Wei E Huang

List of Publications by Year
in descending order

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113 papers	6,501 citations	57758 44 h-index	71685 76 g-index
116 all docs	116 docs citations	116 times ranked	6873 citing authors

#	Article	IF	Citations
1	Raman spectroscopy and machine learning for the classification of breast cancers. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 264, 120300.	3.9	73
2	Isolation and Culture of Single Microbial Cells by Laser Ejection Sorting Technology. Applied and Environmental Microbiology, 2022, 88, AEM0116521.	3.1	12
3	High-Speed Diagnosis of Bacterial Pathogens at the Single Cell Level by Raman Microspectroscopy with Machine Learning Filters and Denoising Autoencoders. ACS Chemical Biology, 2022, 17, 376-385.	3.4	17
4	Clinical Perspective of Antimicrobial Resistance in Bacteria. Infection and Drug Resistance, 2022, Volume 15, 735-746.	2.7	49
5	Reprogramming Synthetic Cells for Targeted Cancer Therapy. ACS Synthetic Biology, 2022, 11, 1349-1360.	3.8	12
6	Environmental microbiology in China. Environmental Microbiology, 2021, 23, 529-529.	3.8	0
7	Bacterial wax synthesis. Biotechnology Advances, 2021, 46, 107680.	11.7	10
8	From macro to micro: a combined bioluminescenceâ€fluorescence approach to monitor bacterial localization. Environmental Microbiology, 2021, 23, 2070-2085.	3.8	9
9	Microbiology Biotechnology in China. Microbial Biotechnology, 2021, 14, 322-322.	4.2	0
10	Redesign of ultrasensitive and robust RecA gene circuit to sense DNA damage. Microbial Biotechnology, 2021, 14, 2481-2496.	4.2	2
11	Development of a Fast Raman-Assisted Antibiotic Susceptibility Test (FRAST) for the Antibiotic Resistance Analysis of Clinical Urine and Blood Samples. Analytical Chemistry, 2021, 93, 5098-5106.	6.5	45
12	Unveiling Cancer Metabolism through Spontaneous and Coherent Raman Spectroscopy and Stable Isotope Probing. Cancers, 2021, 13, 1718.	3.7	32
13	Genetic engineering biofilms inÂsitu using ultrasoundâ€mediated DNA delivery. Microbial Biotechnology, 2021, 14, 1580-1593.	4.2	4
14	Regulation and Characterization of Mutants of fixABCX in Rhizobium leguminosarum. Molecular Plant-Microbe Interactions, 2021, 34, 1167-1180.	2.6	14
15	Clinical validation of optimised RT-LAMP for the diagnosis of SARS-CoV-2 infection. Scientific Reports, 2021, 11, 16193.	3.3	21
16	In Vitro Anticancer Drug Sensitivity Sensing through Single-Cell Raman Spectroscopy. Biosensors, 2021, 11, 286.	4.7	9
17	Understanding and mathematical modelling of cellular resource allocation in microorganisms: a comparative synthesis. BMC Bioinformatics, 2021, 22, 467.	2.6	5
18	Rational Design and Characterization of Nitric Oxide Biosensors in E. coli Nissle 1917 and Mini SimCells. ACS Synthetic Biology, 2021, 10, 2566-2578.	3.8	10

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19	Whole-cell bioreporters for evaluating petroleum hydrocarbon contamination. Critical Reviews in Environmental Science and Technology, 2021, 51, 272-322.	12.8	29
20	Ramanâ€“deuterium isotope probing to study metabolic activities of single bacterial cells in human intestinal microbiota. Microbial Biotechnology, 2020, 13, 572-583.	4.2	48
21	A single-cell Raman-based platform to identify developmental stages of human pluripotent stem cell-derived neurons. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18412-18423.	7.1	59
22	Elevated intracellular cyclicâ€diâ€GMP level in Shewanella oneidensis increases expression of câ€type cytochromes. Microbial Biotechnology, 2020, 13, 1904-1916.	4.2	23
23	Fingerprinting Bacterial Metabolic Response to Erythromycin by Raman-Integrated Mid-Infrared Photothermal Microscopy. Analytical Chemistry, 2020, 92, 14459-14465.	6.5	20
24	Strategies to minimize preventable morbidity and mortality resulting from pandemics like COVID â€19. Environmental Microbiology, 2020, 22, 4085-4092.	3.8	2
25	Development of a rapid test kit for SARS-CoV-2: an example of product design. Bio-Design and Manufacturing, 2020, 3, 83-86.	7.7	21
26	Chromosome-free bacterial cells are safe and programmable platforms for synthetic biology. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6752-6761.	7.1	32
27	Ramanâ€activated sorting of antibioticâ€resistant bacteria in human gut microbiota. Environmental Microbiology, 2020, 22, 2613-2624.	3.8	32
28	RTâ€LAMP for rapid diagnosis of coronavirus SARSâ€CoVâ€2. Microbial Biotechnology, 2020, 13, 950-961.	4.2	408
29	A new approach to find biomarkers in chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) by single-cell Raman micro-spectroscopy. Analyst, The, 2019, 144, 913-920.	3.5	16
30	Defensive Function of Transposable Elements in Bacteria. ACS Synthetic Biology, 2019, 8, 2141-2151.	3.8	27
31	Proteorhodopsin Overproduction Enhances the Long-Term Viability of Escherichia coli. Applied and Environmental Microbiology, 2019, 86, .	3.1	12
32	Raman profiling of embryo culture medium to identify aneuploid and euploid embryos. Fertility and Sterility, 2019, 111, 753-762.e1.	1.0	33
33	Development of Aspirin-Inducible Biosensors in Escherichia coli and SimCells. Applied and Environmental Microbiology, 2019, 85, .	3.1	17
34	Monitoring Cr toxicity and remediation processes - combining a whole-cell bioreporter and Cr isotope techniques. Water Research, 2019, 153, 295-303.	11.3	20
35	Single-Cell and Time-Resolved Profiling of Intracellular Salmonella Metabolism in Primary Human Cells. Analytical Chemistry, 2019, 91, 7729-7737.	6.5	20
36	The urgent need for microbiology literacy in society. Environmental Microbiology, 2019, 21, 1513-1528.	3.8	99

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37	The Synthetic Microbiology Caucus: from abstract ideas to turning microbes into cellular machines and back. Microbial Biotechnology, 2019, 12, 5-7.	4.2	5
38	Effect of Laser Irradiation on Cell Function and Its Implications in Raman Spectroscopy. Applied and Environmental Microbiology, 2018, 84, .	3.1	40
39	Application of a bacterial whole cell biosensor for the rapid detection of cytotoxicity in heavy metal contaminated seawater. Chemosphere, 2018, 200, 322-329.	8.2	44
40	An efficient microalgal biomass harvesting method with a high concentration ratio using the polymer-surfactant aggregates process. Algal Research, 2018, 30, 86-93.	4.6	9
41	Induction of Escherichia coli Into a VBNC State by Continuous-Flow UVC and Subsequent Changes in Metabolic Activity at the Single-Cell Level. Frontiers in Microbiology, 2018, 9, 2243.	3.5	32
42	Ramanâ€activated cell sorting and metagenomic sequencing revealing carbonâ€fixing bacteria in the ocean. Environmental Microbiology, 2018, 20, 2241-2255.	3.8	62
43	Singleâ€cell genomics based on Raman sorting reveals novel carotenoidâ€containing bacteria in the Red Sea. Microbial Biotechnology, 2017, 10, 125-137.	4.2	72
44	Metabolic-Activity-Based Assessment of Antimicrobial Effects by D₂O-Labeled Single-Cell Raman Microspectroscopy. Analytical Chemistry, 2017, 89, 4108-4115.	6.5	129
45	Surface-Enhanced Raman Spectroscopy Combined with Stable Isotope Probing to Monitor Nitrogen Assimilation at Both Bulk and Single-Cell Level. Analytical Chemistry, 2017, 89, 5793-5800.	6.5	43
46	Label-Free Discrimination of Rhizobial Bacteroids and Mutants by Single-Cell Raman Microspectroscopy. Analytical Chemistry, 2017, 89, 6336-6340.	6.5	25
47	Emerging Trends for Microbiome Analysis: From Single-Cell Functional Imaging to Microbiome Big Data. Engineering, 2017, 3, 66-70.	6.7	30
48	New naphthalene whole-cell bioreporter for measuring and assessing naphthalene in polycyclic aromatic hydrocarbons contaminated site. Chemosphere, 2017, 186, 510-518.	8.2	33
49	Development of SimCells as a novel chassis for functional biosensors. Scientific Reports, 2017, 7, 7261.	3.3	24
50	Raman-Deuterium Isotope Probing for in-situ identification of antimicrobial resistant bacteria in Thames River. Scientific Reports, 2017, 7, 16648.	3.3	69
51	Raman Deuterium Isotope Probing Reveals Microbial Metabolism at the Single-Cell Level. Analytical Chemistry, 2017, 89, 13305-13312.	6.5	51
52	Construction of a bioreporter by heterogeneously expressing a Vibrio natriegens recA::luxCDABE fusion in Escherichia coli, and genotoxicity assessments of petrochemical-contaminated groundwater in northern China. Environmental Sciences: Processes and Impacts, 2016, 18, 751-759.	3.5	10
53	Continuous cell sorting in a flow based on single cell resonance Raman spectra. Lab on A Chip, 2016, 16, 1420-1429.	6.0	62
54	Single cell stable isotope probing in microbiology using Raman microspectroscopy. Current Opinion in Biotechnology, 2016, 41, 34-42.	6.6	174

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55	Raman activated cell sorting. Current Opinion in Chemical Biology, 2016, 33, 1-8.	6.1	83
56	Reverse and Multiple Stable Isotope Probing to Study Bacterial Metabolism and Interactions at the Single Cell Level. Analytical Chemistry, 2016, 88, 9443-9450.	6.5	72
57	Label-free, rapid and quantitative phenotyping of stress response in E. coli via ramanome. Scientific Reports, 2016, 6, 34359.	3.3	87
58	Surface-Enhanced Raman Spectroscopy for Identification of Heavy Metal Arsenic(V)-Mediated Enhancing Effect on Antibiotic Resistance. Analytical Chemistry, 2016, 88, 3164-3170.	6.5	50
59	Biodegradation of phenolic compounds and their metabolites in contaminated groundwater using microbial fuel cells. Bioresource Technology, 2016, 200, 426-434.	9.6	73
60	HipH Catalyzes the Hydroxylation of 4-Hydroxyisophthalate to Protocatechuate in 2,4-Xylenol Catabolism by Pseudomonas putida NCIMB 9866. Applied and Environmental Microbiology, 2016, 82, 724-731.	3.1	10
61	Biodegradation: Updating the Concepts of Control for Microbial Cleanup in Contaminated Aquifers. Environmental Science & Technology, 2015, 49, 7073-7081.	10.0	211
62	Tracking heavy water (D ₂ O) incorporation for identifying and sorting active microbial cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E194-203.	7.1	359
63	Single cell biotechnology to shed a light on biological â€˜dark matterâ€™ in nature. Microbial Biotechnology, 2015, 8, 15-16.	4.2	20
64	Raman-Activated Cell Sorting Based on Dielectrophoretic Single-Cell Trap and Release. Analytical Chemistry, 2015, 87, 2282-2289.	6.5	126
65	Towards high-throughput microfluidic Raman-activated cell sorting. Analyst, The, 2015, 140, 6163-6174.	3.5	67
66	The influence of carbon sources on the expression of the recA gene and genotoxicity detection by an Acinetobacter bioreporter. Environmental Sciences: Processes and Impacts, 2015, 17, 835-843.	3.5	7
67	Use of a whole-cell bioreporter, Acinetobacter baylyi, to estimate the genotoxicity and bioavailability of chromium(VI)-contaminated soils. Biotechnology Letters, 2015, 37, 343-348.	2.2	29
68	Magnetic nanoparticle-mediated isolation of functional bacteria in a complex microbial community. ISME Journal, 2015, 9, 603-614.	9.8	75
69	A whole-cell bioreporter approach for the genotoxicity assessment of bioavailability of toxic compounds in contaminated soil in China. Environmental Pollution, 2014, 195, 178-184.	7.5	40
70	Raman spectroscopy provides a rapid, nonâ€invasive method for quantitation of starch in live, unicellular microalgae. Biotechnology Journal, 2014, 9, 1512-1518.	3.5	50
71	Quantitative dynamics of triacylglycerol accumulation in microalgae populations at single-cell resolution revealed by Raman microspectroscopy. Biotechnology for Biofuels, 2014, 7, 58.	6.2	67
72	Single-Cell Raman Sorting. Methods in Molecular Biology, 2014, 1096, 147-153.	0.9	10

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73	Bacterial Whole-Cell Biosensors for the Detection of Contaminants in Water and Soils. Methods in Molecular Biology, 2014, 1096, 155-168.	0.9	6
74	APPLICATION OF MAGNETIC NANOPARTICLES IN DRINKING WATER PURIFICATION. Environmental Engineering and Management Journal, 2014, 13, 2023-2029.	0.6	30
75	Stable Isotope Probing and Raman Spectroscopy for Monitoring Carbon Flow in a Food Chain and Revealing Metabolic Pathway. Analytical Chemistry, 2013, 85, 1642-1649.	6.5	67
76	Whole cell bioreporter application for rapid detection and evaluation of crude oil spill in seawater caused by Dalian oil tank explosion. Water Research, 2013, 47, 1191-1200.	11.3	70
77	Raman Activated Cell Ejection for Isolation of Single Cells. Analytical Chemistry, 2013, 85, 10697-10701.	6.5	105
78	WHOLE CELL BIOREPORTER FOR THE ESTIMATION OF OIL CONTAMINATION. Environmental Engineering and Management Journal, 2013, 12, 1353-1358.	0.6	7
79	FUNCTIONALIZATION AND IMMOBILIZATION OF WHOLE CELL BIOREPORTERS FOR THE DETECTION OF ENVIRONMENTAL CONTAMINATION. Environmental Engineering and Management Journal, 2013, 12, 1417-1422.	0.6	9
80	Bacterial recombination promotes the evolution of multi-drug-resistance in functionally diverse populations. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 1477-1484.	2.6	64
81	Characterization and Modeling of Transcriptional Cross-Regulation in Acinetobacter baylyi ADP1. ACS Synthetic Biology, 2012, 1, 274-283.	3.8	17
82	Raman-Activated Cell Counting for Profiling Carbon Dioxide Fixing Microorganisms. Journal of Physical Chemistry A, 2012, 116, 6560-6563.	2.5	36
83	Rapid resonance Raman microspectroscopy to probe carbon dioxide fixation by single cells in microbial communities. ISME Journal, 2012, 6, 875-885.	9.8	100
84	A Culture-Independent Approach to Unravel Uncultured Bacteria and Functional Genes in a Complex Microbial Community. PLoS ONE, 2012, 7, e47530.	2.5	26
85	Single cell Raman spectroscopy for cell sorting and imaging. Current Opinion in Biotechnology, 2012, 23, 56-63.	6.6	180
86	When single cell technology meets omics, the new toolbox of analytical biotechnology is emerging. Current Opinion in Biotechnology, 2012, 23, 1.	6.6	83
87	Wholeâ€cell bacterial bioreporter for actively searching and sensing of alkanes and oil spills. Microbial Biotechnology, 2012, 5, 87-97.	4.2	73
88	Functionalization of wholeâ€cell bacterial reporters with magnetic nanoparticles. Microbial Biotechnology, 2011, 4, 89-97.	4.2	81
89	Assessing the Ecotoxicologic Hazards of a Pandemic Influenza Medical Response. Environmental Health Perspectives, 2011, 119, 1084-1090.	6.0	33
90	Biofilm formation in environmental bacteria is influenced by different macromolecules depending on genus and species. Environmental Microbiology, 2010, 12, 2496-2507.	3.8	84

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91	Shining Light on the Microbial World. Advances in Applied Microbiology, 2010, 70, 153-186.	2.4	185
92	Agroinfiltration Reduces ABA Levels and Suppresses Pseudomonas syringae-Elicited Salicylic Acid Production in Nicotiana tabacum. PLoS ONE, 2010, 5, e8977.	2.5	37
93	Optimization of Bacterial Whole Cell Bioreporters for Toxicity Assay of Environmental Samples. Environmental Science & Technology, 2009, 43, 7931-7938.	10.0	84
94	Resolving Genetic Functions within Microbial Populations: In Situ Analyses Using rRNA and mRNA Stable Isotope Probing Coupled with Single-Cell Raman-Fluorescence In Situ Hybridization. Applied and Environmental Microbiology, 2009, 75, 234-241.	3.1	128
95	Raman tweezers sorting of single microbial cells. Environmental Microbiology Reports, 2009, 1, 44-49.	2.4	115
96	Characterizing the regulation of the Pu promoter in Acinetobacter baylyi ADP1. Environmental Microbiology, 2008, 10, 1668-1680.	3.8	27
97	Ultrasound-mediated DNA transfer for bacteria. Nucleic Acids Research, 2007, 35, e129-e129.	14.5	60
98	Raman-FISH: combining stable-isotope Raman spectroscopy and fluorescence in situ hybridization for the single cell analysis of identity and function. Environmental Microbiology, 2007, 9, 1878-1889.	3.8	305
99	Single-Cell Raman Spectral Profiles of Pseudomonas fluorescens SBW25 Reflects in vitro and in planta Metabolic History. Microbial Ecology, 2007, 53, 414-425.	2.8	41
100	Pseudomonas fluorescens SBW25 Biofilm and Planktonic Cells Have Differentiable Raman Spectral Profiles. Microbial Ecology, 2007, 53, 471-474.	2.8	30
101	The Environmental Plasmid pQBR103 Alters the Single-Cell Raman Spectral Profile of Pseudomonas fluorescens SBW25. Microbial Ecology, 2007, 53, 494-497.	2.8	6
102	Consideration of Future Requirements for Raman Microbiology as an Examplar for the Ab Initio Development of Informatics Frameworks for Emergent OMICS Technologies. OMICS A Journal of Integrative Biology, 2006, 10, 238-241.	2.0	2
103	Rapid characterization of microbial biodegradation pathways by FT-IR spectroscopy. Journal of Microbiological Methods, 2006, 67, 273-280.	1.6	37
104	Quantitativein situassay of salicylic acid in tobacco leaves using a genetically modified biosensor strain ofAcinetobactersp. ADP1. Plant Journal, 2006, 46, 1073-1083.	5.7	115
105	The use of chemical profiling for monitoring metabolic changes in artificial soil slurries caused by horizontal gene transfer. Metabolomics, 2006, 1, 305-315.	3.0	3
106	Chromosomally located gene fusions constructed in Acinetobacter sp. ADP1 for the detection of salicylate. Environmental Microbiology, 2005, 7, 1339-1348.	3.8	99
107	Insight into pollutant bioavailability and toxicity using Raman confocal microscopy. Journal of Microbiological Methods, 2005, 60, 417-422.	1.6	17
108	Raman Microscopic Analysis of Single Microbial Cells. Analytical Chemistry, 2004, 76, 4452-4458.	6.5	371

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109	UV-B radiation induced changes in litter quality affects earthworm growth and cast characteristics as determined by metabolic fingerprinting. Pedobiologia, 2003, 47, 784-787.	1.2	6
110	Dissolved Oxygen Imaging in a Porous Medium to Investigate Biodegradation in a Plume with Limited Electron Acceptor Supply. Environmental Science & Technology, 2003, 37, 1905-1911.	10.0	85
111	Physical modelling of solute transport in porous media: evaluation of an imaging technique using UV excited fluorescent dye. Water Research, 2002, 36, 1843-1853.	11.3	73
112	Enhanced biodegradation of petroleum hydrocarbons in polluted soil*. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2000, 35, 177-188.	1.7	6
113	A quantitative <scp>RTâ€qLAMP</scp> for the detection of <scp>SARSâ€CoV</scp> â€2 and human gene in clinical application. Microbial Biotechnology, 0, , .	4.2	2