringent metallic planar structures for terahertz wave polarization manipulation. Optics Letters, 2014, 39, 311.	3.3	12
85	Optical Absorbers: Nanocavity Enhancement for Ultra-Thin Film Optical Absorber (Adv. Mater. 17/2014). Advanced Materials, 2014, 26, 2736-2736.	21.0	0
86	Nanocavity Enhanced Absorption of Ultra-thin Films. , 2014, , .		0
87	A large-scale lithography-free metasurface with spectrally tunable super absorption. Nanoscale, 2014, 6, 5599.	5.6	60
88	Super absorption of ultra-thin organic photovoltaic films. Optics Communications, 2014, 314, 48-56.	2.1	24
89	Refractive index engineering of metal-dielectric nanocomposite thin films for optical super absorber. Applied Physics Letters, 2014, 104, 203112.	3.3	30
90	Spatially Selective Plasmonic Sensing Using Metallic Nanoslit Arrays. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 96-101.	2.9	42

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91	Holographic Photopolymer Linear Variable Filter with Enhanced Blue Reflection. ACS Applied Materials & Interfaces, 2014, 6, 3081-3087.	8.0	14
92	Nanocavity Enhancement for Ultraâ€Thin Film Optical Absorber. Advanced Materials, 2014, 26, 2737-2743.	21.0	120
93	Plasmonic-enhanced Si Schottky barrier solar cells. Solar Energy Materials and Solar Cells, 2014, 120, 591-595.	6.2	23
94	Broadband absorption engineering of hyperbolic metafilm patterns. Scientific Reports, 2014, 4, 4498.	3.3	157
95	Polarization Management of Terahertz Extraordinary Optical Transmission through Ultracompact L-Shaped Subwavelength Patterns on Metal Films. Plasmonics, 2013, 8, 733-740.	3.4	9
96	Plasmonic interferometric sensor arrays for high-performance label-free biomolecular detection. Lab on A Chip, 2013, 13, 4755.	6.0	89
97	Plasmonic transparent electrodes for molecular organic photovoltaics with enhanced absorption. , 2013, , .		0
98	Wide-Angle and Polarization-Insensitive Perfect Absorber for Organic Photovoltaic Layers. IEEE Photonics Technology Letters, 2013, 25, 1266-1269.	2.5	18
99	Plasmonicâ€Enhanced Organic Photovoltaics: Breaking the 10% Efficiency Barrier. Advanced Materials, 2013, 25, 2385-2396.	21.0	420
100	Polarization-Insensitive Metalâ€“Semiconductorâ€“Metal Nanoplasmonic Structures for Ultrafast Ultraviolet Detectors. Plasmonics, 2013, 8, 239-247.	3.4	6
101	Rainbow Trapping in Hyperbolic Metamaterial Waveguide. Scientific Reports, 2013, 3, 1249.	3.3	153
102	Polymeric photovoltaics with various metallic plasmonic nanostructures. Journal of Applied Physics, 2013, 113, 063109.	2.5	52
103	Plasmonic interferometers for label-free multiplexed sensing. Optics Express, 2013, 21, 5859.	3.4	55
104	Efficient end-fire coupling of surface plasmons on flat metal surfaces for improved plasmonic Mach-Zehnder interferometer. Journal of Applied Physics, 2013, 113, .	2.5	21
105	Circular plasmonic interferometers for ultrasensitive low-background optical sensing. , 2013, , .		0
106	A metal-insulator-metal plasmonic Mach-Zehnder interferometer array for multiplexed sensing. Journal of Applied Physics, 2013, 113, 133102.	2.5	25
107	Super Meta-Absorber for Ultra-Thin OPV Films. , 2013, , .		0
108	Nonlinear “Rainbow” trapping effect for broadband third-harmonic generation. , 2012, , .		0

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109	Surface plasmon coupling efficiency from nanoslit apertures to metal-insulator-metal waveguides. Applied Physics Letters, 2012, 101, .	3.3	10
110	Research Highlights on Organic Photovoltaics and Plasmonics. IEEE Photonics Journal, 2012, 4, 620-624.	2.0	12
111	Reflective micro-concentrator arrays from holographic photopolymerization: design, fabrication and characterization. Journal of Materials Chemistry, 2012, 22, 25161.	6.7	4
112	Short-Range Surface Plasmon Polaritons for Extraordinary Low Transmission Through Ultra-Thin Metal Films with Nanopatterns. Plasmonics, 2012, 7, 47-52.	3.4	19
113	Oneâ€Step Fabrication of Graded Rainbowâ€Colored Holographic Photopolymer Reflection Gratings. Advanced Materials, 2012, 24, 1604-1609.	21.0	44
114	Improved holographic rainbow-colored photopolymer reflection grating. , 2012, , .		0
115	Absorption enhancement in thin-film organic photovoltaics with double plasmonic structures. , 2011, , .		0
116	Adiabatically graded plasmonic structures for “rainbow” trapping effect. , 2011, , .		0
117	Observation of ultra-narrow band plasmon induced transparency based on large-area hybrid plasmon-waveguide systems. Applied Physics Letters, 2011, 99, .	3.3	71
118	Plasmonic Machâ€“Zehnder Interferometer for Ultrasensitive On-Chip Biosensing. ACS Nano, 2011, 5, 9836-9844.	14.6	148
119	Wavelength-Independent Optical Polarizer Based on Metallic Nanowire Arrays. IEEE Photonics Journal, 2011, 3, 1083-1092.	2.0	11
120	Graded Metallic Gratings for Ultrawideband Surface Wave Trapping at THz Frequencies. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 102-109.	2.9	19
121	Surface dispersion engineering of planar plasmonic chirped grating for complete visible rainbow trapping. Applied Physics Letters, 2011, 98, .	3.3	41
122	Omnidirectional absorption enhancement in hybrid waveguide-plasmon system. Applied Physics Letters, 2011, 98, 261101.	3.3	25
123	Flexible porous polymer photonic bandgap structures for chemical and biomedical sensing. , 2011, , .		0
124	One-step holographic lithography fabrication of a rainbow-colored photonic bandgap structure. , 2011, , .		0
125	Experimental verification of the rainbow trapping effect in adiabatic plasmonic gratings. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5169-5173.	7.1	141
126	Rainbow trapping and releasing by chirped plasmonic waveguides at visible frequencies. Applied Physics Letters, 2010, 97, 153115.	3.3	43

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127	Surface plasmon waves generated by nanogrooves through spectral interference. Physical Review B, 2010, 81, .	3.2	29
128	Bidirectional surface wave splitter at visible frequencies. Optics Letters, 2010, 35, 4181.	3.3	45
129	Broadband short-range surface plasmon structures for absorption enhancement in organic photovoltaics. Optics Express, 2010, 18, A620.	3.4	78
130	Near-Field-Resonance-Enhanced Plasmonic Light Beaming. IEEE Photonics Journal, 2010, 2, 8-17.	2.0	12
131	Trapping of surface-plasmon polaritons in a graded Bragg structure: Frequency-dependent spatially separated localization of the visible spectrum modes. Physical Review B, 2009, 80, .	3.2	87
132	Direct mapping of the UV surface plasmons. Optics Letters, 2009, 34, 1324.	3.3	8
133	Direct near-field optical imaging of UV bowtie nanoantennas. Optics Express, 2009, 17, 20301.	3.4	38
134	Vertical Plasmonic Mach-Zehnder interferometer for sensitive optical sensing. Optics Express, 2009, 17, 20747.	3.4	64
135	â€œRainbowâ€•Trapping and Releasing at Telecommunication Wavelengths. Physical Review Letters, 2009, 102, 056801.	7.8	247
136	UV Plasmonic Structures: Direct Observations of UV Extraordinary Optical Transmission and Localized Field Enhancement Through Nanoslits. IEEE Photonics Journal, 2009, 1, 245-253.	2.0	10
137	From Waveguiding to Spatial Localization of THz Waves Within a Plasmonic Metallic Grating. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 486-490.	2.9	52
138	Ultrawide-Bandwidth Slow-Light System Based on THz Plasmonic Graded Metallic Grating Structures. Physical Review Letters, 2008, 100, 256803.	7.8	353
139	Numerical Investigation of a Bidirectional Wave Coupler Based on Plasmonic Bragg Gratings in the Near Infrared Domain. Journal of Lightwave Technology, 2008, 26, 3699-3703.	4.6	34
140	An LED-based miniature illumination subsystem for fluorescence sensing of neuron membrane potentials. , 2008, , .		0
141	A prototype miniaturized chip for bio-imaging applications. , 2008, , .		0
142	Plasmonic surface-wave splitter. Applied Physics Letters, 2007, 90, 161130.	3.3	72
143	Bidirectional subwavelength slit splitter for THz surface plasmons. Optics Express, 2007, 15, 18050.	3.4	62
144	Numerical Study of a High-Resolution Far-Field Scanning Optical Microscope via a Surface Plasmon-Modulated Light Source. Journal of Lightwave Technology, 2007, 25, 830-833.	4.6	11

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145	Design of unidirectional subwavelength slit coupler for THz surface plasmons. , 2007, , .		1