# Wei E Huang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7804521/publications.pdf

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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 | RTâ€LAMP for rapid diagnosis of coronavirus SARSâ€CoVâ€2. Microbial Biotechnology, 2020, 13, 950-961. | 4.2 | 408 |
| 2 | Raman Microscopic Analysis of Single Microbial Cells. Analytical Chemistry, 2004, 76, 4452-4458. | 6.5 | 371 |
| 3 | Tracking heavy water (D <sub>2</sub> 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 |
| 4 | 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 |
| 5 | Biodegradation: Updating the Concepts of Control for Microbial Cleanup in Contaminated Aquifers. Environmental Science & Technology, 2015, 49, 7073-7081. | 10.0 | 211 |
| 6 | Shining Light on the Microbial World. Advances in Applied Microbiology, 2010, 70, 153-186. | 2.4 | 185 |
| 7 | Single cell Raman spectroscopy for cell sorting and imaging. Current Opinion in Biotechnology, 2012, 23, 56-63. | 6.6 | 180 |
| 8 | Single cell stable isotope probing in microbiology using Raman microspectroscopy. Current Opinion in Biotechnology, 2016, 41, 34-42. | 6.6 | 174 |
| 9 | Metabolic-Activity-Based Assessment of Antimicrobial Effects by D<sub>2</sub>O-Labeled Single-Cell Raman Microspectroscopy. Analytical Chemistry, 2017, 89, 4108-4115. | 6.5 | 129 |
| 10 | 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 |
| 11 | Raman-Activated Cell Sorting Based on Dielectrophoretic Single-Cell Trap and Release. Analytical Chemistry, 2015, 87, 2282-2289. | 6.5 | 126 |
| 12 | 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 |
| 13 | Raman tweezers sorting of single microbial cells. Environmental Microbiology Reports, 2009, 1, 44-49. | 2.4 | 115 |
| 14 | Raman Activated Cell Ejection for Isolation of Single Cells. Analytical Chemistry, 2013, 85, 10697-10701. | 6.5 | 105 |
| 15 | Rapid resonance Raman microspectroscopy to probe carbon dioxide fixation by single cells in microbial communities. ISME Journal, 2012, 6, 875-885. | 9.8 | 100 |
| 16 | Chromosomally located gene fusions constructed in Acinetobacter sp. ADP1 for the detection of salicylate. Environmental Microbiology, 2005, 7, 1339-1348. | 3.8 | 99 |
| 17 | The urgent need for microbiology literacy in society. Environmental Microbiology, 2019, 21, 1513-1528. | 3.8 | 99 |
| 18 | Label-free, rapid and quantitative phenotyping of stress response in E. coli via ramanome. Scientific Reports, 2016, 6, 34359. | 3.3 | 87 |

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|---|---|---|---|
| 19 | 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 |
| 20 | Optimization of Bacterial Whole Cell Bioreporters for Toxicity Assay of Environmental Samples. Environmental Science & Technology, 2009, 43, 7931-7938. | 10.0 | 84 |
| 21 | Biofilm formation in environmental bacteria is influenced by different macromolecules depending on genus and species. Environmental Microbiology, 2010, 12, 2496-2507. | 3.8 | 84 |
| 22 | When single cell technology meets omics, the new toolbox of analytical biotechnology is emerging. Current Opinion in Biotechnology, 2012, 23, 1. | 6.6 | 83 |
| 23 | Raman activated cell sorting. Current Opinion in Chemical Biology, 2016, 33, 1-8. | 6.1 | 83 |
| 24 | Functionalization of wholeâ€cell bacterial reporters with magnetic nanoparticles. Microbial Biotechnology, 2011, 4, 89-97. | 4.2 | 81 |
| 25 | Magnetic nanoparticle-mediated isolation of functional bacteria in a complex microbial community. ISME Journal, 2015, 9, 603-614. | 9.8 | 75 |
| 26 | 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 |
| 27 | Wholeâ€cell bacterial bioreporter for actively searching and sensing of alkanes and oil spills. Microbial Biotechnology, 2012, 5, 87-97. | 4.2 | 73 |
| 28 | Biodegradation of phenolic compounds and their metabolites in contaminated groundwater using microbial fuel cells. Bioresource Technology, 2016, 200, 426-434. | 9.6 | 73 |
| 29 | 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 |
| 30 | 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 |
| 31 | 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 |
| 32 | 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 |
| 33 | Raman-Deuterium Isotope Probing for in-situ identification of antimicrobial resistant bacteria in Thames River. Scientific Reports, 2017, 7, 16648. | 3.3 | 69 |
| 34 | 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 |
| 35 | 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 |
| 36 | Towards high-throughput microfluidic Raman-activated cell sorting. Analyst, The, 2015, 140, 6163-6174. | 3.5 | 67 |

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|---|---|---|---|
| 37 | 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 |
| 38 | Continuous cell sorting in a flow based on single cell resonance Raman spectra. Lab on A Chip, 2016, 16, 1420-1429. | 6.0 | 62 |
| 39 | Ramanâ€activated cell sorting and metagenomic sequencing revealing carbonâ€fixing bacteria in the ocean. Environmental Microbiology, 2018, 20, 2241-2255. | 3.8 | 62 |
| 40 | Ultrasound-mediated DNA transfer for bacteria. Nucleic Acids Research, 2007, 35, e129-e129. | 14.5 | 60 |
| 41 | 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 |
| 42 | Raman Deuterium Isotope Probing Reveals Microbial Metabolism at the Single-Cell Level. Analytical Chemistry, 2017, 89, 13305-13312. | 6.5 | 51 |
| 43 | 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 |
| 44 | 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 |
| 45 | Clinical Perspective of Antimicrobial Resistance in Bacteria. Infection and Drug Resistance, 2022, Volume 15, 735-746. | 2.7 | 49 |
| 46 | 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 |
| 47 | 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 |
| 48 | 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 |
| 49 | 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 |
| 50 | 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 |
| 51 | 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 |
| 52 | Effect of Laser Irradiation on Cell Function and Its Implications in Raman Spectroscopy. Applied and Environmental Microbiology, 2018, 84, . | 3.1 | 40 |
| 53 | Rapid characterization of microbial biodegradation pathways by FT-IR spectroscopy. Journal of Microbiological Methods, 2006, 67, 273-280. | 1.6 | 37 |
| 54 | Agroinfiltration Reduces ABA Levels and Suppresses Pseudomonas syringae-Elicited Salicylic Acid Production in Nicotiana tabacum. PLoS ONE, 2010, 5, e8977. | 2.5 | 37 |

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|---|---|---|---|
| 55 | Raman-Activated Cell Counting for Profiling Carbon Dioxide Fixing Microorganisms. Journal of Physical Chemistry A, 2012, 116, 6560-6563. | 2.5 | 36 |
| 56 | Assessing the Ecotoxicologic Hazards of a Pandemic Influenza Medical Response. Environmental Health Perspectives, 2011, 119, 1084-1090. | 6.0 | 33 |
| 57 | New naphthalene whole-cell bioreporter for measuring and assessing naphthalene in polycyclic aromatic hydrocarbons contaminated site. Chemosphere, 2017, 186, 510-518. | 8.2 | 33 |
| 58 | Raman profiling of embryo culture medium to identify aneuploid and euploid embryos. Fertility and Sterility, 2019, 111, 753-762.e1. | 1.0 | 33 |
| 59 | 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 |
| 60 | 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 |
| 61 | Ramanâ€activated sorting of antibioticâ€resistant bacteria in human gut microbiota. Environmental Microbiology, 2020, 22, 2613-2624. | 3.8 | 32 |
| 62 | Unveiling Cancer Metabolism through Spontaneous and Coherent Raman Spectroscopy and Stable Isotope Probing. Cancers, 2021, 13, 1718. | 3.7 | 32 |
| 63 | Pseudomonas fluorescens SBW25 Biofilm and Planktonic Cells Have Differentiable Raman Spectral Profiles. Microbial Ecology, 2007, 53, 471-474. | 2.8 | 30 |
| 64 | Emerging Trends for Microbiome Analysis: From Single-Cell Functional Imaging to Microbiome Big Data. Engineering, 2017, 3, 66-70. | 6.7 | 30 |
| 65 | APPLICATION OF MAGNETIC NANOPARTICLES IN DRINKING WATER PURIFICATION. Environmental Engineering and Management Journal, 2014, 13, 2023-2029. | 0.6 | 30 |
| 66 | 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 |
| 67 | Whole-cell bioreporters for evaluating petroleum hydrocarbon contamination. Critical Reviews in Environmental Science and Technology, 2021, 51, 272-322. | 12.8 | 29 |
| 68 | Characterizing the regulation of the Pu promoter in Acinetobacter baylyi ADP1. Environmental Microbiology, 2008, 10, 1668-1680. | 3.8 | 27 |
| 69 | Defensive Function of Transposable Elements in Bacteria. ACS Synthetic Biology, 2019, 8, 2141-2151. | 3.8 | 27 |
| 70 | A Culture-Independent Approach to Unravel Uncultured Bacteria and Functional Genes in a Complex Microbial Community. PLoS ONE, 2012, 7, e47530. | 2.5 | 26 |
| 71 | Label-Free Discrimination of Rhizobial Bacteroids and Mutants by Single-Cell Raman Microspectroscopy. Analytical Chemistry, 2017, 89, 6336-6340. | 6.5 | 25 |
| 72 | Development of SimCells as a novel chassis for functional biosensors. Scientific Reports, 2017, 7, 7261. | 3.3 | 24 |

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| 73 | Elevated intracellular cyclicâ€diâ€GMP level in Shewanella oneidensis increases expression of câ€type cytochromes. Microbial Biotechnology, 2020, 13, 1904-1916. | 4.2 | 23 |
| 74 | 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 |
| 75 | Clinical validation of optimised RT-LAMP for the diagnosis of SARS-CoV-2 infection. Scientific Reports, 2021, 11, 16193. | 3.3 | 21 |
| 76 | Single cell biotechnology to shed a light on biological â€˜dark matterâ€™ in nature. Microbial Biotechnology, 2015, 8, 15-16. | 4.2 | 20 |
| 77 | Monitoring Cr toxicity and remediation processes - combining a whole-cell bioreporter and Cr isotope techniques. Water Research, 2019, 153, 295-303. | 11.3 | 20 |
| 78 | Single-Cell and Time-Resolved Profiling of Intracellular Salmonella Metabolism in Primary Human Cells. Analytical Chemistry, 2019, 91, 7729-7737. | 6.5 | 20 |
| 79 | Fingerprinting Bacterial Metabolic Response to Erythromycin by Raman-Integrated Mid-Infrared Photothermal Microscopy. Analytical Chemistry, 2020, 92, 14459-14465. | 6.5 | 20 |
| 80 | Insight into pollutant bioavailability and toxicity using Raman confocal microscopy. Journal of Microbiological Methods, 2005, 60, 417-422. | 1.6 | 17 |
| 81 | Characterization and Modeling of Transcriptional Cross-Regulation in Acinetobacter baylyi ADP1. ACS Synthetic Biology, 2012, 1, 274-283. | 3.8 | 17 |
| 82 | Development of Aspirin-Inducible Biosensors in Escherichia coli and SimCells. Applied and Environmental Microbiology, 2019, 85, . | 3.1 | 17 |
| 83 | 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 |
| 84 | 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 |
| 85 | Regulation and Characterization of Mutants of fixABCX in Rhizobium leguminosarum. Molecular Plant-Microbe Interactions, 2021, 34, 1167-1180. | 2.6 | 14 |
| 86 | Proteorhodopsin Overproduction Enhances the Long-Term Viability of Escherichia coli. Applied and Environmental Microbiology, 2019, 86, . | 3.1 | 12 |
| 87 | Isolation and Culture of Single Microbial Cells by Laser Ejection Sorting Technology. Applied and Environmental Microbiology, 2022, 88, AEM0116521. | 3.1 | 12 |
| 88 | Reprogramming Synthetic Cells for Targeted Cancer Therapy. ACS Synthetic Biology, 2022, 11, 1349-1360. | 3.8 | 12 |
| 89 | 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 |
| 90 | 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 |

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| 91 | Bacterial wax synthesis. Biotechnology Advances, 2021, 46, 107680. | 11.7 | 10 |
| 92 | 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 |
| 93 | Single-Cell Raman Sorting. Methods in Molecular Biology, 2014, 1096, 147-153. | 0.9 | 10 |
| 94 | 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 |
| 95 | From macro to micro: a combined bioluminescenceâ€fluorescence approach to monitor bacterial localization. Environmental Microbiology, 2021, 23, 2070-2085. | 3.8 | 9 |
| 96 | In Vitro Anticancer Drug Sensitivity Sensing through Single-Cell Raman Spectroscopy. Biosensors, 2021, 11, 286. | 4.7 | 9 |
| 97 | 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 |
| 98 | 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 |
| 99 | WHOLE CELL BIOREPORTER FOR THE ESTIMATION OF OIL CONTAMINATION. Environmental Engineering and Management Journal, 2013, 12, 1353-1358. | 0.6 | 7 |
| 100 | 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 |
| 101 | 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 |
| 102 | The Environmental Plasmid pQBR103 Alters the Single-Cell Raman Spectral Profile of Pseudomonas fluorescens SBW25. Microbial Ecology, 2007, 53, 494-497. | 2.8 | 6 |
| 103 | Bacterial Whole-Cell Biosensors for the Detection of Contaminants in Water and Soils. Methods in Molecular Biology, 2014, 1096, 155-168. | 0.9 | 6 |
| 104 | The Synthetic Microbiology Caucus: from abstract ideas to turning microbes into cellular machines and back. Microbial Biotechnology, 2019, 12, 5-7. | 4.2 | 5 |
| 105 | Understanding and mathematical modelling of cellular resource allocation in microorganisms: a comparative synthesis. BMC Bioinformatics, 2021, 22, 467. | 2.6 | 5 |
| 106 | Genetic engineering biofilms inÂsitu using ultrasoundâ€mediated DNA delivery. Microbial Biotechnology, 2021, 14, 1580-1593. | 4.2 | 4 |
| 107 | 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 |
| 108 | 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 |

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|---|---|---|---|
| 109 | Strategies to minimize preventable morbidity and mortality resulting from pandemics like COVID â€19. Environmental Microbiology, 2020, 22, 4085-4092. | 3.8 | 2 |
| 110 | Redesign of ultrasensitive and robust RecA gene circuit to sense DNA damage. Microbial Biotechnology, 2021, 14, 2481-2496. | 4.2 | 2 |
| 111 | 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 |
| 112 | Environmental microbiology in China. Environmental Microbiology, 2021, 23, 529-529. | 3.8 | 0 |
| 113 | Microbiology Biotechnology in China. Microbial Biotechnology, 2021, 14, 322-322. | 4.2 | 0 |