Alan X Wang

List of Publications by Year
in descending order

64 papers	1,540 citations	279798 23 h-index	315739 38 g-index
65 all docs	65 docs citations	65 times ranked	1781 citing authors

#	Article	IF	Citations
1	Review of Recent Progress of Plasmonic Materials and Nano-Structures for Surface-Enhanced Raman Scattering. Materials, 2015, 8, 3024-3052.	2.9	193
2	Microfluidic diatomite analytical devices for illicit drug sensing with ppb-Level sensitivity. Sensors and Actuators B: Chemical, 2018, 259, 587-595.	7.8	91
3	Trace Detection of Tetrahydrocannabinol in Body Fluid via Surface-Enhanced Raman Scattering and Principal Component Analysis. ACS Sensors, 2019, 4, 1109-1117.	7.8	73
4	Quantitative TLC-SERS detection of histamine in seafood with support vector machine analysis. Food Control, 2019, 103, 111-118.	5.5	65
5	Enhancing surface plasmon resonances of metallic nanoparticles by diatom biosilica. Optics Express, 2013, 21, 15308.	3.4	60
6	Detecting explosive molecules from nanoliter solution: A new paradigm of SERS sensing on hydrophilic photonic crystal biosilica. Biosensors and Bioelectronics, 2017, 88, 63-70.	10.1	57
7	Ultracompact Silicon-Conductive Oxide Nanocavity Modulator with 0.02 Lambda-Cubic Active Volume. Nano Letters, 2018, 18, 1075-1081.	9.1	56
8	Guided-mode-resonance-coupled plasmonic-active SiO2 nanotubes for surface enhanced Raman spectroscopy. Applied Physics Letters, 2012, 100, 191114.	3.3	53
9	Ultra-sensitive immunoassay biosensors using hybrid plasmonic-biosilica nanostructured materials. Journal of Biophotonics, 2015, 8, 659-667.	2.3	51
10	Ultrashort Near-Infrared Fiber-Optic Sensors for Carbon Dioxide Detection. IEEE Sensors Journal, 2015, 15, 5327-5332.	4.7	49
11	Ultra-sensitive lab-on-a-chip detection of Sudan I in food using plasmonics-enhanced diatomaceous thin film. Food Control, 2017, 79, 258-265.	5.5	47
12	Optofluidic sensing from inkjet-printed droplets: the enormous enhancement by evaporation-induced spontaneous flow on photonic crystal biosilica. Nanoscale, 2016, 8, 17285-17294.	5.6	44
13	Biological Photonic Crystalâ€Enhanced Plasmonic Mesocapsules: Approaching Singleâ€Molecule Optofluidicâ€SERS Sensing. Advanced Optical Materials, 2019, 7, 1900415.	7.3	44
14	Chemical and Biological Sensing Using Diatom Photonic Crystal Biosilica With In-Situ Growth Plasmonic Nanoparticles. IEEE Transactions on Nanobioscience, 2016, 15, 828-834.	3.3	42
15	Plasmonics-enhanced metalâ€"organic framework nanoporous films for highly sensitive near-infrared absorption. Journal of Materials Chemistry C, 2015, 3, 2763-2767.	5.5	41
16	Surface-Enhanced Raman Spectroscopy Sensors From Nanobiosilica With Self-Assembled Plasmonic Nanoparticles. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 127-132.	2.9	38
17	Simultaneous colorimetric and surface-enhanced Raman scattering detection of melamine from milk. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 231, 118130.	3.9	33
18	Photonic crystal-enhanced fluorescence imaging immunoassay for cardiovascular disease biomarker screening with machine learning analysis. Sensors and Actuators B: Chemical, 2019, 290, 118-124.	7.8	31

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19	High-Speed Plasmonic-Silicon Modulator Driven by Epsilon-Near-zero Conductive Oxide. Journal of Lightwave Technology, 2020, 38, 3338-3345.	4.6	30
20	Plasmonic cellulose textile fiber from waste paper for BPA sensing by SERS. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 227, 117664.	3.9	28
21	Electrokinetic Manipulation Integrated Plasmonicâ€"Photonic Hybrid Raman Nanosensors with Dually Enhanced Sensitivity. ACS Sensors, 2017, 2, 346-353.	7.8	26
22	Diatomite Photonic Crystals for Facile On-Chip Chromatography and Sensing of Harmful Ingredients from Food. Materials, 2018, 11, 539.	2.9	25
23	Multi-functional regenerated cellulose fibers decorated with plasmonic Au nanoparticles for colorimetry and SERS assays. Cellulose, 2018, 25, 6041-6053.	4.9	24
24	On-chip near-infrared spectroscopy of CO2 using high resolution plasmonic filter array. Applied Physics Letters, 2016, 108, .	3.3	23
25	VCSEL Array-Based Gigabit Free-Space Optical Femtocell Communication. Journal of Lightwave Technology, 2020, 38, 1659-1667.	4.6	23
26	High-efficiency and high-speed germanium photodetector enabled by multiresonant photonic crystal. Nanophotonics, 2021, 10, 1081-1087.	6.0	23
27	Plasmonic nanoparticlesâ€decorated diatomite biosilica: extending the horizon of onâ€chip chromatography and labelâ€free biosensing. Journal of Biophotonics, 2017, 10, 1473-1484.	2.3	22
28	Tetrahydrocannabinol Sensing in Complex Biofluid with Portable Raman Spectrometer Using Diatomaceous SERS Substrates. Biosensors, 2019, 9, 125.	4.7	22
29	Photonic crystal enhanced fluorescence immunoassay on diatom biosilica. Journal of Biophotonics, 2018, 11, e201800009.	2.3	21
30	Photonic Crystal Enhanced SERS Detection of Analytes Separated by Ultrathin Layer Chromatography Using a Diatom Frustule Monolayer. Advanced Materials Interfaces, 2020, 7, 2000191.	3.7	18
31	Guided-Mode Resonance Grating with Self-Assembled Silver Nanoparticles for Surface-Enhanced Raman Scattering Spectroscopy. Photonics, 2014, 1, 380-389.	2.0	17
32	Femto-Joule All-Optical Switching Using Epsilon-Near-Zero High-Mobility Conductive Oxide. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-9.	2.9	16
33	Electrically Tunable High-Quality Factor Silicon Microring Resonator Gated by High Mobility Conductive Oxide. ACS Photonics, 2021, 8, 1933-1936.	6.6	16
34	Multiscale Photonic Crystal Enhanced Coreâ€"Shell Plasmonic Nanomaterial for Rapid Vapor-Phase Detection of Explosives. ACS Applied Nano Materials, 2020, 3, 1656-1665.	5.0	13
35	Sub-Part-Per-Billion Level Sensing of Fentanyl Residues from Wastewater Using Portable Surface-Enhanced Raman Scattering Sensing. Biosensors, 2021, 11, 370.	4.7	13
36	Design and Characterization of High Efficiency Nanoantenna Couplers With Plasmonic Integrated Circuit. Journal of Lightwave Technology, 2017, 35, 3182-3188.	4.6	11

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37	Highly-porous diatom biosilica stationary phase for thin-layer chromatography. Journal of Chromatography A, 2019, 1591, 162-170.	3.7	11
38	MOS Capacitor-Driven Silicon Modulators: A Mini Review and Comparative Analysis of Modulation Efficiency and Optical Loss. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-11.	2.9	11
39	Nanostructured copper sulfide thin film via a spatial successive ionic layer adsorption and reaction process showing significant surface-enhanced infrared absorption of CO₂. Journal of Materials Chemistry C, 2020, 8, 3069-3078.	5.5	9
40	Quaternion-based parallel feature extraction: Extending the horizon of quantitative analysis using TLC-SERS sensing. Sensors and Actuators B: Chemical, 2019, 299, 126902.	7.8	8
41	Multiplex sensing of complex mixtures by machine vision analysis of TLC-SERS images. Sensors and Actuators B: Chemical, 2022, 357, 131355.	7.8	8
42	Self-powered microfluidic pump using evaporation from diatom biosilica thin films. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	7
43	Fabrication and Application of SERS-Active Cellulose Fibers Regenerated from Waste Resource. Polymers, 2021, 13, 2142.	4.5	7
44	Bioenabled SERS substrates for food safety and drinking water monitoring. Proceedings of SPIE, 2015, 9488, .	0.8	6
45	Direct and Efficient Optical Coupling Into Plasmonic Integrated Circuits From Optical Fibers. IEEE Photonics Technology Letters, 2016, 28, 1165-1168.	2.5	6
46	Plasmonic color filter array based visible light spectroscopy. Scientific Reports, 2021, 11, 23687.	3.3	6
47	Hybrid silicon-conductive oxide-plasmonic electro-absorption modulator with 2-V swing voltage. Journal of Nanophotonics, 2019, 13, 1.	1.0	5
48	Ultra-Sensitive, Rapid and On-Site Sensing Harmful Ingredients Used in Aquaculture with Magnetic Fluid SERS. Biosensors, 2022, 12, 169.	4.7	5
49	Dual-Mode Silicon Photonic Crystal Nanocavity Modulator with Indium Oxide Gate. , 2018, , .		2
50	Reduced surface roughness with improved imprinting technique for polymer optical components. , 2012, , .		1
51	Ultra-efficient nano-photonic devices using hybrid material systems for optical communication and sensing. , 2012, , .		1
52	Ultra-compact plasmonic waveguides with high efficiency dipole nanoantennas. , 2016, , .		1
53	Facile detection of biogenic amines in plasma using photonic crystal biosilica combining surface-enhanced Raman spectroscopy and thin layer chromatography. , 2016, , .		1
54	Plasmonic integrated circuits with high efficiency nano-antenna couplers. , 2016, , .		1

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55	Silicon Microring Modulator with Transparent Conductive Oxide Gate. , 2019, , .		1
56	High-Speed Plasmonic-Conductive Oxide-Silicon Modulator by Epsilon-Near-Zero Electro-Absorption. , 2019, , .		1
57	Silicon Microring Resonator Driven by High-Mobility Conductive Oxide Capacitor. , 2020, , .		1
58	Hybrid femtocellâ€“attocell optical links for indoor free-space optical communication. Optical Engineering, 2019, 58, 1.	1.0	1
59	Manufacturing of board level waveguide bus using hard mold. , 2012, , .		0
60	A surface-normal plasmonic modulator with electro-optic polymer in metallic slits. , 2016, , .		0
61	Energy-Efficient Silicon Photonic Crystal Nanocavity Modulator Driven by Indium Oxide Gate. , 2018, , .		0
62	High-Speed Atto-Joule per Bit Photonic Crystal Nanocavity Modulator. , 2019, , .		0
63	Silicon-Plasmonic Electro-Absorption Modulator Gated by High Mobility Indium Oxide. , 2019, , .		0
64	Thermal-Free Tunable Silicon Microring Resonator Driven by High-Mobility Conducting Oxide. , 2021, , .		0