

Wei-Chuan Shih

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84
papers

1,809
citations

26
h-index

40
g-index

130
ext. papers

2,423
ext. citations

5.4
avg, IF

5.17
L-index

#	Paper	IF	Citations
84	Nanoporous Metals: From Plasmonic Properties to Applications in Enhanced Spectroscopy and Photocatalysis. <i>ACS Nano</i> , 2021 , 15, 6038-6060	16.7	38
83	Imaging the Electrochemical Impedance of Single Cells via Conductive Polymer Thin Film. <i>ACS Sensors</i> , 2021 , 6, 485-492	9.2	3
82	SERS-Based Ultrasensitive Lateral Flow Assay for Quantitative Sensing of Protein Biomarkers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021 , 27, 1-8	3.8	2
81	Exploring the synergy of radiative coupling and substrate undercut in arrayed gold nanodisks for economical, ultra-sensitive label-free biosensing.. <i>IEEE Sensors Journal</i> , 2021 , 21, 23971-23978	4	0
80	Mid-Infrared Laser Spectroscopy Detection and Quantification of Explosives in Soils Using Multivariate Analysis and Artificial Intelligence. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 4178	2.6	4
79	Magnetic Active Water Filter Membrane for Induced Heating to Remove Biofoulants. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 10291-10298	9.5	4
78	Smartphone Nano-Colorimetry for On-Demand Multiplex Lead and Mercury Detection and Quantitation in Drinking Water. <i>IEEE Sensors Journal</i> , 2020 , 20, 6685-6691	4	7
77	Commercial and emerging technologies for cancer diagnosis and prognosis based on circulating tumor exosomes. <i>JPhys Photonics</i> , 2020 , 2, 032002	2.5	4
76	Optically Tunable Tin Oxide-Coated Hollow Gold-Silver Nanorattles for Use in Solar-Driven Applications. <i>ACS Omega</i> , 2020 , 5, 23769-23777	3.9	2
75	Plasmonic nano-aperture label-free imaging (PANORAMA). <i>Nature Communications</i> , 2020 , 11, 5805	17.4	11
74	Directed Concentrating of Micro-/Nanoparticles via Near-Infrared Laser Generated Plasmonic Microbubbles. <i>ACS Omega</i> , 2020 , 5, 32481-32489	3.9	3
73	Enhanced Heterogeneous Nanocatalysis on a Nanoporous Gold Disk Array with High-Density Hot Spots. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 13499-13506	9.5	21
72	Investigation of Thermal Properties of Graphene-Coated Membranes by Laser Irradiation to Remove Biofoulants. <i>Environmental Science & Technology</i> , 2019 , 53, 903-911	10.3	5
71	Symmetry Breaking-Induced Plasmonic Mode Splitting in Coupled Gold-Silver Alloy Nanodisk Array for Ultrasensitive RGB Colorimetric Biosensing. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 2273-2281	9.5	19
70	Detection of phytocannabinoids from buccal swabs by headspace solid phase microextraction coupled with gas chromatography/mass spectrometry. <i>Analytical Methods</i> , 2018 , 10, 942-946	3.2	5
69	Nanoporous Gold Nanoparticles and Arrays for Label-Free Nanoplasmonic Biosensing. <i>Integrated Analytical Systems</i> , 2018 , 25-67	0.4	1
68	Nanoporous metals by alloy corrosion: Bioanalytical and biomedical applications. <i>MRS Bulletin</i> , 2018 , 43, 49-56	3.2	42

67	Plasmonic nanoparticle-based expansion microscopy with surface-enhanced Raman and dark-field spectroscopic imaging. <i>Biomedical Optics Express</i> , 2018 , 9, 603-615	3.5	13
66	Mitigating fringing in discrete frequency infrared imaging using time-delayed integration. <i>Biomedical Optics Express</i> , 2018 , 9, 832-843	3.5	12
65	Photothermal generation of programmable microbubble array on nanoporous gold disks. <i>Optics Express</i> , 2018 , 26, 16893-16902	3.3	10
64	Integrated Nanogap Platform for Sub-Volt Dielectrophoretic Trapping and Real-Time Raman Imaging of Biological Nanoparticles. <i>Nano Letters</i> , 2018 , 18, 5946-5953	11.5	25
63	Compressed sensing hyperspectral imaging in the 0.9-2.5 μm shortwave infrared wavelength range using a digital micromirror device and InGaAs linear array detector. <i>Applied Optics</i> , 2018 , 57, 5019-5024	1.7	8
62	Toward the identification of marijuana varieties by headspace chemical forensics. <i>Forensic Chemistry</i> , 2018 , 11, 23-31	2.8	3
61	Modeling the surface of fast-cured polymer droplet lenses for precision fabrication. <i>Applied Optics</i> , 2018 , 57, 10342-10347	1.7	1
60	Photothermal Generation of Programmable Microbubble Array on Nanoporous Gold Disks 2018 ,		1
59	Smartphone Nanocolorimetry for On-Demand Lead Detection and Quantitation in Drinking Water. <i>Analytical Chemistry</i> , 2018 , 90, 11517-11522	7.8	29
58	Catalytic assembly of DNA nanostructures on a nanoporous gold array as 3D architectures for label-free telomerase activity sensing. <i>Nanoscale Horizons</i> , 2017 , 2, 217-224	10.8	10
57	Effective Light Directed Assembly of Building Blocks with Microscale Control. <i>Small</i> , 2017 , 13, 1700684	11	18
56	Far-field plasmonic coupling in 2-dimensional polycrystalline plasmonic arrays enables wide tunability with low-cost nanofabrication. <i>Nanoscale Horizons</i> , 2017 , 2, 267-276	10.8	12
55	EBL-Based Fabrication and Different Modeling Approaches for Nanoporous Gold Nanodisks. <i>ACS Photonics</i> , 2017 , 4, 1870-1878	6.3	24
54	Portable SERS sensor for malachite green and other small dye molecules 2017 ,		1
53	Single-molecule DNA hybridization on nanoporous gold nanoparticle array chip 2017 ,		1
52	Hyperspectral expansion microscopy 2017 ,		2
51	Automated batch characterization of inkjet-printed elastomer lenses using a LEGO platform. <i>Applied Optics</i> , 2017 , 56, 7346-7350	1.7	5
50	3-Dimensional Plasmonic Substrates Based on Chicken Eggshell Bio-Templates for SERS-Based Bio-Sensing. <i>Micromachines</i> , 2017 , 8, 196	3.3	6

49	Raman spectra and DFT calculations for botryococcene and methylsqualene hydrocarbons from the B race of the green microalga <i>Botryococcus braunii</i> . <i>Journal of Molecular Structure</i> , 2017 , 1147, 427-437	3.4	
48	Open-source do-it-yourself multi-color fluorescence smartphone microscopy. <i>Biomedical Optics Express</i> , 2017 , 8, 5075-5086	3.5	44
47	Nanoporous Gold Nanocomposites as a Versatile Platform for Plasmonic Engineering and Sensing. <i>Sensors</i> , 2017 , 17,	3.8	13
46	Fabrication of multipoint side-firing optical fiber by laser micro-ablation. <i>Optics Letters</i> , 2017 , 42, 1808-1811	3.11	9
45	Nanoporous Gold Disks Functionalized with Stabilized G-Quadruplex Moieties for Sensing Small Molecules. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 29968-29976	9.5	25
44	Nanoplasmonic sensing on DNA topological structure functionalized nanoporous gold disks 2016 ,		0
43	Simultaneous Chemical and Refractive Index Sensing in the 1-2.5 μm Near-Infrared Wavelength Range on Nanoporous Gold Disks. <i>Nano Letters</i> , 2016 , 16, 4641-7	11.5	51
42	Photothermal inactivation of bacteria on plasmonic nanostructures 2016 ,		1
41	Direct-write patterning of nanoporous gold microstructures by in situ laser-assisted dealloying. <i>Optics Express</i> , 2016 , 24, 23610-23617	3.3	12
40	Photothermal inactivation of heat-resistant bacteria on nanoporous gold disk arrays. <i>Optical Materials Express</i> , 2016 , 6, 1217	2.6	37
39	Raman spectroscopy as a diagnostic tool for monitoring acute nephritis. <i>Journal of Biophotonics</i> , 2016 , 9, 260-9	3.1	9
38	3D Cross-Point Plasmonic Nanoarchitectures Containing Dense and Regular Hot Spots for Surface-Enhanced Raman Spectroscopy Analysis. <i>Advanced Materials</i> , 2016 , 28, 8695-8704	24	127
37	Fabricating optical lenses by inkjet printing and heat-assisted in situ curing of polydimethylsiloxane for smartphone microscopy. <i>Journal of Biomedical Optics</i> , 2015 , 20, 047005	3.5	69
36	Noninvasive glucose sensing by transcutaneous Raman spectroscopy. <i>Journal of Biomedical Optics</i> , 2015 , 20, 051036	3.5	25
35	Reagent- and separation-free measurements of urine creatinine concentration using stamping surface enhanced Raman scattering (S-SERS). <i>Biomedical Optics Express</i> , 2015 , 6, 849-58	3.5	54
34	In situ patterning of hierarchical nanoporous gold structures by in-plane dealloying. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2015 , 194, 34-40	3.1	10
33	Morphological control and plasmonic tuning of nanoporous gold disks by surface modifications. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 247-252	7.1	44
32	Label-free, zeptomole cancer biomarker detection by surface-enhanced fluorescence on nanoporous gold disk plasmonic nanoparticles. <i>Journal of Biophotonics</i> , 2015 , 8, 855-63	3.1	31

31	Morphological, plasmonic and SERS characterization of DC-sputtered gold nanoislands. <i>Biomedical Spectroscopy and Imaging</i> , 2015 , 4, 95-103	1.3	2
30	Raman spectroscopy complements optical coherent tomography in tissue classification and cancer detection 2015 ,		1
29	2015 ,		1
28	Gold nanoshell-decorated silicone surfaces for the near-infrared (NIR) photothermal destruction of the pathogenic bacterium <i>E. faecalis</i> . <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 3981-93	9.5	64
27	Improvement of tissue analysis and classification using optical coherence tomography combined with Raman spectroscopy. <i>Journal of Innovative Optical Health Sciences</i> , 2015 , 08, 1550006	1.2	8
26	Constrained regularization for noninvasive glucose sensing using Raman spectroscopy. <i>Journal of Innovative Optical Health Sciences</i> , 2015 , 08, 1550022	1.2	3
25	Performance of line-scan Raman microscopy for high-throughput chemical imaging of cell population. <i>Applied Optics</i> , 2014 , 53, 2881-5	1.7	57
24	Label-free, in situ SERS monitoring of individual DNA hybridization in microfluidics. <i>Nanoscale</i> , 2014 , 6, 8521-6	7.7	66
23	Laser rapid thermal annealing enables tunable plasmonics in nanoporous gold nanoparticles. <i>Nanoscale</i> , 2014 , 6, 12470-5	7.7	40
22	Analysis of ethyl and methyl centralite vibrational spectra for mapping organic gunshot residues. <i>Analyst, The</i> , 2014 , 139, 4270-8	5	14
21	Internal and external morphology-dependent plasmonic resonance in monolithic nanoporous gold nanoparticles. <i>RSC Advances</i> , 2014 , 4, 36682-36688	3.7	31
20	Characterization of nanoporous gold disks for photothermal light harvesting and light-gated molecular release. <i>Nanoscale</i> , 2014 , 6, 5718-24	7.7	68
19	Monolithic NPG nanoparticles with large surface area, tunable plasmonics, and high-density internal hot-spots. <i>Nanoscale</i> , 2014 , 6, 8199-207	7.7	69
18	Automated image curvature assessment and correction for high-throughput Raman spectroscopy and microscopy. <i>Biomedical Spectroscopy and Imaging</i> , 2014 , 3, 359-368	1.3	10
17	Microfluidic surface-enhanced Raman scattering sensor with monolithically integrated nanoporous gold disk arrays for rapid and label-free biomolecular detection. <i>Journal of Biomedical Optics</i> , 2014 , 19, 111611	3.5	59
16	Stamping surface-enhanced Raman spectroscopy for label-free, multiplexed, molecular sensing and imaging. <i>Journal of Biomedical Optics</i> , 2014 , 19, 050501	3.5	34
15	Line-scan Raman microscopy complements optical coherence tomography for tumor boundary detection. <i>Laser Physics Letters</i> , 2014 , 11, 105602	1.5	17
14	Surface-enhanced Raman spectroscopy with monolithic nanoporous gold disk substrates. <i>Nanoscale</i> , 2013 , 5, 4105-9	7.7	80

13	High-speed hyperspectral Raman imaging for label-free compositional microanalysis. <i>Biomedical Optics Express</i> , 2013 , 4, 2376-82	3-5	39
12	High-throughput Raman and surface-enhanced Raman microscopy 2012 ,		2
11	Parallel Raman microspectroscopy using programmable multipoint illumination. <i>Optics Letters</i> , 2012 , 37, 1289-91	3	33
10	A flexible optrode for deep brain neurophotronics 2011 ,		1
9	Noninvasive Glucose Sensing with Raman Spectroscopy 2009 , 391-419		1
8	Infrared contrast of crude-oil-covered water surfaces. <i>Optics Letters</i> , 2008 , 33, 3019-21	3	26
7	Modeling of thickness dependent infrared radiance contrast of native and crude oil covered water surfaces. <i>Optics Express</i> , 2008 , 16, 10535-42	3-3	25
6	Intrinsic Raman spectroscopy for quantitative biological spectroscopy part I: theory and simulations. <i>Optics Express</i> , 2008 , 16, 12726-36	3-3	48
5	Intrinsic Raman spectroscopy for quantitative biological spectroscopy part II: experimental applications. <i>Optics Express</i> , 2008 , 16, 12737-45	3-3	33
4	Constrained regularization: hybrid method for multivariate calibration. <i>Analytical Chemistry</i> , 2007 , 79, 234-9	7.8	31
3	Determination of uncertainty in parameters extracted from single spectroscopic measurements. <i>Journal of Biomedical Optics</i> , 2007 , 12, 064012	3-5	22
2	MEMS tunable gratings with analog actuation. <i>Information Sciences</i> , 2003 , 149, 31-40	7-7	8
1	Introduction to Spectroscopy for Noninvasive Glucose Sensing 331-356		1