# Zachary J Smith

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6198379/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 82 papers | 1,843 citations | 361413 20 h-index | 276875 41 g-index |
| 82 all docs | 82 docs citations | 82 times ranked | 3119 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Epiâ€illumination darkâ€field microscopy enables direct visualization of unlabeled small organisms with high spatial and temporal resolution. Journal of Biophotonics, 2022, 15, e202100185. | 2.3 | 5 |
| 2 | Simultaneous 3D deconvolution and halo removal for spatial light interference microscopy through a two-edge apodized Wiener filter. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2022, 39, 287. | 1.5 | 1 |
| 3 | Label-free imaging of intracellular organelle dynamics using flat-fielding quantitative phase contrast microscopy (FF-QPCM). Optics Express, 2022, 30, 9505. | 3.4 | 13 |
| 4 | Applying limiting entropy to quantify the alignment of collagen fibers by polarized light imaging. Mathematical Biosciences and Engineering, 2021, 18, 2331-2356. | 1.9 | 1 |
| 5 | Fast confocal Raman imaging via context-aware compressive sensing. Analyst, The, 2021, 146, 2348-2357. | 3.5 | 15 |
| 6 | Recent advances in structured illumination microscopy. JPhys Photonics, 2021, 3, 024009. | 4.6 | 25 |
| 7 | Azo-Enhanced Raman Scattering for Enhancing the Sensitivity and Tuning the Frequency of Molecular Vibrations. ACS Central Science, 2021, 7, 768-780. | 11.3 | 20 |
| 8 | Organelle-specific phase contrast microscopy enables gentle monitoring and analysis of mitochondrial network dynamics. Biomedical Optics Express, 2021, 12, 4363. | 2.9 | 18 |
| 9 | A sample-preparation-free, automated, sample-to-answer system for cell counting in human body fluids. Analytical and Bioanalytical Chemistry, 2021, 413, 5025-5035. | 3.7 | 5 |
| 10 | Vibrational Fingerprint Analysis of an Azo-based Resonance Raman Scattering Probe for Imaging Proton Distribution in Cellular Lysosomes. Analytical Chemistry, 2021, 93, 15659-15666. | 6.5 | 6 |
| 11 | Improving the limit of detection in portable luminescent assay readers through smart optical design. Journal of Biophotonics, 2020, 13, e201900241. | 2.3 | 10 |
| 12 | Low resolution Raman: the impact of spectral resolution on limit of detection and imaging speed in hyperspectral imaging. Analyst, The, 2020, 145, 6607-6616. | 3.5 | 9 |
| 13 | Combined Morpho-Chemical Profiling of Individual Extracellular Vesicles and Functional Nanoparticles without Labels. Analytical Chemistry, 2020, 92, 5585-5594. | 6.5 | 25 |
| 14 | Nanogap Plasmonic Structures Fabricated by Switchable Capillaryâ€Force Driven Selfâ€Assembly for Localized Sensing of Anticancer Medicines with Microfluidic SERS. Advanced Functional Materials, 2020, 30, 1909467. | 14.9 | 91 |
| 15 | Optical volumetric projection with large NA objectives for fast high-resolution 3D imaging of neural signals. Biomedical Optics Express, 2020, 11, 3769. | 2.9 | 4 |
| 16 | Nanometer precise red blood cell sizing using a cost-effective quantitative dark field imaging system. Biomedical Optics Express, 2020, 11, 5950. | 2.9 | 3 |
| 17 | Lin28 enhances de novo fatty acid synthesis to promote cancer progression via SREBP â€1. EMBO Reports, 2019, 20, e48115. | 4.5 | 21 |
| 18 | Dual-phone illumination-imaging system for high resolution and large field of view multi-modal microscopy. Lab on A Chip, 2019, 19, 825-836. | 6.0 | 21 |

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|---|---|---|---|
| 19 | Quantitative phase microscopy with enhanced contrast and improved resolution through ultraâ€oblique illumination (UOâ€QPM). Journal of Biophotonics, 2019, 12, e201900011. | 2.3 | 23 |
| 20 | A lowâ€cost, automated parasite diagnostic system via a portable, robotic microscope and deep learning. Journal of Biophotonics, 2019, 12, e201800410. | 2.3 | 28 |
| 21 | Simultaneous recovery of both bright and dim structures from noisy fluorescence microscopy images using a modified TV constraint. Journal of Microscopy, 2019, 275, 24-35. | 1.8 | 2 |
| 22 | Automated morphometry toolbox for analysis of microscopic model organisms using simple bright-field imaging. Biology Open, 2019, 8, . | 1.2 | 7 |
| 23 | A smart preparation strategy for point-of-care cellular counting of trace volumes of human blood. Analytical and Bioanalytical Chemistry, 2019, 411, 2767-2780. | 3.7 | 9 |
| 24 | Editorial: Plasmonic Technologies for Bioanalytical Applications. Frontiers in Chemistry, 2019, 7, 865. | 3.6 | 4 |
| 25 | Simple adaptive mobile phone screen illumination for dual phone differential phase contrast (DPDPC) microscopy. Biomedical Optics Express, 2019, 10, 4369. | 2.9 | 11 |
| 26 | Morphology and structure of the metalâ€“organic framework ZIF-8 during crystallisation measured by a new technique: dynamic angle-resolved second-harmonic scattering (AD-SHS). Acta Crystallographica Section A: Foundations and Advances, 2019, 75, e671-e671. | 0.1 | 0 |
| 27 | Performance of a costâ€effective and automated blood counting system for resourceâ€limited settings operated by trained and untrained users. Journal of Biophotonics, 2018, 11, e201700030. | 2.3 | 10 |
| 28 | Structured illumination microscopy with interleaved reconstruction (SIMILR). Journal of Biophotonics, 2018, 11, e201700090. | 2.3 | 25 |
| 29 | Screening of nutritional and genetic anemias using elastic light scattering. Lab on A Chip, 2018, 18, 3263-3271. | 6.0 | 2 |
| 30 | Optical volumetric projection for fast 3D imaging through circularly symmetric pupil engineering. Biomedical Optics Express, 2018, 9, 437. | 2.9 | 5 |
| 31 | Morphology and structure of ZIF-8 during crystallisation measured by dynamic angle-resolved second harmonic scattering. Nature Communications, 2018, 9, 3418. | 12.8 | 29 |
| 32 | A modular, open-source, slide-scanning microscope for diagnostic applications in resource-constrained settings. PLoS ONE, 2018, 13, e0194063. | 2.5 | 31 |
| 33 | Benchtop and animal validation of a portable fluorescence microscopic imaging system for potential use in cholecystectomy. Journal of Biomedical Optics, 2018, 23, 1. | 2.6 | 1 |
| 34 | Evaluation of anemia diagnosis based on elastic light scattering (Conference Presentation). , 2017, , . | | 0 |
| 35 | Field performance of a low-cost and fully-automated blood counting system operated by trained and untrained users (Conference Presentation). , 2017, , . | | 0 |
| 36 | Time-resolved SERS for characterizing extracellular vesicles. , 2017, , . | | 1 |

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|---|---|---|---|
| 37 | Fsâ€laser ablation of teeth is temperature limited and provides information about the ablated components. Journal of Biophotonics, 2017, 10, 1292-1304. | 2.3 | 17 |
| 38 | Multispectral Optical Tweezers for Biochemical Fingerprinting of CD9-Positive Exosome Subpopulations. Analytical Chemistry, 2017, 89, 5357-5363. | 6.5 | 69 |
| 39 | Single particle analysis: Methods for detection of platelet extracellular vesicles in suspension (excluding flow cytometry). Platelets, 2017, 28, 249-255. | 2.3 | 30 |
| 40 | A new red cell index and portable RBC analyzer for screening of iron deficiency and Thalassemia minor in a Chinese population. Scientific Reports, 2017, 7, 10510. | 3.3 | 17 |
| 41 | Raman Plus X: Biomedical Applications of Multimodal Raman Spectroscopy. Sensors, 2017, 17, 1592. | 3.8 | 29 |
| 42 | Subnanometer-resolved chemical imaging via multivariate analysis of tip-enhanced Raman maps. Light: Science and Applications, 2017, 6, e17098-e17098. | 16.6 | 36 |
| 43 | Simple, cost effective blood counting without needing trained users. , 2017, , . | | 0 |
| 44 | Smart fast blood counting of trace volumes of body fluids from various mammalian species using a compact custom-built microscope cytometer (Conference Presentation). , 2016, , . | | 0 |
| 45 | Raman spectroscopy of single extracellular vesicles reveals subpopulations with varying membrane content (Conference Presentation). , 2016, , . | | 0 |
| 46 | The effects of laser repetition rate on femtosecond laser ablation of dry bone: a thermal and LIBS study. Journal of Biophotonics, 2016, 9, 171-180. | 2.3 | 22 |
| 47 | In vivo detection of cervical intraepithelial neoplasia by multimodal colposcopy. , 2016, , . | | 0 |
| 48 | Comment on â€œLabel-Free Single Exosome Detection Using Frequency Locked Microtoroid Optical Resonatorsâ€• ACS Photonics, 2016, 3, 716-717. | 6.6 | 1 |
| 49 | Preliminary fsLIBS study on bone tumors. Biomedical Optics Express, 2015, 6, 4850. | 2.9 | 3 |
| 50 | Single exosome study reveals subpopulations distributed among cell lines with variability related to membrane content. Journal of Extracellular Vesicles, 2015, 4, 28533. | 12.2 | 240 |
| 51 | Smart and Fast Blood Counting of Trace Volumes of Body Fluids from Various Mammalian Species Using a Compact, Custom-Built Microscope Cytometer. Analytical Chemistry, 2015, 87, 11854-11862. | 6.5 | 17 |
| 52 | 3D plasmonic nanobowl platform for the study of exosomes in solution. Nanoscale, 2015, 7, 9290-9297. | 5.6 | 138 |
| 53 | Development of inexpensive blood imaging systems: where are we now?. Expert Review of Medical Devices, 2015, 12, 613-627. | 2.8 | 7 |
| 54 | Image reconstruction for structured-illumination microscopy with low signal level. Optics Express, 2014, 22, 8687. | 3.4 | 65 |

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|---|---|---|---|
| 55 | Long term Raman spectral study of power-dependent photodamage in red blood cells. Applied Physics Letters, 2014, 104, . | 3.3 | 17 |
| 56 | Single-step preparation and image-based counting of minute volumes of human blood. Lab on A Chip, 2014, 14, 3029. | 6.0 | 38 |
| 57 | Characterization of Femtosecond Laser-Induced Breakdown Spectroscopy (fsLIBS) and Applications for Biological Samples. Applied Spectroscopy, 2014, 68, 949-954. | 2.2 | 15 |
| 58 | Direct comparison of fatty acid ratios in single cellular lipid droplets as determined by comparative Raman spectroscopy and gas chromatography. Analyst, The, 2013, 138, 6662. | 3.5 | 54 |
| 59 | Precise Monitoring of Chemical Changes through Localization Analysis of Dynamic Spectra (LADS). Applied Spectroscopy, 2013, 67, 187-195. | 2.2 | 4 |
| 60 | Super-resolved spatial light interference microscopy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 344. | 1.5 | 5 |
| 61 | Modern Trends in Imaging VI: Raman Scattering in Pathology. Analytical Cellular Pathology, 2012, 35, 145-163. | 1.4 | 16 |
| 62 | Nanometer-Scale Sizing Accuracy of Particle Suspensions on an Unmodified Cell Phone Using Elastic Light Scattering. PLoS ONE, 2012, 7, e46030. | 2.5 | 17 |
| 63 | Raman scattering in pathology. Analytical Cellular Pathology, 2012, 35, 145-63. | 1.4 | 7 |
| 64 | In-plane rotation classification for coherent X-ray imaging of single biomolecules. Optics Express, 2011, 19, 11691. | 3.4 | 1 |
| 65 | Multivariate optical computing using a digital micromirror device for fluorescence and Raman spectroscopy. Optics Express, 2011, 19, 16950. | 3.4 | 20 |
| 66 | Time-Gated Raman Spectra of Living Samples. , 2011, , . | | 0 |
| 67 | Cell-Phone-Based Platform for Biomedical Device Development and Education Applications. PLoS ONE, 2011, 6, e17150. | 2.5 | 301 |
| 68 | Rejection of Fluorescence Background in Resonance and Spontaneous Raman Microspectroscopy. Journal of Visualized Experiments, 2011, , . | 0.3 | 1 |
| 69 | Microscopy and Spectroscopy on a Cell Phone. , 2011, , . | | 1 |
| 70 | Multivariate Optical Computing for Biological Samples using a Digital Micromirror Device. , 2011, , . | | 0 |
| 71 | Integrated Raman and angular scattering microscopy reveals chemical and morphological differences between activated and nonactivated CD8+ T lymphocytes. Journal of Biomedical Optics, 2010, 15, 036021. | 2.6 | 21 |
| 72 | Development of a time-gated system for Raman spectroscopy of biological samples. Optics Express, 2010, 18, 20049. | 3.4 | 47 |

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|---|---|---|---|
| 73 | Construction of an integrated Raman- and angular-scattering microscope. Review of Scientific Instruments, 2009, 80, 044302. | 1.3 | 11 |
| 74 | Validation of an integrated Raman- and angular-scattering microscopy system on heterogeneous bead mixtures and single human immune cells. Applied Optics, 2009, 48, D109. | 2.1 | 38 |
| 75 | Integrated Raman- and angular-scattering microscopy. Optics Letters, 2008, 33, 714. | 3.3 | 35 |
| 76 | Integrated Raman and angular scattering microscopy (IRAM). , 2008, , . | | 0 |
| 77 | Studying Single Cells Using Integrated Raman and Angular-Scattering Microscopy. , 2008, , . | | 0 |
| 78 | Integrated Raman and Angular-scatter Microscopy (IRAM). , 2008, , . | | 0 |
| 79 | Raman Spectroscopy of Single PDT Treated Cells. , 2006, , . | | 0 |
| 80 | New Twists and Turns for Confocal Raman Microscopy. , 2006, , . | | 0 |
| 81 | Surface-sensitive polarized Raman spectroscopy of biological tissue. Optics Letters, 2005, 30, 1363. | 3.3 | 22 |
| 82 | Asymmetrical Illumination Enables Lipid Droplets Segmentation in Caenorhabditis elegans Using Epi-Illumination Dark Field Microscopy. Frontiers in Physics, 0, 10, . | 2.1 | 0 |