Chao Zhang

List of Publications by Year
in descending order

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92 papers	3,920 citations	101384 36 h-index	128067 60 g-index
92 all docs	92 docs citations	92 times ranked	4171 citing authors

#	Article	IF	Citations
1	Aluminum Nanocrystals as a Plasmonic Photocatalyst for Hydrogen Dissociation. Nano Letters, 2016, 16, 1478-1484.	4.5	294
2	Highly Sensitive, Uniform, and Reproducible Surfaceâ€Enhanced Raman Spectroscopy from Hollow Auâ€Ag Alloy Nanourchins. Advanced Materials, 2014, 26, 2431-2439.	11.1	240
3	SERS activated platform with three-dimensional hot spots and tunable nanometer gap. Sensors and Actuators B: Chemical, 2018, 258, 163-171.	4.0	208
4	Aluminum Nanocrystals: A Sustainable Substrate for Quantitative SERS-Based DNA Detection. Nano Letters, 2017, 17, 5071-5077.	4.5	173
5	Local hot charge density regulation: Vibration-free pyroelectric nanogenerator for effectively enhancing catalysis and in-situ surface enhanced Raman scattering monitoring. Nano Energy, 2021, 81, 105585.	8.2	154
6	3D silver nanoparticles with multilayer graphene oxide as a spacer for surface enhanced Raman spectroscopy analysis. Nanoscale, 2018, 10, 5897-5905.	2.8	145
7	Hydrophobic multiscale cavities for high-performance and self-cleaning surface-enhanced Raman spectroscopy (SERS) sensing. Nanophotonics, 2020, 9, 4761-4773.	2.9	136
8	U-bent fiber optic SPR sensor based on graphene/AgNPs. Sensors and Actuators B: Chemical, 2017, 251, 127-133.	4.0	130
9	Hierarchical Particle-In-Quasicavity Architecture for Ultratrace In Situ Raman Sensing and Its Application in Real-Time Monitoring of Toxic Pollutants. Analytical Chemistry, 2020, 92, 14754-14761.	3.2	118
10	Highly ordered arrays of hat-shaped hierarchical nanostructures with different curvatures for sensitive SERS and plasmon-driven catalysis. Nanophotonics, 2021, 11, 33-44.	2.9	98
11	3D SERS substrate based on Au-Ag bi-metal nanoparticles/MoS₂ hybrid with pyramid structure. Optics Express, 2018, 26, 21546.	1.7	92
12	Gold@silver bimetal nanoparticles/pyramidal silicon 3D substrate with high reproducibility for high-performance SERS. Scientific Reports, 2016, 6, 25243.	1.6	86
13	SERS substrate based on the flexible hybrid of polydimethylsiloxane and silver colloid decorated with silver nanoparticles. Optics Express, 2018, 26, 21784.	1.7	73
14	Flexible and stretchable SERS substrate based on a pyramidal PMMA structure hybridized with graphene oxide assivated AgNPs. Applied Surface Science, 2018, 455, 1171-1178.	3.1	69
15	MoS₂-based multiple surface plasmonic coupling for enhanced surface-enhanced Raman scattering and photoelectrocatalytic performance utilizing the size effect. Optics Express, 2021, 29, 38768.	1.7	68
16	Shell-isolated graphene@Cu nanoparticles on graphene@Cu substrates for the application in SERS. Carbon, 2016, 98, 526-533.	5.4	65
17	Constructing 3D and Flexible Plasmonic Structure for Highâ€Performance SERS Application. Advanced Materials Technologies, 2018, 3, 1800174.	3.0	65
18	Quasi Optical Cavity of Hierarchical ZnO Nanosheets@Ag Nanoravines with Synergy of Near- and Far-Field Effects for in Situ Raman Detection. Journal of Physical Chemistry Letters, 2019, 10, 3676-3680.	2.1	60

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19	A novel U-bent plastic optical fibre local surface plasmon resonance sensor based on a graphene and silver nanoparticle hybrid structure. Journal Physics D: Applied Physics, 2017, 50, 165105.	1.3	58
20	Pollutant capturing SERS substrate: porous boron nitride microfibers with uniform silver nanoparticle decoration. Nanoscale, 2015, 7, 18992-18997.	2.8	56
21	Ag2O@Ag core-shell structure on PMMA as low-cost and ultra-sensitive flexible surface-enhanced Raman scattering substrate. Journal of Alloys and Compounds, 2017, 695, 1677-1684.	2.8	56
22	Synthesis of low-cost 3D-porous ZnO/Ag SERS-active substrate with ultrasensitive and repeatable detectability. Sensors and Actuators B: Chemical, 2018, 256, 268-275.	4.0	55
23	Theoretical design of a surface plasmon resonance sensor with high sensitivity and high resolution based on grapheneâ€“WS₂ hybrid nanostructures and Auâ€“Ag bimetallic film. RSC Advances, 2017, 7, 47177-47182.	1.7	50
24	Manipulating the surface-enhanced Raman spectroscopy (SERS) activity and plasmon-driven catalytic efficiency by the control of Ag NP/graphene layers under optical excitation. Nanophotonics, 2021, 10, 1529-1540.	2.9	48
25	Experimental and theoretical investigation for surface plasmon resonance biosensor based on graphene/Au film/D-POF. Optics Express, 2019, 27, 3483.	1.7	48
26	Grapheneâ€“silver nanowire hybrid films as electrodes for transparent and flexible loudspeakers. CrystEngComm, 2014, 16, 3532.	1.3	47
27	A sensitive, uniform, reproducible and stable SERS substrate has been presented based on MoS₂@Ag nanoparticles@pyramidal silicon. RSC Advances, 2017, 7, 5764-5773.	1.7	45
28	Sensitive, reproducible, and stable 3D plasmonic hybrids with bilayer WS₂ as nanospacer for SERS analysis. Optics Express, 2018, 26, 21626.	1.7	45
29	Graphene-Ag nanoparticles-cicada wings hybrid system for obvious SERS performance and DNA molecular detection. Optics Express, 2019, 27, 3000.	1.7	45
30	Different number of silver nanoparticles layers for surface enhanced raman spectroscopy analysis. Sensors and Actuators B: Chemical, 2018, 255, 374-383.	4.0	42
31	In-situ electrospun aligned and maize-like AgNPs/PVA@Ag nanofibers for surface-enhanced Raman scattering on arbitrary surface. Nanophotonics, 2019, 8, 1719-1729.	2.9	42
32	A novel natural surface-enhanced Raman spectroscopy (SERS) substrate based on graphene oxide-Ag nanoparticles-Mytilus coruscus hybrid system. Sensors and Actuators B: Chemical, 2018, 261, 1-10.	4.0	41
33	Direct growth of graphene on quartz substrates for label-free detection of adenosine triphosphate. Nanotechnology, 2014, 25, 165702.	1.3	40
34	Label-free and stable serum analysis based on Ag-NPs/PSi surface-enhanced Raman scattering for noninvasive lung cancer detection. Biomedical Optics Express, 2018, 9, 4345.	1.5	39
35	Few-layer MoS2-encapsulated Cu nanoparticle hybrids fabricated by two-step annealing process for surface enhanced Raman scattering. Sensors and Actuators B: Chemical, 2016, 230, 645-652.	4.0	38
36	Facile synthesis of large-area and highly crystalline WS2 film on dielectric surfaces for SERS. Journal of Alloys and Compounds, 2016, 666, 412-418.	2.8	37

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37	Ag gyrus-nanostructure supported on graphene/Au film with nanometer gap for ideal surface enhanced Raman scattering. Optics Express, 2017, 25, 20631.	1.7	37
38	Controlled-layer and large-area MoS_2 films encapsulated Au nanoparticle hybrids for SERS. Optics Express, 2016, 24, 26097.	1.7	36
39	Graphene oxide-decorated silver dendrites for high-performance surface-enhanced Raman scattering applications. Journal of Materials Chemistry C, 2017, 5, 3908-3915.	2.7	33
40	3D hybrid MoS2/AgNPs/inverted pyramid PMMA resonant cavity system for the excellent flexible surface enhanced Raman scattering sensor. Sensors and Actuators B: Chemical, 2018, 274, 152-162.	4.0	33
41	Experimental and theoretical investigation for a hierarchical SERS activated platform with 3D dense hot spots. Sensors and Actuators B: Chemical, 2018, 263, 408-416.	4.0	29
42	High-performance 3D flexible SERS substrate based on graphene oxide/silver nanoparticles/pyramid PMMA. Optical Materials Express, 2018, 8, 844.	1.6	29
43	Improved Laser Damage Threshold of In2Se3 Saturable Absorber by PVD for High-Power Mode-Locked Er-Doped Fiber Laser. Nanomaterials, 2019, 9, 1216.	1.9	28
44	Sensitive and selective surface plasmon resonance sensor employing a gold-supported graphene composite film/D-shaped fiber for dopamine detection. Journal Physics D: Applied Physics, 2019, 52, 195402.	1.3	27
45	Coupling of multiple plasma polarization modes in particlesâ€“multilayer film system for surface-enhanced Raman scattering. APL Photonics, 2021, 6, .	3.0	26
46	In situ detection of trace pollutants: a cost-effective SERS substrate of blackberry-like silver/graphene oxide nanoparticle cluster based on quick self-assembly technology. Optics Express, 2019, 27, 9879.	1.7	26
47	Aluminum nanoparticle films with an enhanced hot-spot intensity for high-efficiency SERS. Optics Express, 2020, 28, 9174.	1.7	26
48	High stability luminophores: fluorescent CsPbX₃ (X = Cl, Br and I) nanofiber prepared by one-step electrospinning method. Optics Express, 2018, 26, 20649.	1.7	24
49	Capillarityâ€Assistant Assembly: A Fast Preparation of 3D Pomegranateâ€Like Ag Nanoparticle Clusters on CuO Nanowires and Its Applications in SERS. Advanced Materials Interfaces, 2018, 5, 1800672.	1.9	23
50	Evanescent wave absorption sensor with direct-growth MoS₂film based on U-bent tapered multimode fiber. Journal Physics D: Applied Physics, 2017, 50, 315302.	1.3	22
51	Fast multiphase analysis: Self-separation of mixed solution by a wettability-controlled CuO@Ag SERS substrate and its applications in pollutant detection. Sensors and Actuators B: Chemical, 2020, 307, 127663.	4.0	22
52	Large energy pulses generation in a mode-locked Er-doped fiber laser based on CVD-grown Bi₂Te₃ saturable absorber. Optical Materials Express, 2019, 9, 3535.	1.6	22
53	Particle-in-Molybdenum Disulfide-Coated Cavity Structure with a Raman Internal Standard for Sensitive Raman Detection of Water Contaminants from Ions to <300 nm Nanoplastics. Journal of Physical Chemistry Letters, 2022, 13, 5815-5823.	2.1	22
54	Preparation of Graphene/ITO Nanorod Metamaterial/U-Bent-Annealing Fiber Sensor and DNA Biomolecule Detection. Nanomaterials, 2019, 9, 1154.	1.9	20

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55	Synergizing piezoelectric and plasmonic modulation of PVDF/MoS2 cavity/Au for enhanced photocatalysis. Applied Surface Science, 2022, 577, 151811.	3.1	19
56	Adsorbable and self-supported 3D AgNPs/G@Ni foam as cut-and-paste highly-sensitive SERS substrates for rapid in situ detection of residuum. Optics Express, 2017, 25, 16437.	1.7	18
57	Heterogeneous and cross-distributed metal structure hybridized with MoS₂ as high-performance flexible SERS substrate. Optics Express, 2018, 26, 23831.	1.7	18
58	Qualitative and quantitative detection of microcystin-LR based on SERS-FET dual-mode biosensor. Biosensors and Bioelectronics, 2022, 212, 114434.	5.3	18
59	Natural biomaterial sarcosine as an interfacial layer enables inverted organic solar cells to exhibit over 16.4% efficiency. Nanoscale, 2021, 13, 11128-11137.	2.8	16
60	MoS2-spaced bimetal composite structure as SERS-SPR sensor for glucose detection. Journal of Alloys and Compounds, 2022, 902, 163789.	2.8	16
61	Selenium-assisted controlled growth of grapheneâ€“Bi2Se3 nanoplates hybrid Dirac materials by chemical vapor deposition. Applied Surface Science, 2016, 365, 357-363.	3.1	15
62	Toward the highly sensitive SERS detection of bio-molecules: the formation of a 3D self-assembled structure with a uniform GO mesh between Ag nanoparticles and Au nanoparticles. Optics Express, 2019, 27, 25091.	1.7	15
63	Elevating the density and intensity of hot spots by repeated annealing for high-efficiency SERS. Optics Express, 2020, 28, 29357.	1.7	15
64	3D Hybrid Plasmonic Nanostructures with Dense Hot Spots Using Monolayer MoS₂ as Subâ€Nanometer Spacer. Advanced Materials Interfaces, 2018, 5, 1800661.	1.9	14
65	CVD-Bi₂Te₃ as a saturable absorber for various solitons in a mode-locked Er-doped fiber laser. Applied Optics, 2020, 59, 7792.	0.9	12
66	Electric Field-Modulated Surface Enhanced Raman Spectroscopy by PVDF/Ag Hybrid. Scientific Reports, 2020, 10, 5269.	1.6	11
67	Multiscale structure enabled effective plasmon coupling and molecular enriching for SERS detection. Applied Surface Science, 2021, 544, 148908.	3.1	11
68	Heterostructured CuO@ZnO@Ag biomimetic setaria as wettability-switchable difunctional SERS substrate for trace pesticide and DNA detections. Nanophotonics, 2021, 10, 2671-2682.	2.9	11
69	Plasmonic and bi-piezoelectric enhanced photocatalysis using PVDF/ZnO/Au nanobrush. Nanophotonics, 2022, 11, 3339-3349.	2.9	11
70	Large-energy mode-locked ytterbium-doped linear-cavity fiber laser based on chemical vapor deposition-Bi2Se3 as a saturable absorber. Applied Optics, 2019, 58, 2695.	0.9	10
71	In-situ growth of AuNPs on WS2@U-bent optical fiber for evanescent wave absorption sensor. Applied Surface Science, 2018, 441, 1072-1078.	3.1	9
72	3D Ultrasensitive Polymers-Plasmonic Hybrid Flexible Platform for In-Situ Detection. Polymers, 2020, 12, 392.	2.0	9

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73	Construct high-precise SERS sensor by hierarchical superhydrophobic Si/Cu(OH)2 platform for ultratrace detection of food contaminants. Sensors and Actuators B: Chemical, 2022, 352, 131056.	4.0	8
74	Enhanced SERS and catalytic performance via piezoelectric and plasmonic coupling effects for organic pollutant molecule degradation. Journal of Alloys and Compounds, 2022, 918, 165813.	2.8	8
75	Noble metal modified ReS₂ nanocavity for surface-enhanced Raman spectroscopy (SERS) analysis. Optics Express, 2021, 29, 28664.	1.7	7
76	MoS₂/graphene van der Waals heterojunctions combined with two-layered Au NP for SERS and catalysis analyse. Optics Express, 2021, 29, 38053.	1.7	7
77	Role of Graphene in Constructing Multilayer Plasmonic SERS Substrate with Graphene/AgNPs as Chemical Mechanismâ€"Electromagnetic Mechanism Unit. Nanomaterials, 2020, 10, 2371.	1.9	6
78	High-performance flexible surface-enhanced Raman scattering substrate based on the particle-in-multiscale 3D structure. Nanophotonics, 2021, 10, 4045-4055.	2.9	6
79	Theoretical and experimental investigation of the flexible Ag nano-tree@Cu mesh SERS substrate. Journal of Alloys and Compounds, 2022, 908, 164622.	2.8	6
80	High-Performance Surface-Enhanced Raman Scattering Substrates Based on the ZnO/Ag Core-Satellite Nanostructures. Nanomaterials, 2022, 12, 1286.	1.9	6
81	Integrated accurate extraction and fast detection of analyte: Capillarity-Based SERS substrate using in effluent monitoring. Applied Surface Science, 2021, 542, 148735.	3.1	5
82	Preparation and surface-enhanced Raman scattering properties of GO/Ag/Ta₂O₅ composite substrates. Optics Express, 2021, 29, 34552.	1.7	5
83	SERS substrate with wettability difference for molecular self-concentrating detection. Nanotechnology, 2021, 32, 375603.	1.3	4
84	Preparation of a superhydrophobic AgNP/GF substrate and its SERS application in a complex detection environment. Optics Express, 2021, 29, 34085.	1.7	4
85	Exploring the biotoxicity of carbon boride nanosheets (BC₃) based on the villin headpiece protein model. Journal Physics D: Applied Physics, 2022, 55, 175403.	1.3	3
86	Role of graphene in improving catalytic behaviors of AuNPs/MoS₂/Gr/Ni-F structure in hydrogen evolution reaction*. Chinese Physics B, 2021, 30, 088801.	0.7	2
87	Molecular dynamics study of a covalent organic framework as highly-efficient and biocompatible carriers for doxorubicin delivery: the role of nanopores. Journal Physics D: Applied Physics, 2022, 55, 105402.	1.3	2
88	Preparation of 3D ZnTiO3/Ag NPs composite as the photocatalytic SERS-active substrate with well reusability. Applied Optics, 2020, 59, 5589.	0.9	1
89	Facilely Flexible Imprinted Hemispherical Cavity Array for Effective Plasmonic Coupling as SERS Substrate. Nanomaterials, 2021, 11, 3196.	1.9	1
90	Heterostructured Cu2Oâ€"Au nanowire as a dual-functional nanocomposite for environmental pollutant degradation and hydrogen peroxide sensing. Applied Optics, 2021, 60, 5936.	0.9	0

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91	Surface enhanced Raman scattering characteristics of three-dimensional pyramid stereo composite substrate. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 058103.	0.2	0
92	Precise real-time quantification for photocatalytic reaction: integration of the sensitive in-situ SERS sensor and high-efficiency photocatalyst. Nanotechnology, 2022, 33, 225701.	1.3	0