

Roger J Zemp

List of Publications by Year in descending order

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99
papers

1,664
citations

318942

23
h-index

371746

37
g-index

100
all docs

100
docs citations

100
times ranked

2048
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast hybrid optomechanical scanning photoacoustic remote sensing microscopy for virtual histology. Biomedical Optics Express, 2022, 13, 39.	1.5	3
2	Flexible transparent CMUT arrays for photoacoustic tomography. Optics Express, 2022, 30, 15877.	1.7	19
3	Hadamard Aperiodic Interval Codes for Parallel-Transmission 2D and 3D Synthetic Aperture Ultrasound Imaging. Applied Sciences (Switzerland), 2022, 12, 4917.	1.3	5
4	Outperforming piezoelectric ultrasonics with high-reliability single-membrane CMUT array elements. Microsystems and Nanoengineering, 2022, 8, .	3.4	6
5	Multi-layer label-free H&E-like histology using ultraviolet scattering-augmented photoacoustic remote sensing microscopy. , 2022, , .		0
6	Deep learning-enabled realistic virtual histology with ultraviolet scattering and photoacoustic remote sensing microscopy. , 2022, , .		0
7	Dual-Frequency CMUT Arrays for Multiband Ultrasound Imaging Applications. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2532-2542.	1.7	13
8	Photoacoustic remote sensing 3D H&E histology with fluorescence validation. , 2021, , .		1
9	High sensitivity transparent capacitive micromachined ultrasound transducer linear arrays for optical, photoacoustic and ultrasound imaging. , 2021, , .		1
10	Transparent capacitive micromachined ultrasound transducer linear arrays for combined realtime optical and ultrasonic imaging. Optics Letters, 2021, 46, 1542.	1.7	16
11	Virtual hematoxylin and eosin histopathology using simultaneous photoacoustic remote sensing and scattering microscopy. Optics Express, 2021, 29, 13864.	1.7	13
12	Fiber-based photoacoustic remote sensing microscopy and spectral-domain optical coherence tomography with a dual-function 1050-nm interrogation source. Journal of Biomedical Optics, 2021, 26, .	1.4	3
13	Single laser-shot super-resolution photoacoustic tomography with fast sparsity-based reconstruction. Photoacoustics, 2021, 22, 100258.	4.4	1
14	F-mode ultraviolet photoacoustic remote sensing for label-free virtual H&E histopathology using a single excitation wavelength. Optics Letters, 2021, 46, 3500.	1.7	7
15	Virtual histopathology with ultraviolet scattering and photoacoustic remote sensing microscopy. Optics Letters, 2021, 46, 5153-5156.	1.7	9
16	Multimodal 3D photoacoustic remote sensing and confocal fluorescence microscopy imaging. Journal of Biomedical Optics, 2021, 26, .	1.4	6
17	Bias-sensitive transparent single-element ultrasound transducers using hot-pressed PMN-PT. OSA Continuum, 2021, 4, 2606.	1.8	6
18	Depth-resolved hematoxylin and eosin virtual histopathology with photoacoustic remote sensing and scattering microscopy. , 2021, , .		0

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19	Fast analysis of resected breast tissue margins using ultraviolet photoacoustic remote sensing microscopy. , 2021, , .		0
20	Virtual histological assessment of human breast tumor specimens using spectral-domain optical coherence tomography augmented with ultraviolet photoacoustic remote sensing microscopy. , 2021, , .		0
21	Transparent capacitive micromachined ultrasonic transducer (CMUT) arrays for real-time photoacoustic applications. Optics Express, 2020, 28, 13750.	1.7	35
22	Reflective objective-based ultraviolet photoacoustic remote sensing virtual histopathology. Optics Letters, 2020, 45, 535.	1.7	33
23	Label-free lipid contrast imaging using non-contact near-infrared photoacoustic remote sensing microscopy. Optics Letters, 2020, 45, 4559.	1.7	18
24	Multimodal imaging with spectral-domain optical coherence tomography and photoacoustic remote sensing microscopy. Optics Letters, 2020, 45, 4859.	1.7	15
25	In vivo combined virtual histology and vascular imaging with dual-wavelength photoacoustic remote sensing microscopy. OSA Continuum, 2020, 3, 2680.	1.8	12
26	Enrichment and ratiometric detection of circulating tumor cells using PSMA- and folate receptor-targeted magnetic and surface-enhanced Raman scattering nanoparticles. Biomedical Optics Express, 2020, 11, 6211.	1.5	3
27	Towards microvascular pressure estimation using ultrasound and photoacoustic imaging. Photoacoustics, 2019, 14, 99-104.	4.4	2
28	A Nonlinear Lumped Equivalent Circuit Model for a Single Uncollapsed Square CMUT Cell. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1340-1351.	1.7	15
29	Fast Orthogonal Rowâ€œColumn Electronic Scanning Experiments and Comparisons. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1093-1101.	1.7	11
30	A New 3D Imaging Technique Integrating Ultrafast Compounding, Hadamard Encoding, and Reconfigurable Fresnel Lensing, demonstrated on a 128-Element, Crossed Electrode Endoscope. , 2019, , .		1
31	Transparent capacitive micromachined ultrasonic transducers (CMUTs) for photoacoustic applications. Optics Express, 2019, 27, 13204.	1.7	33
32	Real-time functional photoacoustic remote sensing microscopy. Optics Letters, 2019, 44, 3466.	1.7	18
33	Ultraviolet photoacoustic remote sensing microscopy. Optics Letters, 2019, 44, 3586.	1.7	34
34	A 30 MHz, 3D Imaging, Forward Looking Miniature Endoscope Based on a 128-Element Relaxor Array. , 2018, , .		0
35	Coherence-gated photoacoustic remote sensing microscopy. Optics Express, 2018, 26, 23689.	1.7	13
36	Non-invasive spinal vibration testing using ultrafast ultrasound imaging: A new way to measure spine function. Scientific Reports, 2018, 8, 9611.	1.6	2

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37	Simultaneous Azimuth and Fresnel Elevation Compounding: A Fast 3-D Imaging Technique for Crossed-Electrode Arrays. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1657-1668.	1.7	12
38	Scattering cross-sectional modulation in photoacoustic remote sensing microscopy. Optics Letters, 2018, 43, 146.	1.7	18
39	3D photoacoustic imaging using Hadamard-bias encoding with a crossed electrode relaxor array. Optics Letters, 2018, 43, 3425.	1.7	17
40	Deep non-contact photoacoustic initial pressure imaging. Optica, 2018, 5, 814.	4.8	54
41	Tissue perfusion rate estimation with compression-based photoacoustic-ultrasound imaging. Journal of Biomedical Optics, 2018, 23, 1.	1.4	4
42	In vivo photoacoustic difference-spectra imaging of bacteria using photoswitchable chromoproteins. Journal of Biomedical Optics, 2018, 23, 1.	1.4	23
43	Toward wide-field high-speed photoacoustic remote sensing microscopy. , 2018, , .		3
44	Estimation of cerebral metabolic rate of oxygen consumption using combined multiwavelength photoacoustic microscopy and Doppler microultrasound. Journal of Biomedical Optics, 2018, 23, 1.	1.4	4
45	Bias-sensitive crossed-electrode relaxor 2D arrays for 3D photoacoustic imaging. , 2018, , .		3
46	Non-interferometric photoacoustic remote sensing microscopy. Light: Science and Applications, 2017, 6, e16278-e16278.	7.7	150
47	Multifrequency Interlaced CMUTs for Photoacoustic Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 391-401.	1.7	33
48	Enhanced Detection of Cancer Biomarkers in Blood-Borne Extracellular Vesicles Using Nanodroplets and Focused Ultrasound. Cancer Research, 2017, 77, 3-13.	0.4	51
49	Fabrication of Linear Array and Top-Orthogonal-to-Bottom Electrode CMUT Arrays With a Sacrificial Release Process. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 93-107.	1.7	27
50	Optimization strategies and neighbor pair complementary codes for massively parallel focal zone ultrafast ultrasound. , 2017, , .		0
51	Optimization strategies and neighbour-pair complementary codes for massively parallel focal-zone ultrafast ultrasound. , 2017, , .		0
52	Temporal evolution of low-coherence reflectometry signals in photoacoustic remote sensing microscopy. Applied Optics, 2017, 56, 5172.	2.1	28
53	A nonlinear large signal equivalent circuit model for a square CMUT cell. , 2017, , .		0
54	A nonlinear large signal equivalent circuit model for a square CMUT cell. , 2017, , .		0

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55	Multi-frequency CMUT imaging arrays for multi-scale imaging and imaging-therapy applications. , 2017, , .		0
56	Notice of Removal: Perfusion-rate estimation using compression-based photoacoustic-ultrasound imaging. , 2017, , .		0
57	Fabrication and performance of a 128-element crossed-electrode relaxor array, for a novel 3D imaging approach. , 2017, , .		0
58	Fabrication and performance of a 128-element crossed-electrode relaxor array, for a novel 3D imaging approach. , 2017, , .		0
59	Photoacoustic imaging of lymphatic pumping. Journal of Biomedical Optics, 2017, 22, 1.	1.4	23
60	S-sequence enhanced synthetic aperture ultrasound scattering tomography. , 2016, , .		0
61	Engineering Dark Chromoprotein Reporters for Photoacoustic Microscopy and FRET Imaging. Scientific Reports, 2016, 6, 22129.	1.6	30
62	Modelling of large-scale multi-frequency CMUT arrays with circular membranes. , 2016, , .		6
63	Self and Mutual Radiation Impedances for Modeling of Multi-Frequency CMUT Arrays. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1441-1454.	1.7	19
64	Acoustic diagnosis of pulmonary hypertension: automated speech- recognition-inspired classification algorithm outperforms physicians. Scientific Reports, 2016, 6, 33182.	1.6	16
65	Photoacoustic imaging of angiogenesis in a subcutaneous islet transplant site in a murine model. Journal of Biomedical Optics, 2016, 21, 066003.	1.4	5
66	Porphyrin Nanodroplets: Sub-µm Ultrasound and Photoacoustic Contrast Imaging Agents. Small, 2016, 12, 371-380.	5.2	82
67	Multimodality Raman and photoacoustic imaging of surface-enhanced-Raman-scattering-targeted tumor cells. Journal of Biomedical Optics, 2016, 21, 020503.	1.4	8
68	Detection of Heart Sounds in Children with and without Pulmonary Arterial Hypertension- Daubechies Wavelets Approach. PLoS ONE, 2015, 10, e0143146.	1.1	8
69	Practical S-Sequence aperture coding schemes for volumetric imaging with Top Orthogonal to Bottom Electrode (TOBE) arrays. , 2015, , .		0
70	Mutual radiation impedance for modeling of multi-frequency CMUT arrays. , 2015, , .		8
71	Electrical impedace matching of CMUT cells. , 2015, , .		1
72	Nonlinear lumped modelling of large-scale CMUT TOBE architectures. , 2015, , .		0

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73	Validating tyrosinase homologue <i>melA</i> as a photoacoustic reporter gene for imaging <i>Escherichia coli</i> . Journal of Biomedical Optics, 2015, 20, 106008.	1.4	13
74	Monitoring photodynamic therapy with photoacoustic microscopy. Journal of Biomedical Optics, 2015, 20, 106012.	1.4	15
75	Top orthogonal to bottom electrode (TOBE) 2-D CMUT arrays for 3-D photoacoustic imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1393-1395.	1.7	40
76	In-Vivo functional optical-resolution photoacoustic microscopy with stimulated Raman scattering fiber-laser source. Biomedical Optics Express, 2014, 5, 539.	1.5	67
77	Detection of circulating tumor cells using targeted surface-enhanced Raman scattering nanoparticles and magnetic enrichment. Journal of Biomedical Optics, 2014, 19, 056014.	1.4	47
78	Reflection-mode multiple-illumination photoacoustic sensing to estimate optical properties. Photoacoustics, 2014, 2, 33-38.	4.4	5
79	RNA Biomarker Release with Ultrasound and Phase-Change Nanodroplets. Ultrasound in Medicine and Biology, 2014, 40, 1847-1856.	0.7	16
80	Spectral analysis of the heart sounds in children with and without pulmonary artery hypertension. International Journal of Cardiology, 2014, 173, 92-99.	0.8	21
81	Top-orthogonal-to-bottom-electrode (TOBE) CMUT arrays for 3-D ultrasound imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 266-276.	1.7	68
82	Comparing Efficiency of micro-RNA and mRNA Biomarker Liberation with Microbubble-Enhanced Ultrasound Exposure. Ultrasound in Medicine and Biology, 2014, 40, 2207-2216.	0.7	7
83	S-sequence spatially-encoded synthetic aperture ultrasound imaging [Correspondence]. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 886-890.	1.7	10
84	Multi-wavelength photoacoustic imaging of inducible tyrosinase reporter gene expression in xenograft tumors. Scientific Reports, 2014, 4, 5329.	1.6	62
85	Synthetic aperture 3D ultrasound imaging schemes with S-sequence bias-encoded top-orthogonal-to-bottom-electrode 2D CMUT arrays. , 2013, , .		7
86	Glancing angle deposited nanostructured film Fabry-Perot etalons for optical detection of ultrasound. Optics Express, 2013, 21, 6391.	1.7	49
87	Phase-function corrected diffusion model for diffuse reflectance of a pencil beam obliquely incident on a semi-infinite turbid medium. Journal of Biomedical Optics, 2013, 18, 067005.	1.4	10
88	S-sequence encoded synthetic aperture B-scan ultrasound imaging. , 2013, , .		14
89	S-sequence bias-encoded photoacoustic imaging with top Orthogonal to Bottom Electrode (TOBE) CMUT arrays. , 2013, , .		2
90	Investigation of photoacoustic signal strength as a function of scan-speed and laser-repetition-rate. , 2013, , .		0

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91	Multi-frequency CMUT arrays for imaging-therapy applications. , 2013, , .		18
92	Blood oxygen flux estimation with a combined photoacoustic and high-frequency ultrasound microscopy system: a phantom study. Journal of Biomedical Optics, 2012, 17, 036012.	1.4	37
93	Realtime flash-difference ultrasound imaging of phase-change perfluorocarbon nanodroplet activation. , 2012, , .		1
94	Double-SOI Wafer-Bonded CMUTs With Improved Electrical Safety and Minimal Roughness of Dielectric and Electrode Surfaces. Journal of Microelectromechanical Systems, 2012, 21, 668-680.	1.7	33
95	Empirical model for dielectric charging in double-SOI-wafer-bonded CMUTs: Theory and experiment. , 2011, , .		1
96	CMUTs with improved electrical safety & minimal dielectric surface charging. , 2010, , .		9
97	Quantitative photoacoustic tomography with multiple optical sources. Applied Optics, 2010, 49, 3566.	2.1	97
98	Detecting rare cancer cells. Nature Nanotechnology, 2009, 4, 798-799.	15.6	25
99	A new photoacoustic method for measuring optical transport Green's functions in turbid media. , 2008, , .		1