Alexander O Govorov

List of Publications by Year
in descending order

233	24,203	6606	7736
papers	citations	79 h-index	150 g-index

245	245	245	20081
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	DNA-based self-assembly of chiral plasmonic nanostructures with tailored optical response. Nature, 2012, 483, 311-314.	13.7	1,868
2	Generating heat with metal nanoparticles. Nano Today, 2007, 2, 30-38.	6.2	1,167
3	Experimental and Theoretical Studies of Light-to-Heat Conversion and Collective Heating Effects in Metal Nanoparticle Solutions. Nano Letters, 2009, 9, 1139-1146.	4.5	608
4	Reconfigurable 3D plasmonic metamolecules. Nature Materials, 2014, 13, 862-866.	13.3	585
5	Gold nanoparticle ensembles as heaters and actuators: melting and collective plasmon resonances. Nanoscale Research Letters, 2006, 1, 84-90.	3.1	582
6	Theory of Circular Dichroism of Nanomaterials Comprising Chiral Molecules and Nanocrystals: Plasmon Enhancement, Dipole Interactions, and Dielectric Effects. Nano Letters, 2010, 10, 1374-1382.	4.5	562
7	Circularly polarized light detection with hot electrons in chiral plasmonic metamaterials. Nature Communications, 2015, 6, 8379.	5.8	539
8	Theory of Photoinjection of Hot Plasmonic Carriers from Metal Nanostructures into Semiconductors and Surface Molecules. Journal of Physical Chemistry C, 2013, 117, 16616-16631.	1.5	499
9	Semiconductor-Metal Nanoparticle Molecules: Hybrid Excitons and the Nonlinear Fano Effect. Physical Review Letters, 2006, 97, 146804.	2.9	498
10	Excitonâ^'Plasmon Interaction and Hybrid Excitons in Semiconductorâ^'Metal Nanoparticle Assemblies. Nano Letters, 2006, 6, 984-994.	4.5	482
11	Plasmonic Circular Dichroism of Chiral Metal Nanoparticle Assemblies. Nano Letters, 2010, 10, 2580-2587.	4.5	440
12	Broadband Metamaterial Absorbers. Advanced Optical Materials, 2019, 7, 1800995.	3.6	404
13	Bioconjugates of CdTe Nanowires and Au Nanoparticles:Â Plasmonâ^'Exciton Interactions, Luminescence Enhancement, and Collective Effects. Nano Letters, 2004, 4, 2323-2330.	4.5	364
14	Plasmonic Circular Dichroism of Peptide-Functionalized Gold Nanoparticles. Nano Letters, 2011, 11, 701-705.	4.5	357
15	Whatâ€™s so Hot about Electrons in Metal Nanoparticles?. ACS Energy Letters, 2017, 2, 1641-1653.	8.8	341
16	Excitonâ€“plasmon interactions in molecular spring assemblies of nanowires and wavelength-based protein detection. Nature Materials, 2007, 6, 291-295.	13.3	315
17	Chirality and chiroptical effects in inorganic nanocrystal systems with plasmon and exciton resonances. Chemical Society Reviews, 2013, 42, 7028.	18.7	310
18	Chiral plasmonic DNA nanostructures with switchable circular dichroism. Nature Communications, 2013, 4, 2948.	5.8	289

#	Article	IF	Citations
19	Photogeneration of hot plasmonic electrons with metal nanocrystals: Quantum description and potential applications. Nano Today, 2014, 9, 85-101.	6.2	270
20	Hybrid Structures Composed of Photosynthetic System and Metal Nanoparticles:Â Plasmon Enhancement Effect. Nano Letters, 2007, 7, 620-625.	4.5	264
21	Harvesting Lost Photons: Plasmon and Upconversion Enhanced Broadband Photocatalytic Activity in Core@Shell Microspheres Based on Lanthanideâ€Doped NaYF₄, TiO₂, and Au. Advanced Functional Materials, 2015, 25, 2950-2960.	7.8	263
22	Plexciton Dynamics: Excitonâ^'Plasmon Coupling in a J-Aggregateâ^'Au Nanoshell Complex Provides a Mechanism for Nonlinearity. Nano Letters, 2011, 11, 1556-1560.	4.5	260
23	A light-driven three-dimensional plasmonic nanosystem that translates molecular motion into reversible chiroptical function. Nature Communications, 2016, 7, 10591.	5.8	259
24	Thermooptical Properties of Gold Nanoparticles Embedded in Ice:â€‰ Characterization of Heat Generation and Melting. Nano Letters, 2006, 6, 783-788.	4.5	257
25	Anomalous ultrafast dynamics of hot plasmonic electrons in nanostructures with hot spots. Nature Nanotechnology, 2015, 10, 770-774.	15.6	256
26	Broadband Hotâ€Electron Collection for Solar Water Splitting with Plasmonic Titanium Nitride. Advanced Optical Materials, 2017, 5, 1601031.	3.6	248
27	Theory of plasmon-enhanced FÃ¶rster energy transfer in optically excited semiconductor and metal nanoparticles. Physical Review B, 2007, 76, .	1.1	238
28	Understanding Hot-Electron Generation and Plasmon Relaxation in Metal Nanocrystals: Quantum and Classical Mechanisms. ACS Photonics, 2017, 4, 2759-2781.	3.2	233
29	Chiral nanoparticle assemblies: circular dichroism, plasmonic interactions, and exciton effects. Journal of Materials Chemistry, 2011, 21, 16806.	6.7	227
30	Coherent control of tunneling in a quantum dot molecule. Physical Review B, 2004, 69, .	1.1	221
31	Picosecond energy transfer and multiexciton transfer outpaces Auger recombination in binaryÂCdSe nanoplatelet solids. Nature Materials, 2015, 14, 484-489.	13.3	211
32	Amplification of Chiroptical Activity of Chiral Biomolecules by Surface Plasmons. Nano Letters, 2013, 13, 1203-1209.	4.5	209
33	Optical properties of coupled metal-semiconductor and metal-molecule nanocrystal complexes: Role of multipole effects. Physical Review B, 2008, 77, .	1.1	208
34	Induced Chirality through Electromagnetic Coupling between Chiral Molecular Layers and Plasmonic Nanostructures. Nano Letters, 2012, 12, 977-983.	4.5	204
35	Plasmon-Induced Circular Dichroism of a Chiral Molecule in the Vicinity of Metal Nanocrystals. Application to Various Geometries. Journal of Physical Chemistry C, 2011, 115, 7914-7923.	1.5	202
36	Boosting Hot Electron-Driven Photocatalysis through Anisotropic Plasmonic Nanoparticles with Hot Spots in Auâ€“TiO₂ Nanoarchitectures. Journal of Physical Chemistry C, 2016, 120, 11690-11699.	1.5	201

#	Article	IF	Citations
37	The nonlinear Fano effect. Nature, 2008, 451, 311-314.	13.7	200
38	Nanoparticle Assemblies with Molecular Springs: A Nanoscale Thermometer. Angewandte Chemie - International Edition, 2005, 44, 7439-7442.	7.2	188
39	Enantioselective control of lattice and shape chirality in inorganic nanostructures using chiral biomolecules. Nature Communications, 2014, 5, 4302.	5.8	187
40	Discrete Nanocubes as Plasmonic Reporters of Molecular Chirality. Nano Letters, 2013, 13, 3145-3151.	4.5	178
41	Optical Generation of Hot Plasmonic Carriers in Metal Nanocrystals: The Effects of Shape and Field Enhancement. Journal of Physical Chemistry C, 2014, 118, 7606-7614.	1.5	178
42	Chiral Nanocrystals: Plasmonic Spectra and Circular Dichroism. Nano Letters, 2012, 12, 3283-3289.	4.5	167
43	Near Infrared, Highly Efficient Luminescent Solar Concentrators. Advanced Energy Materials, 2016, 6, 1501913.	10.2	161
44	Bioconjugated Superstructures of CdTe Nanowires and Nanoparticles:Â Multistep Cascade FÃ¶rster Resonance Energy Transfer and Energy Channeling. Nano Letters, 2005, 5, 2063-2069.	4.5	157
45	Theory of Chiral Plasmonic Nanostructures Comprising Metal Nanocrystals and Chiral Molecular Media. ChemPhysChem, 2012, 13, 2551-2560.	1.0	154
46	Metal-Enhanced Fluorescence of Chlorophylls in Single Light-Harvesting Complexes. Nano Letters, 2008, 8, 558-564.	4.5	146
47	Plasmonic Chiroptical Response of Silver Nanoparticles Interacting with Chiral Supramolecular Assemblies. Journal of the American Chemical Society, 2012, 134, 17807-17813.	6.6	144
48	Giant circular dichroism of a molecule in a region of strong plasmon resonances between two neighboring gold nanocrystals. Physical Review B, 2013, 87, .	1.1	140
49	DNA-Guided Plasmonic Helix with Switchable Chirality. Journal of the American Chemical Society, 2018, 140, 11763-11770.	6.6	138
50	Helical Metal Nanoparticle Assemblies with Defects: Plasmonic Chirality and Circular Dichroism. Journal of Physical Chemistry C, 2011, 115, 13254-13261.	1.5	129
51	Powering the programmed nanostructure and function of gold nanoparticles with catenated DNA machines. Nature Communications, 2013, 4, 2000.	5.8	127
52	Chiral Plasmonic Nanostructures on Achiral Nanopillars. Nano Letters, 2013, 13, 5277-5283.	4.5	125
53	Enantioselective Synthesis of Intrinsically Chiral Mercury Sulfide Nanocrystals. Angewandte Chemie - International Edition, 2013, 52, 1275-1279.	7.2	124
54	Photothermal Circular Dichroism Induced by Plasmon Resonances in Chiral Metamaterial Absorbers and Bolometers. Nano Letters, 2018, 18, 2001-2008.	4.5	123

#	Article	IF	Citations
55	Broad Band Enhancement of Light Absorption in Photosystem I by Metal Nanoparticle Antennas. Nano Letters, 2010, 10, 2069-2074.	4.5	121
56	Chiroplasmonic DNA-based nanostructures. Nature Reviews Materials, 2017, 2, .	23.3	120
57	Determining Plasmonic Hot Electrons and Photothermal Effects during H₂ Evolution with TiNâ€“Pt Nanohybrids. ACS Catalysis, 2020, 10, 5261-5271.	5.5	118
58	Hybridization of electronic states in quantum dots through photon emission. Nature, 2004, 427, 135-138.	13.7	113
59	Bioconjugated Ag Nanoparticles and CdTe Nanowires: Metamaterials with Field-Enhanced Light Absorption. Angewandte Chemie - International Edition, 2006, 45, 4819-4823.	7.2	112
60	The fast and the furious: Ultrafast hot electrons in plasmonic metastructures. Size and structure matter. Nano Today, 2019, 27, 120-145.	6.2	112
61	Amplified Generation of Hot Electrons and Quantum Surface Effects in Nanoparticle Dimers with Plasmonic Hot Spots. Journal of Physical Chemistry C, 2016, 120, 19329-19339.	1.5	110
62	Circular Dichroism of Chiral Molecules in DNA-Assembled Plasmonic Hotspots. ACS Nano, 2018, 12, 9110-9115.	7.3	110
63	Hierarchical synthesis of non-centrosymmetric hybrid nanostructures and enabled plasmon-driven photocatalysis. Nature Communications, 2014, 5, 4792.	5.8	107
64	Chiral Plasmonic Nanostructures Enabled by Bottom-Up Approaches. Annual Review of Physical Chemistry, 2019, 70, 275-299.	4.8	106
65	DNA-Assembled Nanoparticle Rings Exhibit Electric and Magnetic Resonances at Visible Frequencies. Nano Letters, 2015, 15, 1368-1373.	4.5	105
66	Optical properties of a semiconductor quantum dot with a single magnetic impurity: photoinduced spin orientation. Physical Review B, 2005, 71, .	1.1	98
67	3D plasmonic chiral colloids. Nanoscale, 2014, 6, 2077.	2.8	98
68	Electronic Structure of the Plasmons in Metal Nanocrystals: Fundamental Limitations for the Energy Efficiency of Hot Electron Generation. ACS Energy Letters, 2019, 4, 2552-2568.	8.8	98
69	Hotspot-mediated non-dissipative and ultrafast plasmon passage. Nature Physics, 2017, 13, 761-765.	6.5	97
70	Fractal Nanoparticle Plasmonics: The Cayley Tree. ACS Nano, 2015, 9, 3284-3292.	7.3	96
71	Effects of Plasmonic Metal Core -Dielectric Shell Nanoparticles on the Broadband Light Absorption Enhancement in Thin Film Solar Cells. Scientific Reports, 2017, 7, 7696.	1.6	93
72	Multipole and multimode engineering in Mie resonance-based metastructures. Nanophotonics, 2020, 9, 1115-1137.	2.9	93

#	Article	IF	Citations
73	Cooperative expression of atomic chirality in inorganic nanostructures. Nature Communications, 2017, 8, 14312.	5.8	91
74	Quantum theory of the nonlinear Fano effect in hybrid metal-semiconductor nanostructures: The case of strong nonlinearity. Physical Review B, 2011, 84, .	1.1	90
75	Nearâ€Infrared, Heavy Metalâ€Free Colloidal â€œGiantâ€•Core/Shell Quantum Dots. Advanced Energy Materials, 2018, 8, 1701432.	10.2	90
76	Plasmonic Chirality and Circular Dichroism in Bioassembled and Nonbiological Systems: Theoretical Background and Recent Progress. Advanced Materials, 2020, 32, e1801790.	11.1	89
77	Intensifying Heat Using MOFâ€Isolated Graphene for Solarâ€Driven Seawater Desalination at 98% Solarâ€toâ€Thermal Efficiency. Advanced Functional Materials, 2021, 31, 2008904.	7.8	87
78	Multidimensional nanoscopic chiroptics. Nature Reviews Physics, 2022, 4, 113-124.	11.9	87
79	Chiral Plasmonic Nanocrystals for Generation of Hot Electrons: Toward Polarization-Sensitive Photochemistry. Nano Letters, 2019, 19, 1395-1407.	4.5	83
80	Plasmon-induced CD response of oligonucleotide-conjugated metal nanoparticles. Chemical Communications, 2011, 47, 7383.	2.2	82
81	Plasmonic Nanostars with Hot Spots for Efficient Generation of Hot Electrons under Solar Illumination. Advanced Optical Materials, 2017, 5, .	3.6	79
82	Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. Journal of Physical Chemistry Letters, 2019, 10, 419-426.	2.1	74
83	Optical Properties of Chiral Plasmonic Tetramers: Circular Dichroism and Multipole Effects. Journal of Physical Chemistry C, 2013, 117, 14770-14777.	1.5	70
84	Confinement and Interaction of Single Indirect Excitons in a Voltage-Controlled Trap Formed Inside Double InGaAs Quantum Wells. Physical Review Letters, 2013, 110, 127403.	2.9	68
85	Broadband efficiency enhancement in quantum dot solar cells coupled with multispiked plasmonic nanostars. Nano Energy, 2015, 13, 827-835.	8.2	68
86	Identifying Performance-Limiting Deep Traps in Ta₃N₅ for Solar Water Splitting. ACS Catalysis, 2020, 10, 10316-10324.	5.5	68
87	Excitonics of semiconductor quantum dots and wires for lighting and displays. Laser and Photonics Reviews, 2014, 8, 73-93.	4.4	67
88	Localization of Excess Temperature Using Plasmonic Hot Spots in Metal Nanostructures: Combining Nano-Optical Antennas with the Fano Effect. Journal of Physical Chemistry C, 2016, 120, 13215-13226.	1.5	67
89	Optical Aharonov-Bohm effect in stacked type-II quantum dots. Physical Review B, 2007, 76, .	1.1	66
90	Kinetic Density Functional Theory for Plasmonic Nanostructures: Breaking of the Plasmon Peak in the Quantum Regime and Generation of Hot Electrons. Journal of Physical Chemistry C, 2015, 119, 6181-6194.	1.5	66

#	Article	IF	Citations
91	Tunable Nonthermal Distribution of Hot Electrons in a Semiconductor Injected from a Plasmonic Gold Nanostructure. ACS Nano, 2018, 12, 7117-7126.	7.3	65
92	Generation of Hot Electrons with Chiral Metamaterial Perfect Absorbers: Giant Optical Chirality for Polarization-Sensitive Photochemistry. ACS Photonics, 2019, 6, 3241-3252.	3.2	64
93	Optoelectronic Properties in Nearâ€Infrared Colloidal Heterostructured Pyramidal â€œGiantâ€•Core/Shell Quantum Dots. Advanced Science, 2018, 5, 1800656.	5.6	63
94	Metamaterial perfect absorber with unabated size-independent absorption. Optics Express, 2018, 26, 20471.	1.7	63
95	Chiral Assembly of Goldâ€“Silver Coreâ€“Shell Plasmonic Nanorods on DNA Origami with Strong Optical Activity. ACS Nano, 2020, 14, 7454-7461.	7.3	63
96	Determination of hot carrier energy distributions from inversion of ultrafast pump-probe reflectivity measurements. Nature Communications, 2018, 9, 1853.	5.8	62
97	Photostimulated Au Nanoheaters in Polymer and Biological Media: Characterization of Mechanical Destruction and Boiling. Advanced Functional Materials, 2012, 22, 294-303.	7.8	61
98	Multitask deep-learning-based design of chiral plasmonic metamaterials. Photonics Research, 2020, 8, 1213.	3.4	61
99	Theory of Quantum Plasmon Resonances in Doped Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2014, 118, 16035-16042.	1.5	60
100	Towards enhancing photocatalytic hydrogen generation: Which is more important, alloy synergistic effect or plasmonic effect?. Applied Catalysis B: Environmental, 2018, 221, 77-85.	10.8	59
101	DNA-Enabled Chiral Gold Nanoparticleâ€“Chromophore Hybrid Structure with Resonant Plasmonâ€“Exciton Coupling Gives Unusual and Strong Circular Dichroism. Journal of the American Chemical Society, 2019, 141, 19336-19341.	6.6	59
102	Hot Electrons Generated in Chiral Plasmonic Nanocrystals as a Mechanism for Surface Photochemistry and Chiral Growth. Journal of the American Chemical Society, 2020, 142, 4193-4205.	6.6	58
103	Impurity effects on the Aharonov-Bohm optical signatures of neutral quantum-ring magnetoexcitons. Physical Review B, 2004, 70, .	1.1	57
104	Enhanced generation and anisotropic Coulomb scattering of hot electrons in an ultra-broadband plasmonic nanopatch metasurface. Nature Communications, 2017, 8, 986.	5.8	57
105	Experimental and Theoretical Observation of Photothermal Chirality in Gold Nanoparticle Helicoids. ACS Nano, 2020, 14, 4188-4195.	7.3	57
106	Superchiral Plasmonic Phase Sensitivity for Fingerprinting of Protein Interface Structure. ACS Nano, 2017, 11, 12049-12056.	7.3	56
107	Exciton energy transfer between nanoparticles and nanowires. Physical Review B, 2008, 78, .	1.1	55
108	Efficiency of Hot-Electron Generation in Plasmonic Nanocrystals with Complex Shapes: Surface-Induced Scattering, Hot Spots, and Interband Transitions. ACS Photonics, 2020, 7, 2807-2824.	3.2	55

#	Article	IF	Citations
109	Photoactivated Biotemplated Nanoparticles as an Enzyme Mimic. Angewandte Chemie - International Edition, 2008, 47, 5335-5339.	7.2	54
110	Generalized Theory of FÃ¶rster-Type Nonradiative Energy Transfer in Nanostructures with Mixed Dimensionality. Journal of Physical Chemistry C, 2013, 117, 10203-10212.	1.5	54
111	Enhanced Luminescence, Collective Heating, and Nanothermometry in an Ensemble System Composed of Lanthanideâ€Doped Upconverting Nanoparticles and Gold Nanorods. Advanced Optical Materials, 2015, 3, 1606-1613.	3.6	54
112	Highly Efficient Copper Sulfideâ€Based Nearâ€Infrared Photothermal Agents: Exploring the Limits of Macroscopic Heat Conversion. Small, 2018, 14, e1803282.	5.2	54
113	Distance Dependence of FÃ¶rster Resonance Energy Transfer Rates in 2D Perovskite Quantum Wells via Control of Organic Spacer Length. Journal of the American Chemical Society, 2021, 143, 4244-4252.	6.6	54
114	Spin-FÃ¶rster transfer in optically excited quantum dots. Physical Review B, 2005, 71, .	1.1	52
115	Many-body exciton states in self-assembled quantum dots coupled to a Fermi sea. Nature Physics, 2010, 6, 534-538.	6.5	52
116	Comparison of Vapor Formation of Water at the Solid/Water Interface to Colloidal Solutions Using Optically Excited Gold Nanostructures. ACS Nano, 2014, 8, 1439-1448.	7.3	49
117	Chiroptical Activity in Silver Cholate Nanostructures Induced by the Formation of Nanoparticle Assemblies. Journal of Physical Chemistry C, 2013, 117, 22240-22244.	1.5	47
118	Controlling Metamaterial Transparency with Superchiral Fields. ACS Photonics, 2018, 5, 535-543.	3.2	47
119	Long- and short-ranged chiral interactions in DNA-assembled plasmonic chains. Nature Communications, 2021, 12, 2025.	5.8	47
120	Engineering plasmonic hot carrier dynamics toward efficient photodetection. Applied Physics Reviews, 2021, 8, .	5.5	47
121	DNA Scaffolds for the Dictated Assembly of Left-/Right-Handed Plasmonic Au NP Helices with Programmed Chiro-Optical Properties. Journal of the American Chemical Society, 2016, 138, 9895-9901.	6.6	45
122	Laser streaming: Turning a laser beam into a flow of liquid. Science Advances, 2017, 3, e1700555.	4.7	45
123	Hydrodynamic Effects in Interacting Fermi Electron Jets. Physical Review Letters, 2004, 92, 026803.	2.9	43
124	Aluminum Nanoparticles with Hot Spots for Plasmonâ€Induced Circular Dichroism of Chiral Molecules in the UV Spectral Interval. Advanced Optical Materials, 2017, 5, 1700069.	3.6	43
125	Plasmonic Glasses and Films Based on Alternative Inexpensive Materials for Blocking Infrared Radiation. Nano Letters, 2018, 18, 3147-3156.	4.5	43
126	Hot plasmonic electrons for generation of enhanced photocurrent in gold-TiO2 nanocomposites. Nanoscale Research Letters, 2015, 10, 38.	3.1	42

#	Article	IF	Citations
127	Resonant Excitation and Imaging of Nonequilibrium Exciton Spins in Single Coreâ^'Shell GaAsâ^'AlGaAs Nanowires. Nano Letters, 2007, 7, 588-595.	4.5	41
128	Chiral Generation of Hot Carriers for Polarization-Sensitive Plasmonic Photocatalysis. Journal of the American Chemical Society, 2022, 144, 1663-1671.	6.6	41
129	Optical Characterization of Bio-assembled Hybrid Nanostructures. Supramolecular Chemistry, 2006, 18, 415-421.	1.5	39
130	Spatial control of chemical processes on nanostructures through nano-localized water heating. Nature Communications, 2016, 7, 10946.	5.8	39
131	InGaAs and GaAs quantum dot solar cells grown by droplet epitaxy. Solar Energy Materials and Solar Cells, 2017, 161, 377-381.	3.0	39
132	Broadband Tamm plasmon-enhanced planar hot-electron photodetector. Nanoscale, 2020, 12, 23945-23952.	2.8	37
133	Local Growth Mediated by Plasmonic Hot Carriers: Chirality from Achiral Nanocrystals Using Circularly Polarized Light. Nano Letters, 2021, 21, 10315-10324.	4.5	37
134	Semiconductor-metal nanoparticle molecules in a magnetic field: Spin-plasmon and exciton-plasmon interactions. Physical Review B, 2010, 82, .	1.1	36
135	Photophysical Effects behind the Efficiency of Hot Electron Injection in Plasmon-Assisted Catalysis: The Joint Role of Morphology and Composition. ACS Energy Letters, 2020, 5, 395-402.	8.8	36
136	Orientation-Sensitive Peptide-Induced Plasmonic Circular Dichroism in Silver Nanocubes. Journal of Physical Chemistry C, 2016, 120, 12751-12756.	1.5	35
137	Quantifying the photothermal conversion efficiency of plasmonic nanoparticles by means of terahertz radiation. APL Photonics, 2019, 4, .	3.0	32
138	Enhanced Optical Properties of a Photosynthetic System Conjugated with Semiconductor Nanoparticles: The Role of FÃ¶rster Transfer. Advanced Materials, 2008, 20, 4330-4335.	11.1	31
139	Cation exchange synthesis and optoelectronic properties of type II CdTeâ€“Cu2â^'xTe nano-heterostructures. Journal of Materials Chemistry C, 2014, 2, 3189.	2.7	29
140	Ultrastable Plasmonic Cu-Based Coreâ€“Shell Nanoparticles. Chemistry of Materials, 2021, 33, 695-705.	3.2	29
141	FÃ¶rster-Type Nonradiative Energy Transfer for Assemblies of Arrayed Nanostructures: Confinement Dimension vs Stacking Dimension. Journal of Physical Chemistry C, 2014, 118, 4951-4958.	1.5	28
142	Thermo-optical Responses of Nanoparticles: Melting of Ice and Nanocalorimetry Approach. Journal of Electronic Materials, 2007, 36, 1587-1593.	1.0	27
143	Optical Emission and Energy Transfer in Nanoparticleâ^'Nanorod Assemblies: Potential Energy Pump System for Negative Refractive Index Materials. Journal of Physical Chemistry C, 2008, 112, 18314-18320.	1.5	27
144	Optophononics with coupled quantum dots. Nature Communications, 2014, 5, 3299.	5.8	27

#	Article	IF	Citations
145	Gold-implanted plasmonic quartz plate as a launch pad for laser-driven photoacoustic microfluidic pumps. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6580-6585.	3.3	27
146	Measurement of coherent tunneling between InGaAs quantum wells and InAs quantum dots using photoluminescence spectroscopy. Physical Review B, 2010, 82, .	1.1	26
147	Engineering Strongly Chiral Plasmonic Lattices with Achiral Unit Cells for Sensing and Photodetection. Advanced Optical Materials, 2022, 10, .	3.6	26
148	Chiral Bioinspired Plasmonics: A Paradigm Shift for Optical Activity and Photochemistry. ACS Photonics, 2022, 9, 2219-2236.	3.2	26
149	Terahertz Thermometry: Combining Hyperspectral Imaging and Temperature Mapping at Terahertz Frequencies. Laser and Photonics Reviews, 2017, 11, 1600342.	4.4	25
150	Broadband mid-infrared perfect absorber using fractal Gosper curve. Journal Physics D: Applied Physics, 2020, 53, 105106.	1.3	25
151	Size-dependent longitudinal plasmon resonance wavelength and extraordinary scattering properties of Au nanobipyramids. Nanotechnology, 2018, 29, 355402.	1.3	24
152	Generation of hot electrons in nanostructures incorporating conventional and unconventional plasmonic materials. Faraday Discussions, 2019, 214, 199-213.	1.6	24
153	Planar hot-electron photodetector utilizing high refractive index MoS2 in Fabryâ€“PÃ©rot perfect absorber. Nanotechnology, 2020, 31, 274001.	1.3	24
154	Charged donors in quantum dots: Finite difference and fractional dimensions results. Physical Review B, 2004, 69, .	1.1	23
155	Broadband Absorbing Excitonâ€“Plasmon Metafluids with Narrow Transparency Windows. Nano Letters, 2016, 16, 1472-1477.	4.5	23
156	Manipulating the Optoelectronic Properties of Quasi-type II CuInS₂/CdS Core/Shell Quantum Dots for Photoelectrochemical Cell Applications. ACS Applied Materials & Interfaces, 2020, 12, 36277-36286.	4.0	23
157	Chiral Optofluidics with a Plasmonic Metasurface Using the Photothermal Effect. ACS Nano, 2021, 15, 16357-16367.	7.3	23
158	Tailoring the optoelectronic properties of ecoâ€friendly <scp>CuGaS₂</scp>/<scp>ZnSe</scp> core/shell quantum dots for boosted photoelectrochemical solar hydrogen production. EcoMat, 2022, 4, .	6.8	23
159	Upcycling of biomass waste into photothermal superhydrophobic coating for efficient anti-icing and deicing. Materials Today Physics, 2022, 24, 100683.	2.9	23
160	Kondo excitons in self-assembled quantum dots. Physical Review B, 2003, 67, .	1.1	22
161	Rational design of colloidal core/shell quantum dots for optoelectronic applications. Journal of Electronic Science and Technology, 2020, 18, 100018.	2.0	22
162	Spin-dependent transport of electrons in the presence of a smooth lateral potential and spin-orbit interaction. Physical Review B, 2004, 70, .	1.1	21

#	Article	IF	Citations
163	Plasmon-induced Purcell effect in InN/In metal-semiconductor nanocomposites. Physical Review B, 2010, 82, .	1.1	21
164	Traveling Hot Spots in Plasmonic Photocatalysis: Manipulating Interparticle Spacing for Realâ€Time Control of Electron Injection. ChemCatChem, 2018, 10, 1561-1565.	1.8	20
165	Gap-plasmon enhanced water splitting with ultrathin hematite films: the role of plasmonic-based light trapping and hot electrons. Faraday Discussions, 2019, 214, 283-295.	1.6	20
166	Chiral Photomelting of DNA-Nanocrystal Assemblies Utilizing Plasmonic Photoheating. Nano Letters, 2021, 21, 7298-7308.	4.5	20
167	Plasmonic hot-electron photodetection with quasi-bound states in the continuum and guided resonances. Nanophotonics, 2021, 10, 1911-1921.	2.9	19
168	Temporal plasmonics: Fano and Rabi regimes in the time domain in metal nanostructures. Nanophotonics, 2020, 9, 3587-3595.	2.9	19
169	Dark exciton decay dynamics of a semiconductor quantum dot. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 2591-2597.	0.8	18
170	Mid-infrared Plasmonic Circular Dichroism Generated by Graphene Nanodisk Assemblies. Nano Letters, 2017, 17, 5099-5105.	4.5	18
171	Ultraflexible Photothermal Superhydrophobic Coating with Multifunctional Applications Based on Plasmonic TiN Nanoparticles. Advanced Optical Materials, 2022, 10, .	3.6	18
172	Coherent Aharonov-Bohm oscillations in type-II (Zn,Mn)Te/ZnSe quantum dots. Physical Review B, 2008, 77, .	1.1	16
173	Plasmonic Metamaterials and Nanocomposites with the Narrow Transparency Window Effect in Broad Extinction Spectra. ACS Photonics, 2014, 1, 822-832.	3.2	16
174	Fabrication of Anisotropic Silver Nanoplatelets on the Surface of TiO₂ Fibers for Enhanced Photocatalysis of a Chemical Warfare Agent Simulant, Methyl Paraoxon. Journal of Physical Chemistry C, 2019, 123, 19579-19587.	1.5	16
175	Comparing Photoelectrochemical Methanol Oxidation Mechanisms for Gold versus Titanium Nitride Nanoparticles Dispersed in TiO2ÂMatrix. Journal of the Electrochemical Society, 2019, 166, H485-H493.	1.3	16
176	Time-Resolved Temperature-Jump Measurements and Theoretical Simulations of Nanoscale Heat Transfer Using NaYF₄:Yb³⁺:Er³⁺ Upconverting Nanoparticles. Journal of Physical Chemistry C, 2019, 123, 3770-3780.	1.5	16
177	Nanoantennaâ€Enhanced Lightâ€Emitting Diodes: Fundamental and Recent Progress. Laser and Photonics Reviews, 2021, 15, 2000367.	4.4	16
178	Broadband thin-film and metamaterial absorbers using refractory vanadium nitride and their thermal stability. Optics Express, 2021, 29, 33456.	1.7	16
179	Long-Range Plasmon-Assisted Chiral Interactions in Nanocrystal Assemblies. ACS Photonics, 2019, 6, 749-756.	3.2	15
180	Plasmonic Nanocrystals with Complex Shapes for Photocatalysis and Growth: Contrasting Anisotropic Hotâ€Electron Generation with the Photothermal Effect. Advanced Optical Materials, 2022, 10, .	3.6	15

#	Article	IF	Citations
181	Thermomechanical control of electronic coupling in quantum dot solids. Journal of Applied Physics, 2010, 107, 123516.	1.1	14
182	Near-Infrared Plasmonic Copper Nanocups Fabricated by Template-Assisted Magnetron Sputtering. ACS Photonics, 2017, 4, 2881-2890.	3.2	14
183	Terahertz three-dimensional monitoring of nanoparticle-assisted laser tissue soldering. Biomedical Optics Express, 2020, 11, 2254.	1.5	14
184	Rational design of eco-friendly Mn-doped nonstoichiometric CuInSe/ZnSe core/shell quantum dots for boosted photoelectrochemical efficiency. Nano Research, 2022, 15, 7614-7621.	5.8	14
185	Strong Quantum Confinement Effects and Chiral Excitons in Bio-Inspired ZnOâ€“Amino Acid Cocrystals. Journal of Physical Chemistry C, 2018, 122, 6348-6356.	1.5	13
186	Hybrid Plasmonicâ€“Aerogel Materials as Optical Superheaters with Engineered Resonances. Angewandte Chemie - International Edition, 2020, 59, 1696-1702.	7.2	13
187	Chiral Restructuring of Peptide Enantiomers on Gold Nanomaterials. ACS Biomaterials Science and Engineering, 2020, 6, 2612-2620.	2.6	12
188	Nanolayered Tamm Plasmon-Based Multicolor Hot Electron Photodetection for O- and C-Band Telecommunication. ACS Applied Electronic Materials, 2021, 3, 639-650.	2.0	12
189	Electronic states in a magnetic quantum-dot molecule: Instabilities and spontaneous symmetry breaking. Physical Review B, 2007, 76, .	1.1	11
190	Solvent Effect in Dynamic Superstructures from Au Nanoparticles and CdTe Nanowires: Experimental Observation and Theoretical Description. Journal of Physical Chemistry C, 2010, 114, 1404-1410.	1.5	11
191	DNA-Assembled Chiral Satellite-Core Nanoparticle Superstructures: Two-State Chiral Interactions from Dynamic and Static Conformations. Nano Letters, 2022, 22, 4784-4791.	4.5	10
192	Simple and Complex Metafluids and Metastructures with Sharp Spectral Features in a Broad Extinction Spectrum: Particleâ€“Particle Interactions and Testing the Limits of the Beerâ€“Lambert Law. Journal of Physical Chemistry C, 2017, 121, 2987-2997.	1.5	9
193	Hybrid Plasmonicâ€“Aerogel Materials as Optical Superheaters with Engineered Resonances. Angewandte Chemie, 2020, 132, 1713-1719.	1.6	9
194	Thermal Effects of Colloidal Suspensions of Au Nanoparticles. Materials Research Society Symposia Proceedings, 2009, 1172, 60.	0.1	8
195	Special topic on emerging directions in plasmonics. Journal of Chemical Physics, 2020, 153, 010401.	1.2	8
196	Holstein polarons in a strong electric field: Delocalized and stretched states. Physical Review B, 2002, 66, .	1.1	7
197	Photoelectrochemical Methanol Oxidation Under Visible and UV Excitation of TiO₂-Supported TiN and ZrN Plasmonic Nanoparticles. Journal of the Electrochemical Society, 2021, 168, 016503.	1.3	7
198	Visible Light-Induced Reactivity of Plasmonic Gold Nanoparticles Incorporated into TiO2 Matrix towards 2-Chloroethyl Ethyl Sulfide. Crystals, 2021, 11, 659.	1.0	7

#	Article	IF	Citations
199	Chiroptical activity in colloidal quantum dots coated with achiral ligands. Optics Express, 2016, 24, A65.	1.7	6
200	Visible light driven oxidation of harmful 2-Chloroethyl ethyl sulfide using SiO2-TiO2 composite particles and air. Colloids and Interface Science Communications, 2021, 41, 100362.	2.0	6
201	Hot Electron Generation through Near-Field Excitation of Plasmonic Nanoresonators. ACS Photonics, 2021, 8, 1243-1250.	3.2	6
202	Manipulation of Fluid Convection by Surface Lattice Resonance. Advanced Optical Materials, 2022, 10, .	3.6	6
203	Modelling of photo-thermal control of biological cellular oscillators. European Physical Journal: Special Topics, 2013, 222, 2697-2704.	1.2	5
204	Chirality and Nanophotonics. Advanced Optical Materials, 2017, 5, 1700501.	3.6	5
205	Quantum Dots: Nearâ€Infrared, Heavy Metalâ€Free Colloidal â€œGiantâ€•Core/Shell Quantum Dots (Adv.) Tj ETQq1 1 0.784314 rgBT	10.2	5
206	Magnetic properties of charged excitons in self-assembled quantum dots. Physica Status Solidi (B): Basic Research, 2003, 238, 293-296.	0.7	4
207	Spin polarized photocurrent from a single quantum dot. AIP Conference Proceedings, 2005, , .	0.3	3
208	Thermo-optical Properties of Nanoparticles and Nanoparticle Complexes Embedded in Ice: Characterization of Heat Generation and Actuation of Larger-scale Effects. Materials Research Society Symposia Proceedings, 2006, 964, 1.	0.1	3
209	Heat Conversion: Highly Efficient Copper Sulfide-Based Near-Infrared Photothermal Agents: Exploring the Limits of Macroscopic Heat Conversion (Small 49/2018). Small, 2018, 14, 1870238.	5.2	3
210	Rational synthesis of novel â€œgiantâ€•CuInTeSe/CdS core/shell quantum dots for optoelectronics. Nanoscale, 2021, 13, 15301-15310.	2.8	3
211	Mie Sensing with Neural Networks: Recognition of Nanoâ€Object Parameters, the Invisibility Point, and Restricted Models. Advanced Theory and Simulations, 0, , 2100369.	1.3	3
212	Characterization of UVB and UVAâ€340 Lamps and Determination of Their Effects on ER Stress and DNA Damage. Photochemistry and Photobiology, 2022, 98, 1140-1148.	1.3	3
213	Solarâ€Energy Harvesting: Broadband Hotâ€Electron Collection for Solar Water Splitting with Plasmonic Titanium Nitride (Advanced Optical Materials 15/2017). Advanced Optical Materials, 2017, 5, .	3.6	2
214	Charged Excitons in Self-assembled Quantum Dots. Materials Research Society Symposia Proceedings, 2002, 737, 75.	0.1	1
215	Kondo-excitons and Auger processes in self-assembled quantum dots. Materials Research Society Symposia Proceedings, 2002, 737, 86.	0.1	1
216	Assembly of Nanomaterials using Polymers and Biomaterials: Sensing and Electronic Applications. Materials Research Society Symposia Proceedings, 2005, 901, 1.	0.1	1

#	Article	IF	Citations
217	Plasmon induced modifications of the FÃ¶rster energy transfer in reconstituted peridinin-chlorophyll-protein photosynthetic complex. Materials Research Society Symposia Proceedings, 2011, 1286, 24.	0.1	1
218	Luminescent Solar Concentrators: Near Infrared, Highly Efficient Luminescent Solar Concentrators (Adv. Energy Mater. 11/2016). Advanced Energy Materials, 2016, 6, .	10.2	1
219	Theory of Photo-Thermal Effects for Plasmonic Nanocrystals and Assemblies. SpringerBriefs in Applied Sciences and Technology, 2019, , 5-22.	0.2	1
220	Hotspot-mediated non-dissipative and ultrafast plasmon passage. , 0, .		1
221	çŽ¯å¢ƒå•å¥½åž‹é‡åç‚¹åªé˜³èƒ½è½¬æ¢å™¨ä»¶ç”¨ç©¶è¿›å±•. Chinese Science Bulletin, 2022, , .	0.4	1
222	Electronic quantum dot states induced through photon emission. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2079-2093.	0.8	0
223	Dynamics of Bright and Dark Excitons in a Self-Assembled Quantum Dot. AIP Conference Proceedings, 2005, , .	0.3	0
224	Spin-Dependent Coupling Of Charged Excitons In Quantum Dots With Continuum States. AIP Conference Proceedings, 2005, , .	0.3	0
225	Population Inversion and Coherent Phonon Emission in a Biased Quantum Dot System Placed in an Acoustic Cavity. AIP Conference Proceedings, 2005, , .	0.3	0
226	Thermal Transport Properties of Nanostructures Immobilized Substrates. Materials Research Society Symposia Proceedings, 2009, 1172, 7.	0.1	0
227	Metal-Enhanced Fluorescence of Chlorophylls in Single Light-Harvesting Complexes. Materials Research Society Symposia Proceedings, 2009, 1208, 1.	0.1	0
228	Optical properties of hybrid nanostructures: exciton-plasmon interaction, Fano effect, and plasmon-induced chirality. , 2011, , .		0
229	Optically-active hybrid nanostructures: Injection of hot plasmonic electrons, exciton-plasmon interaction, chirality and related applications. , 2013, , .		0
230	Photo-Thermal Spectroscopy with Plasmonic and Rare-Earth Doped (Nano)Materials. SpringerBriefs in Applied Sciences and Technology, 2019, , .	0.2	0
231	â€œTeramometryâ€•and Plasmonic Nanoparticle Imaging for Temperature-Sensing in the Terahertz Regime. , 2016, , .		0
232	Multi-dimensional Imaging in the Terahertz Regime for Theranostic Applications. , 2017, , .		0
233	Terahertz multi-dimensional imaging for nanoparticle-assisted therapeutics. , 2022, , .		0