

Zhigao Dai

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69
papers

3,240
citations

29
h-index

56
g-index

73
ext. papers

3,939
ext. citations

9.5
avg, IF

5.32
L-index

#	Paper	IF	Citations
69	Ultrasensitive detection of miRNA with an antimonene-based surface plasmon resonance sensor. <i>Nature Communications</i> , 2019 , 10, 28	17.4	309
68	In-plane anisotropic and ultra-low-loss polaritons in a natural van der Waals crystal. <i>Nature</i> , 2018 , 562, 557-562	50.4	285
67	Photonics and optoelectronics using nano-structured hybrid perovskite media and their optical cavities. <i>Physics Reports</i> , 2019 , 795, 1-51	27.7	262
66	Topological polaritons and photonic magic angles in twisted HfO_2 bilayers. <i>Nature</i> , 2020 , 582, 209-213	50.4	174
65	3D Flowerlike $\text{Fe}_2\text{O}_3/\text{TiO}_2$ Core-Shell Nanostructures: General Synthesis and Enhanced Photocatalytic Performance. <i>ACS Sustainable Chemistry and Engineering</i> , 2015 , 3, 2975-2984	8.3	154
64	Plasmon-driven reaction controlled by the number of graphene layers and localized surface plasmon distribution during optical excitation. <i>Light: Science and Applications</i> , 2015 , 4, e342-e342	16.7	154
63	Strong Depletion in Hybrid Perovskite p-n Junctions Induced by Local Electronic Doping. <i>Advanced Materials</i> , 2018 , 30, e1705792	24	113
62	Ultrasensitive SERS performance in 3D "sunflower-like" nanoarrays decorated with Ag nanoparticles. <i>Nanoscale</i> , 2017 , 9, 3114-3120	7.7	100
61	Large-scale synthesis and screen printing of upconversion hexagonal-phase $\text{NaYF}_4:\text{Yb}^{3+}, \text{Tm}^{3+}/\text{Er}^{3+}/\text{Eu}^{3+}$ plates for security applications. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 6327-6335	7.1	95
60	Low-Cost, Disposable, Flexible and Highly Reproducible Screen Printed SERS Substrates for the Detection of Various Chemicals. <i>Scientific Reports</i> , 2015 , 5, 10208	4.9	89
59	Ultrasensitive SERS Substrate Integrated with Uniform Subnanometer Scale Blot Spots Created by a Graphene Spacer for the Detection of Mercury Ions. <i>Small</i> , 2017 , 13, 1603347	11	79
58	Present Perspectives of Advanced Characterization Techniques in TiO ₂ -Based Photocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 23265-23286	9.5	78
57	Long range intrinsic ferromagnetism in two dimensional materials and dissipationless future technologies. <i>Applied Physics Reviews</i> , 2018 , 5, 041105	17.3	77
56	Self-assembled free-standing polypyrrole nanotube membrane as an efficient FTO- and Pt-free counter electrode for dye-sensitized solar cells. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 14-7	9.5	75
55	Efficient UV-Vis-NIR Responsive Upconversion and Plasmonic-Enhanced Photocatalyst Based on Lanthanide-Doped $\text{NaYF}_4/\text{SnO}_2/\text{Ag}$. <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 10889-10899	8.3	59
54	Wetting properties and SERS applications of ZnO/Ag nanowire arrays patterned by a screen printing method. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 6371-6379	7.1	48
53	Preparation of $\text{M}@\text{BiFeO}_3$ Nanocomposites ($\text{M}=\text{Ag, Au}$) Bowl Arrays with Enhanced Visible Light Photocatalytic Activity. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 2255-2263	3.8	46

52	Non-centrosymmetric Au-SnO ₂ hybrid nanostructures with strong localization of plasmonic for enhanced photocatalysis application. <i>Nanoscale</i> , 2013 , 5, 5628-36	7.7	46
51	Flexible Broadband Graphene Photodetectors Enhanced by Plasmonic Cu P Colloidal Nanocrystals. <i>Small</i> , 2017 , 13, 1701881	11	45
50	Artificial Metaphotonics Born Naturally in Two Dimensions. <i>Chemical Reviews</i> , 2020 , 120, 6197-6246	68.1	42
49	In situ Raman scattering study on a controllable plasmon-driven surface catalysis reaction on Ag nanoparticle arrays. <i>Nanotechnology</i> , 2012 , 23, 335701	3.4	41
48	Enhanced photocatalysis by coupling of anatase TiO ₂ film to triangular Ag nanoparticle island. <i>Nanoscale Research Letters</i> , 2012 , 7, 239	5	40
47	Significant Radiation Tolerance and Moderate Reduction in Thermal Transport of a Tungsten Nanofilm by Inserting Monolayer Graphene. <i>Advanced Materials</i> , 2017 , 29, 1604623	24	36
46	Large-area, well-ordered, uniform-sized bowtie nanoantenna arrays for surface enhanced Raman scattering substrate with ultra-sensitive detection. <i>Applied Physics Letters</i> , 2013 , 103, 041903	3.4	35
45	Edge-oriented and steerable hyperbolic polaritons in anisotropic van der Waals nanocavities. <i>Nature Communications</i> , 2020 , 11, 6086	17.4	32
44	Self-assembly of Au@Ag core-shell nanocuboids into staircase superstructures by droplet evaporation. <i>Nanoscale</i> , 2017 , 10, 142-149	7.7	32
43	Efficiency enhancements in Ag nanoparticles-SiO ₂ -TiO ₂ sandwiched structure via plasmonic effect-enhanced light capturing. <i>Nanoscale Research Letters</i> , 2013 , 8, 73	5	32
42	Anchoring of Ag ₆ Si ₂ O ₇ nanoparticles on β -Fe ₂ O ₃ short nanotubes as a Z-scheme photocatalyst for improving their photocatalytic performances. <i>Dalton Transactions</i> , 2016 , 45, 12745-55	4.3	31
41	Direct graphene synthesis on SiO ₂ /Si substrate by ion implantation. <i>Applied Physics Letters</i> , 2013 , 102, 193102	3.4	29
40	Hybridized Hyperbolic Surface Phonon Polaritons at β -MoO and Polar Dielectric Interfaces. <i>Nano Letters</i> , 2021 , 21, 3112-3119	11.5	29
39	Obviously Angular, Cuboid-Shaped TiO ₂ Nanowire Arrays Decorated with Ag Nanoparticle as Ultrasensitive 3D Surface-Enhanced Raman Scattering Substrates. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 22711-22718	3.8	28
38	Preparing of Highly Conductive Patterns on Flexible Substrates by Screen Printing of Silver Nanoparticles with Different Size Distribution. <i>Nanoscale Research Letters</i> , 2016 , 11, 412	5	28
37	Capillary-bridge mediated assembly of aligned perovskite quantum dots for high-performance photodetectors. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 5954-5961	7.1	26
36	Chemical switching of low-loss phonon polaritons in β -MoO by hydrogen intercalation. <i>Nature Communications</i> , 2020 , 11, 2646	17.4	26
35	Metal ion-mediated synthesis and shape-dependent magnetic properties of single-crystalline β -Fe ₂ O ₃ nanoparticles. <i>CrystEngComm</i> , 2014 , 16, 5566-5572	3.3	25

34	Reliable Synthesis of Large-Area Monolayer WS ₂ Single Crystals, Films, and Heterostructures with Extraordinary Photoluminescence Induced by Water Intercalation. <i>Advanced Optical Materials</i> , 2018 , 6, 1701347	8.1	24
33	The ion implantation-induced properties of one-dimensional nanomaterials. <i>Nanoscale Research Letters</i> , 2013 , 8, 175	5	22
32	Anion-mediated synthesis of monodisperse silver nanoparticles useful for screen printing of high-conductivity patterns on flexible substrates for printed electronics. <i>RSC Advances</i> , 2015 , 5, 9783-9797	3.7	22
31	Advances in Near-Infrared Luminescent Materials without Cr ³⁺ : Crystal Structure Design, Luminescence Properties, and Applications. <i>Chemistry of Materials</i> , 2021 , 33, 5496-5526	9.6	22
30	Monolayer graphene on nanostructured Ag for enhancement of surface-enhanced Raman scattering stable platform. <i>Nanotechnology</i> , 2015 , 26, 125603	3.4	21
29	Superior Magnetoresistance Performance of Hybrid Graphene Foam/Metal Sulfide Nanocrystal Devices. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 19397-19403	9.5	20
28	Highly efficient and stable CsPbBr ₃ perovskite quantum dots by encapsulation in dual-shell hollow silica spheres for WLEDs. <i>Inorganic Chemistry Frontiers</i> , 2020 , 7, 2060-2071	6.8	20
27	Rings of saturn-like nanoarrays with high number density of hot spots for surface-enhanced Raman scattering. <i>Applied Physics Letters</i> , 2014 , 105, 033515	3.4	20
26	Micro/nanosized Nontraditional Evaporated Structures Based on Closely Packed Monolayer Binary Colloidal Crystals and Their Fine Structure Enhanced Properties. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 20521-20528	3.8	20
25	Modulating the threshold voltage of oxide nanowire field-effect transistors by a Ga ⁺ ion beam. <i>Nano Research</i> , 2014 , 7, 1691-1698	10	19
24	Design of high-performance memristor cell using W-implanted SiO ₂ films. <i>Applied Physics Letters</i> , 2016 , 108, 153501	3.4	19
23	Carbon and silica interlayer influence for the photocatalytic performances of spindle-like Fe ₂ O ₃ /Bi ₂ O ₃ p-n heterostructures. <i>Materials Science in Semiconductor Processing</i> , 2016 , 41, 411-419	4.3	18
22	Enhanced and polarization dependence of surface-enhanced Raman scattering in silver nanoparticle array-nanowire systems. <i>Applied Physics Letters</i> , 2013 , 102, 163108	3.4	18
21	Synthesis and optical properties of gold nanorods with controllable morphology. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 434002	1.8	18
20	Competitive reaction pathway for site-selective conjugation of Raman dyes to hotspots on gold nanorods for greatly enhanced SERS performance. <i>Small</i> , 2014 , 10, 4012-9	11	16
19	Formation of Carbonized Polystyrene Sphere/hemisphere Shell Arrays by Ion Beam Irradiation and Subsequent Annealing or Chloroform Treatment. <i>Scientific Reports</i> , 2015 , 5, 17529	4.9	14
18	Nanograting-assisted generation of surface plasmon polaritons in Weyl semimetal WTe ₂ . <i>Optical Materials</i> , 2018 , 86, 421-423	3.3	14
17	Side-to-side alignment of gold nanorods with polarization-free characteristic for highly reproducible surface enhanced Raman scattering. <i>Applied Physics Letters</i> , 2014 , 105, 211902	3.4	13

16	Fabrication and properties of TiO ₂ nanofilms on different substrates by a novel and universal method of Ti-ion implantation and subsequent annealing. <i>Nanotechnology</i> , 2013 , 24, 255603	3.4	11
15	Recent progress in the fabrication of SERS substrates based on the arrays of polystyrene nanospheres. <i>Science China: Physics, Mechanics and Astronomy</i> , 2016 , 59, 1	3.6	9
14	Enhanced Ferroelectric Properties of Gd-Substitution BiFeO ₃ Thin Films Prepared by Sol-Gel Process. <i>Ferroelectrics</i> , 2010 , 410, 96-101	0.6	9
13	Fabrication and optical properties of controlled Ag nanostructures for plasmonic applications. <i>Journal of Applied Physics</i> , 2013 , 114, 083523	2.5	7
12	Simultaneous enhancement of luminescence and stability of lead halide perovskites by a diatomite microcavity for light-emitting diodes. <i>Chemical Engineering Journal</i> , 2021 , 417, 128056	14.7	7
11	Synthesis of graphene by MEVVA source ion implantation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013 , 305, 29-32	1.2	6
10	Synergistic effect of V/N codoping by ion implantation on the electronic and optical properties of TiO ₂ . <i>Journal of Applied Physics</i> , 2014 , 115, 143106	2.5	6
9	Origin of white light luminescence from Si ⁺ /C ⁺ sequentially implanted and annealed silica. <i>Journal of Applied Physics</i> , 2012 , 111, 084304	2.5	6
8	Novel doping for synthesis monodispersed TiO ₂ grains filled into spindle-like hematite bi-component nanoparticles by ion implantation. <i>AIP Advances</i> , 2012 , 2, 032179	1.5	6
7	Efficient and Tunable Reflection of Phonon Polaritons at Built-In Intercalation Interfaces. <i>Advanced Materials</i> , 2021 , 33, e2008070	24	6
6	Tailoring Topological Transitions of Anisotropic Polaritons by Interface Engineering in Biaxial Crystals.. <i>Nano Letters</i> , 2022 ,	11.5	6
5	Effect of annealing temperature on the ferroelectric properties of BiFeO ₃ thin films prepared by sol-gel process. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2010 , 25, 384-387	1	4
4	Fabrication of highly homogeneous surface-enhanced Raman scattering substrates using Ag ion implantation. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 254003	1.8	4
3	Super-Resolution Imaging with Graphene. <i>Biosensors</i> , 2021 , 11,	5.9	2
2	Narrow Bandgap Metal Halide Perovskites: Synthesis, Characterization, and Optoelectronic Applications. <i>Advanced Optical Materials</i> , 2102661	8.1	0
1	Thermal characterization of carbon nanotube fibers based on steady-state electro-Raman-thermal technique. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015 , 64, 126501	0.6	