

Lei Shao

List of Publications by Year in descending order

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79
papers

6,040
citations

101543

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79698

73
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80
all docs

80
docs citations

80
times ranked

8495
citing authors

#	ARTICLE	IF	CITATIONS
1	Gold nanorods and their plasmonic properties. <i>Chemical Society Reviews</i> , 2013, 42, 2679-2724.	38.1	1,576
2	Understanding the Photothermal Conversion Efficiency of Gold Nanocrystals. <i>Small</i> , 2010, 6, 2272-2280.	10.0	505
3	Gold Nanorods: The Most Versatile Plasmonic Nanoparticles. <i>Chemical Reviews</i> , 2021, 121, 13342-13453.	47.7	237
4	Unraveling the Evolution and Nature of the Plasmons in (Au Core)@Ag Shell Nanorods. <i>Advanced Materials</i> , 2012, 24, OP200-7.	21.0	225
5	Advanced Plasmonic Materials for Dynamic Color Display. <i>Advanced Materials</i> , 2018, 30, e1704338.	21.0	176
6	Angle- and Energy-Resolved Plasmon Coupling in Gold Nanorod Dimers. <i>ACS Nano</i> , 2010, 4, 3053-3062.	14.6	158
7	Growth of Monodisperse Gold Nanospheres with Diameters from 20 nm to 220 nm and Their Core/Satellite Nanostructures. <i>Advanced Optical Materials</i> , 2014, 2, 65-73.	7.3	158
8	Gold Nanobipyramids: An Emerging and Versatile Type of Plasmonic Nanoparticles. <i>Accounts of Chemical Research</i> , 2019, 52, 2136-2146.	15.6	133
9	Shape-Dependent Refractive Index Sensitivities of Gold Nanocrystals with the Same Plasmon Resonance Wavelength. <i>Journal of Physical Chemistry C</i> , 2009, 113, 17691-17697.	3.1	130
10	(Gold Nanorod Core)/(Polyaniline Shell) Plasmonic Switches with Large Plasmon Shifts and Modulation Depths. <i>Advanced Materials</i> , 2014, 26, 3282-3289.	21.0	129
11	Plasmonic Metasurfaces with Conjugated Polymers for Flexible Electronic Paper in Color. <i>Advanced Materials</i> , 2016, 28, 9956-9960.	21.0	128
12	Observation of the Fano Resonance in Gold Nanorods Supported on High-Dielectric-Constant Substrates. <i>ACS Nano</i> , 2011, 5, 6754-6763.	14.6	124
13	Universal Scaling and Fano Resonance in the Plasmon Coupling between Gold Nanorods. <i>ACS Nano</i> , 2011, 5, 5976-5986.	14.6	119
14	Photocurrent Enhancement of HgTe Quantum Dot Photodiodes by Plasmonic Gold Nanorod Structures. <i>ACS Nano</i> , 2014, 8, 8208-8216.	14.6	116
15	Gold Nanorod Rotary Motors Driven by Resonant Light Scattering. <i>ACS Nano</i> , 2015, 9, 12542-12551.	14.6	109
16	Distinct Plasmonic Manifestation on Gold Nanorods Induced by the Spatial Perturbation of Small Gold Nanospheres. <i>Nano Letters</i> , 2012, 12, 1424-1430.	9.1	106
17	Mass-Based Photothermal Comparison Among Gold Nanocrystals, PbS Nanocrystals, Organic Dyes, and Carbon Black. <i>Journal of Physical Chemistry C</i> , 2013, 117, 8909-8915.	3.1	97
18	Plasmon-Controlled Förster Resonance Energy Transfer. <i>Journal of Physical Chemistry C</i> , 2012, 116, 8287-8296.	3.1	96

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19	Hot Electron Generation and Cathodoluminescence Nanoscopy of Chiral Split Ring Resonators. Nano Letters, 2016, 16, 5183-5190.	9.1	92
20	A Gold Nanocrystal/Poly(dimethylsiloxane) Composite for Plasmonic Heating on Microfluidic Chips. Advanced Materials, 2012, 24, 94-98.	21.0	88
21	Room-temperature valleytronic transistor. Nature Nanotechnology, 2020, 15, 743-749.	31.5	87
22	Plasmonic-Molecular Resonance Coupling: Plasmonic Splitting versus Energy Transfer. Journal of Physical Chemistry C, 2012, 116, 14088-14095.	3.1	85
23	Plasmonic Properties of Single Multispiked Gold Nanostars: Correlating Modeling with Experiments. Langmuir, 2012, 28, 8979-8984.	3.5	80
24	Light-Driven Rotation of Plasmonic Nanomotors. Advanced Functional Materials, 2018, 28, 1706272.	14.9	77
25	Fano Resonance in (Gold Core)~(Dielectric Shell) Nanostructures without Symmetry Breaking. Small, 2012, 8, 1503-1509.	10.0	63
26	Macroscale Colloidal Noble Metal Nanocrystal Arrays and Their Refractive Index-Based Sensing Characteristics. Small, 2014, 10, 802-811.	10.0	59
27	Evaluating Conditions for Strong Coupling between Nanoparticle Plasmons and Organic Dyes Using Scattering and Absorption Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 20588-20596.	3.1	58
28	Correlating the Plasmonic and Structural Evolutions during the Sulfidation of Silver Nanocubes. ACS Nano, 2013, 7, 9354-9365.	14.6	57
29	Identifying the functional groups effect on passivating perovskite solar cells. Science Bulletin, 2020, 65, 1726-1734.	9.0	52
30	Comparison of the plasmonic performances between lithographically fabricated and chemically grown gold nanorods. Physical Chemistry Chemical Physics, 2015, 17, 10861-10870.	2.8	46
31	Site-Selective Deposition of Metal-Organic Frameworks on Gold Nanobipyramids for Surface-Enhanced Raman Scattering. Nano Letters, 2021, 21, 8205-8212.	9.1	46
32	Observation of chiral and slow plasmons in twisted bilayer graphene. Nature, 2022, 605, 63-68.	27.8	45
33	Directional Control of Light with Nanoantennas. Advanced Optical Materials, 2021, 9, .	7.3	44
34	Nanoantenna-Sandwiched Graphene with Giant Spectral Tuning in the Visible-to-Near-Infrared Region. Advanced Optical Materials, 2014, 2, 162-170.	7.3	39
35	How to Utilize Excited Plasmon Energy Efficiently. ACS Nano, 2021, 15, 10759-10768.	14.6	39
36	Metasurfaces and Colloidal Suspensions Composed of 3D Chiral Si Nanoresonators. Advanced Materials, 2017, 29, 1701352.	21.0	39

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37	Plasmonically enabled two-dimensional material-based optoelectronic devices. <i>Nanoscale</i> , 2020, 12, 8095-8108.	5.6	38
38	Probing Photothermal Effects on Optically Trapped Gold Nanorods by Simultaneous Plasmon Spectroscopy and Brownian Dynamics Analysis. <i>ACS Nano</i> , 2017, 11, 10053-10061.	14.6	34
39	Antibody–Antigen Interaction Dynamics Revealed by Analysis of Single-Molecule Equilibrium Fluctuations on Individual Plasmonic Nanoparticle Biosensors. <i>ACS Nano</i> , 2018, 12, 9958-9965.	14.6	34
40	Plasmon-Modulated Light Scattering from Gold Nanocrystal-Decorated Hollow Mesoporous Silica Microspheres. <i>ACS Nano</i> , 2010, 4, 6565-6572.	14.6	33
41	Brownian fluctuations of an optically rotated nanorod. <i>Optica</i> , 2017, 4, 746.	9.3	33
42	Continuous–Gradient Plasmonic Nanostructures Fabricated by Evaporation on a Partially Exposed Rotating Substrate. <i>Advanced Materials</i> , 2016, 28, 4658-4664.	21.0	32
43	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. <i>Nano Letters</i> , 2019, 19, 3295-3304.	9.1	28
44	Plasmonic Color Laser Printing inside Transparent Gold Nanodisk–Embedded Poly(dimethylsiloxane) Matrices. <i>Advanced Optical Materials</i> , 2020, 8, 1901605.	7.3	27
45	Anapole States and Toroidal Resonances Realized in Simple Gold Nanoplate–on–Mirror Structures. <i>Advanced Optical Materials</i> , 2020, 8, 2001173.	7.3	27
46	Molecular Tunnel Junction-Controlled High-Order Charge Transfer Plasmon and Fano Resonances. <i>ACS Nano</i> , 2018, 12, 12541-12550.	14.6	24
47	Assembly of gold nanorods functionalized by zirconium-based metal–organic frameworks for surface enhanced Raman scattering. <i>Nanoscale</i> , 2022, 14, 5561-5568.	5.6	22
48	Chirality-selective transparency induced by lattice resonance in bilayer metasurfaces. <i>Photonics Research</i> , 2021, 9, 484.	7.0	21
49	Heterostructures Built through Site–Selective Deposition on Anisotropic Plasmonic Metal Nanocrystals and Their Applications. <i>Small Structures</i> , 2021, 2, .	12.0	21
50	Switching plasmonic Fano resonance in gold nanosphere–nanoplate heterodimers. <i>Nanoscale</i> , 2019, 11, 9641-9653.	5.6	19
51	Strengthening Fano resonance on gold nanoplates with gold nanospheres. <i>Nanoscale</i> , 2020, 12, 1975-1984.	5.6	18
52	All-State Switching of the Mie Resonance of Conductive Polyaniline Nanospheres. <i>Nano Letters</i> , 2022, 22, 1406-1414.	9.1	18
53	Photothermal DNA Release from Laser-Tweezed Individual Gold Nanomotors Driven by Photon Angular Momentum. <i>ACS Photonics</i> , 2018, 5, 2168-2175.	6.6	15
54	Fabrication of plasmonic nanostructures by hole-mask colloidal lithography: Recent development. <i>Applied Materials Today</i> , 2019, 15, 6-17.	4.3	15

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55	(Metal yolk)/(porous ceria shell) nanostructures for high-performance plasmonic photocatalysis under visible light. <i>Nano Research</i> , 2020, 13, 1354-1362.	10.4	15
56	Generation and Detection of Strain-Localized Excitons in WS ₂ Monolayer by Plasmonic Metal Nanocrystals. <i>ACS Nano</i> , 2022, 16, 10647-10656.	14.6	14
57	Optically controlled stochastic jumps of individual gold nanorod rotary motors. <i>Physical Review B</i> , 2018, 98, .	3.2	13
58	Morphology Engineering of Au/(PdAg alloy) Nanostructures for Enhanced Electrocatalytic Ethanol Oxidation. <i>Particle and Particle Systems Characterization</i> , 2018, 35, 1800258.	2.3	13
59	Selective Deposition of Catalytic Metals on Plasmonic Au Nanocups for Room-Light-Active Photooxidation of <i>o</i> -Phenylenediamine. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 51855-51866.	8.0	12
60	Phonon Thermal Transport in Silicene/Graphene Heterobilayer Nanostructures: Effect of Interlayer Interactions. <i>ACS Omega</i> , 2022, 7, 5844-5852.	3.5	11
61	Enhancing the crystallinity and surface roughness of sputtered TiO ₂ thin film by ZnO underlayer. <i>Applied Surface Science</i> , 2009, 255, 6781-6785.	6.1	9
62	Nanoparticle-Loaded Cylindrical Micelles from Nanopore Extrusion of Block Copolymer Spherical Micelles. <i>Macromolecular Rapid Communications</i> , 2013, 34, 1850-1855.	3.9	9
63	Facet- and Gas-Dependent Reshaping of Au Nanoplates by Plasma Treatment. <i>ACS Nano</i> , 2021, 15, 9860-9870.	14.6	9
64	(Gold nanorod core)/(poly(3,4-ethylene-dioxythiophene) shell) nanostructures and their monolayer arrays for plasmonic switching. <i>Nanoscale</i> , 2020, 12, 20684-20692.	5.6	8
65	Asymmetric Light Scattering on Heterodimers Made of Au Nanorods Vertically Standing on Au Nanodisks. <i>Advanced Optical Materials</i> , 2021, 9, 2001595.	7.3	8
66	Control of light-valley interactions in 2D transition metal dichalcogenides with nanophotonic structures. <i>Nanoscale</i> , 2021, 13, 6357-6372.	5.6	7
67	Plasmon-Enhanced, Self-Traced Nanomotors on the Surface of Silicon. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24958-24967.	13.8	7
68	Recent Progress in Optical-Resonance-Assisted Movement Control of Nanomotors. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900160.	6.1	6
69	Electronic Paper: Plasmonic Metasurfaces with Conjugated Polymers for Flexible Electronic Paper in Color (<i>Adv. Mater.</i> 45/2016). <i>Advanced Materials</i> , 2016, 28, 10103-10103.	21.0	5
70	Controlling the emission frequency of graphene nanoribbon emitters based on spatially excited topological boundary states. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8277-8283.	2.8	5
71	Electrophoretic Plasmonic Ink for Dynamic Color Display. <i>Advanced Optical Materials</i> , 2021, 9, 2100091.	7.3	5
72	A Data-Mining-Assisted Design of Structural Colors on Diamond Metasurfaces. <i>Advanced Photonics Research</i> , 0, , 2100292.	3.6	4

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73	Metasurfaces: Continuous-Gradient Plasmonic Nanostructures Fabricated by Evaporation on a Partially Exposed Rotating Substrate (Adv. Mater. 23/2016). Advanced Materials, 2016, 28, 4756-4756.	21.0	1
74	Functional Metal Nanocrystals for Biomedical Applications. , 2017, , 809-840.		1
75	Fabrication of continuous gradient plasmonic nanostructures. , 2016, , .		0
76	Plasmon-Enhanced, Self-Traced Nanomotors on the Surface of Silicon. Angewandte Chemie, 0, , .	2.0	0
77	Functional Metal Nanocrystals for Biomedical Applications. , 2015, , 1-32.		0
78	Plasmon-coupling-induced photon scattering torque. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 671.	2.1	0
79	Synthesis of Colloidal Semiconductor Nanocrystals With Tunable Plasmonic Properties. , 2022, , 3-45.		0