

Sarah E Bohndiek

List of Publications by Year in descending order

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134
papers

5,536
citations

109321

35
h-index

85541

71
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141
all docs

141
docs citations

141
times ranked

7892
citing authors

#	ARTICLE	IF	CITATIONS
1	Opti-MSFA: a toolbox for generalized design and optimization of multispectral filter arrays. <i>Optics Express</i> , 2022, 30, 7591.	3.4	11
2	The Potential of Photoacoustic Imaging in Radiation Oncology. <i>Frontiers in Oncology</i> , 2022, 12, 803777.	2.8	11
3	Spectrally tailored 'hyperpixel' filter arrays for imaging of chemical compositions. , 2022, , .		2
4	Optimizing achromaticity in metalenses, and development of a layered thin-film metalens. , 2022, , .		0
5	Evaluation of Label-Free Confocal Raman Microspectroscopy for Monitoring Oxidative Stress In Vitro in Live Human Cancer Cells. <i>Antioxidants</i> , 2022, 11, 573.	5.1	5
6	SIMPA: an open-source toolkit for simulation and image processing for photonics and acoustics. <i>Journal of Biomedical Optics</i> , 2022, 27, .	2.6	9
7	The IPASC data format: A consensus data format for photoacoustic imaging. <i>Photoacoustics</i> , 2022, 26, 100339.	7.8	6
8	Photoacoustic Tomography Detects Response and Resistance to Bevacizumab in Breast Cancer Mouse Models. <i>Cancer Research</i> , 2022, 82, 1658-1668.	0.9	11
9	Quantification of vascular networks in photoacoustic mesoscopy. <i>Photoacoustics</i> , 2022, 26, 100357.	7.8	13
10	Criteria for the design of tissue-mimicking phantoms for the standardization of biophotonic instrumentation. <i>Nature Biomedical Engineering</i> , 2022, 6, 541-558.	22.5	20
11	DNA-Based Nanocarriers to Enhance the Photoacoustic Contrast of Tumors In Vivo. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001739.	7.6	5
12	A Copolymer-in-Oil Tissue-Mimicking Material With Tuneable Acoustic and Optical Characteristics for Photoacoustic Imaging Phantoms. <i>IEEE Transactions on Medical Imaging</i> , 2021, 40, 3593-3603.	8.9	10
13	Multi-modal imaging of high-risk ductal carcinoma in situ of the breast using C2Am: a targeted cell death imaging agent. <i>Breast Cancer Research</i> , 2021, 23, 25.	5.0	3
14	Learned spectral decoloring enables photoacoustic oximetry. <i>Scientific Reports</i> , 2021, 11, 6565.	3.3	34
15	Spectral Endoscopy Enhances Contrast for Neoplasia in Surveillance of Barrett's Esophagus. <i>Cancer Research</i> , 2021, 81, 3415-3425.	0.9	14
16	Technical validation studies of a dual-wavelength LED-based photoacoustic and ultrasound imaging system. <i>Photoacoustics</i> , 2021, 22, 100267.	7.8	9
17	First experience in clinical application of hyperspectral endoscopy for evaluation of colonic polyps. <i>Journal of Biophotonics</i> , 2021, 14, e202100078.	2.3	10
18	First-in-human pilot study of snapshot multispectral endoscopy for early detection of Barrett's-related neoplasia. <i>Journal of Biomedical Optics</i> , 2021, 26, .	2.6	7

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19	Twelve tips for engaging with biologists, as told by a physicist. <i>Nature</i> , 2020, 577, 283-284.	27.8	1
20	A Comparative Photophysical Study of Structural Modifications of Thioflavin T-Inspired Fluorophores. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8406-8416.	4.6	20
21	IPASC: a Community-Driven Consensus-Based Initiative Towards Standardisation in Photoacoustic Imaging. , 2020, , .		1
22	A background correction method to compensate illumination variation in hyperspectral imaging. <i>PLoS ONE</i> , 2020, 15, e0229502.	2.5	6
23	Deep learning applied to hyperspectral endoscopy for online spectral classification. <i>Scientific Reports</i> , 2020, 10, 3947.	3.3	37
24	ThX â€“ a next-generation probe for the early detection of amyloid aggregates. <i>Chemical Science</i> , 2020, 11, 4578-4583.	7.4	43
25	Co-registration of optoacoustic tomography and magnetic resonance imaging data from murine tumour models. <i>Photoacoustics</i> , 2020, 18, 100147.	7.8	21
26	Photoacoustics resolves species-specific differences in hemoglobin concentration and oxygenation. <i>Journal of Biomedical Optics</i> , 2020, 25, .	2.6	14
27	Robustness to misalignment of low-cost, compact quantitative phase imaging architectures. <i>OSA Continuum</i> , 2020, 3, 2660.	1.8	1
28	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
29	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
30	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
31	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
32	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
33	A background correction method to compensate illumination variation in hyperspectral imaging. , 2020, 15, e0229502.		0
34	Optoacoustic Imaging Detects Hormone-Related Physiological Changes of Breast Parenchyma. <i>Ultraschall in Der Medizin</i> , 2019, 40, 757-763.	1.5	8
35	Photoacoustic imaging as a tool to probe the tumour microenvironment. <i>DMM Disease Models and Mechanisms</i> , 2019, 12, .	2.4	57
36	Grayscale-to-Color: Scalable Fabrication of Custom Multispectral Filter Arrays. <i>ACS Photonics</i> , 2019, 6, 3132-3141.	6.6	65

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37	Coherent Imaging Through Multicore Fibres With Applications in Endoscopy. <i>Journal of Lightwave Technology</i> , 2019, 37, 5733-5745.	4.6	10
38	An Activatable Cancer-Targeted Hydrogen Peroxide Probe for Photoacoustic and Fluorescence Imaging. <i>Cancer Research</i> , 2019, 79, 5407-5417.	0.9	31
39	A clinically translatable hyperspectral endoscopy (HySE) system for imaging the gastrointestinal tract. <i>Nature Communications</i> , 2019, 10, 1902.	12.8	75
40	Addressing photoacoustics standards. <i>Nature Photonics</i> , 2019, 13, 298-298.	31.4	20
41	A roadmap for the clinical implementation of optical-imaging biomarkers. <i>Nature Biomedical Engineering</i> , 2019, 3, 339-353.	22.5	52
42	Characterizing Optical Fiber Transmission Matrices Using Metasurface Reflector Stacks for Lensless Imaging without Distal Access. <i>Physical Review X</i> , 2019, 9, .	8.9	33
43	Reconstruction of Optical Vector-Fields With Applications in Endoscopic Imaging. <i>IEEE Transactions on Medical Imaging</i> , 2019, 38, 955-967.	8.9	12
44	Hyperspectral imaging in biomedical applications. <i>Journal of Optics (United Kingdom)</i> , 2019, 21, 010202.	2.2	9
45	Development of a blood oxygenation phantom for photoacoustic tomography combined with online pO ₂ detection and flow spectrometry. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	22
46	Quantitative phase and polarization imaging through an optical fiber applied to detection of early esophageal tumorigenesis. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	16
47	Full-field quantitative phase and polarisation-resolved imaging through an optical fibre bundle. <i>Optics Express</i> , 2019, 27, 23929.	3.4	14
48	Bifunctional fluorescent probes for detection of amyloid aggregates and reactive oxygen species. <i>Royal Society Open Science</i> , 2018, 5, 171399.	2.4	11
49	Smartâ€œDustâ€œNanorice for Enhancement of Endogenous Raman Signal, Contrast in Photoacoustic Imaging, and T2â€œShortening in Magnetic Resonance Imaging. <i>Small</i> , 2018, 14, e1703683.	10.0	8
50	Emerging optical methods for endoscopic surveillance of Barrett's oesophagus. <i>The Lancet Gastroenterology and Hepatology</i> , 2018, 3, 349-362.	8.1	15
51	Detection of early neoplasia in Barrett's esophagus using lectin-based near-infrared imaging: an ex vivo study on human tissue. <i>Endoscopy</i> , 2018, 50, 618-625.	1.8	21
52	Optoacoustics delineates murine breast cancer models displaying angiogenesis and vascular mimicry. <i>British Journal of Cancer</i> , 2018, 118, 1098-1106.	6.4	44
53	Quantitative evaluation of comb-structure correction methods for multispectral fibrescopic imaging. <i>Scientific Reports</i> , 2018, 8, 17801.	3.3	7
54	An active DNA-based nanoprobe for photoacoustic pH imaging. <i>Chemical Communications</i> , 2018, 54, 10176-10178.	4.1	6

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55	Oxygen-Enhanced and Dynamic Contrast-Enhanced Optoacoustic Tomography Provide Surrogate Biomarkers of Tumor Vascular Function, Hypoxia, and Necrosis. <i>Cancer Research</i> , 2018, 78, 5980-5991.	0.9	44
56	Raman micro-spectroscopy for accurate identification of primary human bronchial epithelial cells. <i>Scientific Reports</i> , 2018, 8, 12604.	3.3	51
57	Graphitic and oxidised high pressure high temperature (HPHT) nanodiamonds induce differential biological responses in breast cancer cell lines. <i>Nanoscale</i> , 2018, 10, 12169-12179.	5.6	17
58	Bimodal reflectance and fluorescence multispectral endoscopy based on spectrally resolving detector arrays. <i>Journal of Biomedical Optics</i> , 2018, 24, 1.	2.6	17
59	Application of confocal Raman micro-spectroscopy for label-free monitoring of oxidative stress in living bronchial cells. , 2018, , .		1
60	Wide-field phase imaging for the endoscopic detection of dysplasia and early-stage esophageal cancer. , 2018, , .		0
61	Evaluation of Precision in Optoacoustic Tomography for Preclinical Imaging in Living Subjects. <i>Journal of Nuclear Medicine</i> , 2017, 58, 807-814.	5.0	64
62	Spectral band optimization for multispectral fluorescence imaging. , 2017, , .		1
63	Quantitative imaging of tumor vasculature using multispectral optoacoustic tomography (MSOT). , 2017, , .		0
64	Evaluation of illumination systems for wide-field hyperspectral imaging in biomedical applications. , 2017, , .		1
65	Nanodiamond preparation and surface characterization for biological applications. <i>Proceedings of SPIE</i> , 2017, , .	0.8	2
66	Fluorescence hyperspectral imaging (fHSI) using a spectrally resolved detector array. <i>Journal of Biophotonics</i> , 2017, 10, 840-853.	2.3	29
67	Label-free monitoring of tissue biochemistry following traumatic brain injury using Raman spectroscopy. <i>Analyst, The</i> , 2017, 142, 132-139.	3.5	26
68	Assessing Oxidative Stress in Tumors by Measuring the Rate of Hyperpolarized [1-13C]Dehydroascorbic Acid Reduction Using 13C Magnetic Resonance Spectroscopy. <i>Journal of Biological Chemistry</i> , 2017, 292, 1737-1748.	3.4	32
69	Distance dependent photoacoustics revealed through DNA nanostructures. <i>Nanoscale</i> , 2017, 9, 16193-16199.	5.6	15
70	Optoacoustic Detection of Early Therapy-Induced Tumor Cell Death Using a Targeted Imaging Agent. <i>Clinical Cancer Research</i> , 2017, 23, 6893-6903.	7.0	25
71	Photoacoustic imaging using genetically encoded reporters: a review. <i>Journal of Biomedical Optics</i> , 2017, 22, 070901.	2.6	72
72	Evaluation of illumination system uniformity for wide-field biomedical hyperspectral imaging. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 045301.	2.2	19

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73	Towards Quantitative Evaluation of Tissue Absorption Coefficients Using Light Fluence Correction in Optoacoustic Tomography. IEEE Transactions on Medical Imaging, 2017, 36, 322-331.	8.9	73
74	Imaging biomarker roadmap for cancer studies. Nature Reviews Clinical Oncology, 2017, 14, 169-186.	27.6	792
75	Tolerancing the alignment of large-core optical fibers, fiber bundles and light guides using a Fourier approach. Applied Optics, 2017, 56, 3303.	1.8	0
76	Oxygen Enhanced Optoacoustic Tomography (OE-OT) Reveals Vascular Dynamics in Murine Models of Prostate Cancer. Theranostics, 2017, 7, 2900-2913.	10.0	83
77	Current and Emerging Technologies for Probing Molecular Signatures of Traumatic Brain Injury. Frontiers in Neurology, 2017, 8, 450.	2.4	18
78	A multispectral endoscope based on spectrally resolved detector arrays. Proceedings of SPIE, 2017, , .	0.8	3
79	Towards a simulation framework to maximize the resolution of biomedical hyperspectral imaging. Proceedings of SPIE, 2017, , .	0.8	4
80	Abstract 2866: Volumetric optoacoustic imaging of tumor cell death using a targeted imaging agent. , 2017, , .		0
81	Measurement of changes in blood oxygenation using Multispectral Optoacoustic Tomography (MSOT) allows assessment of tumor development. , 2016, , .		1
82	Hyperspectral fluorescence imaging with multi wavelength LED excitation. Proceedings of SPIE, 2016, , .	0.8	4
83	Design and validation of a near-infrared fluorescence endoscope for detection of early esophageal malignancy. Journal of Biomedical Optics, 2016, 21, 084001.	2.6	23
84	Contrast agents for molecular photoacoustic imaging. Nature Methods, 2016, 13, 639-650.	19.0	979
85	In vivo light fluence correction for determination of tissue absorption coefficient using Multispectral Optoacoustic Tomography. , 2016, , .		0
86	Design and validation of a near-infrared fluorescence endoscope for detection of early esophageal malignancy using a targeted imaging probe. Proceedings of SPIE, 2016, , .	0.8	0
87	Abstract 4198: Optoacoustic imaging of blood vasculature and study of angiogenesis in orthotopic breast cancer models. Cancer Research, 2016, 76, 4198-4198.	0.9	1
88	Light fluence correction for quantitative determination of tissue absorption coefficient using multi-spectral optoacoustic tomography. , 2015, , .		0
89	Single-Pixel Phase-Corrected Fiber Bundle Endomicroscopy With Lensless Focussing Capability. Journal of Lightwave Technology, 2015, 33, 3419-3425.	4.6	5
90	Evaluation of multispectral optoacoustic tomography (MSOT) performance in phantoms and in vivo. , 2015, , .		1

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91	Experimental evaluation of a hyperspectral imager for near-infrared fluorescent contrast agent studies. Proceedings of SPIE, 2015, , .	0.8	1
92	Photoacoustic Tomography Detects Early Vessel Regression and Normalization During Ovarian Tumor Response to the Antiangiogenic Therapy Trebananib. Journal of Nuclear Medicine, 2015, 56, 1942-1947.	5.0	72
93	Light fluence correction for quantitative determination of tissue absorption coefficient using multi-spectral optoacoustic tomography. , 2015, , .		2
94	Quantitation of a spin polarization-induced nuclear Overhauser effect (SPINOE) between a hyperpolarized ^{13}C -labeled cell metabolite and water protons. Contrast Media and Molecular Imaging, 2014, 9, 182-186.	0.8	13
95	Cellulose nanoparticles: photoacoustic contrast agents that biodegrade to simple sugars. Proceedings of SPIE, 2014, , .	0.8	1
96	Analysis of image heterogeneity using 2D Minkowski functionals detects tumor responses to treatment. Magnetic Resonance in Medicine, 2014, 71, 402-410.	3.0	46
97	Gold nanorods combine photoacoustic and Raman imaging for detection and treatment of ovarian cancer. , 2014, , .		1
98	Cellulose nanoparticles are a biodegradable photoacoustic contrast agent for use in living mice. Photoacoustics, 2014, 2, 119-127.	7.8	48
99	Abstract 2047: Molecular photoacoustic imaging and serum diagnostics rapidly detect response to angiotensin 1 and 2 blockade in ovarian cancer. , 2014, , .		0
100	Molecular Photoacoustic Imaging of Follicular Thyroid Carcinoma. Clinical Cancer Research, 2013, 19, 1494-1502.	7.0	107
101	Stable phantoms for characterization of photoacoustic tomography (PAT) systems. Proceedings of SPIE, 2013, , .	0.8	1
102	A small animal Raman instrument for rapid, wide-area, spectroscopic imaging. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12408-12413.	7.1	185
103	The good mentorship guide. Physics World, 2013, 26, 44-45.	0.0	0
104	Development and Application of Stable Phantoms for the Evaluation of Photoacoustic Imaging Instruments. PLoS ONE, 2013, 8, e75533.	2.5	94
105	Magnetic resonance imaging with hyperpolarized $[1,4-^{13}\text{C}]_2$ fumarate allows detection of early renal acute tubular necrosis. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13374-13379.	7.1	99
106	Hyperpolarized ^{13}C Spectroscopy Detects Early Changes in Tumor Vasculature and Metabolism after VEGF Neutralization. Cancer Research, 2012, 72, 854-864.	0.9	73
107	Improving Image Quality by Accounting for Changes in Water Temperature during a Photoacoustic Tomography Scan. PLoS ONE, 2012, 7, e45337.	2.5	25
108	Hyperpolarized $[1-^{13}\text{C}]$ -Ascorbic and Dehydroascorbic Acid: Vitamin C as a Probe for Imaging Redox Status in Vivo. Journal of the American Chemical Society, 2011, 133, 11795-11801.	13.7	177

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109	Tumor imaging using hyperpolarized ¹³ C magnetic resonance spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2011, 66, 505-519.	3.0	229
110	Hyperpolarized ¹³ C MRI and PET: In Vivo Tumor Biochemistry. <i>Journal of Nuclear Medicine</i> , 2011, 52, 1333-1336.	5.0	52
111	Magnetization transfer measurements of exchange between hyperpolarized [1- ¹³ C]pyruvate and [1- ¹³ C]lactate in a murine lymphoma. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 872-880.	3.0	107
112	Optical characterisation of a CMOS active pixel sensor using periodic noise reduction techniques. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 620, 549-556.	1.6	13
113	Characterisation of regional variations in a stitched CMOS active pixel sensor. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 620, 540-548.	1.6	11
114	Detecting treatment response in a model of human breast adenocarcinoma using hyperpolarised [1- ¹³ C]pyruvate and [1,4- ¹³ C ₂]fumarate. <i>British Journal of Cancer</i> , 2010, 103, 1400-1406.	6.4	124
115	Detection of Tumor Response to a Vascular Disrupting Agent by Hyperpolarized ¹³ C Magnetic Resonance Spectroscopy. <i>Molecular Cancer Therapeutics</i> , 2010, 9, 3278-3288.	4.1	66
116	Imaging and ¹³ C methods for the molecular diagnosis of cancer. <i>Expert Review of Molecular Diagnostics</i> , 2010, 10, 417-434.	3.1	22
117	Signal and noise transfer properties of CMOS based active pixel flat panel imager coupled to structured CsI:Tl. <i>Medical Physics</i> , 2009, 36, 116-126.	3.0	21
118	An active pixel sensor x-ray diffraction (APXRD) system for breast cancer diagnosis. <i>Physics in Medicine and Biology</i> , 2009, 54, 3513-3527.	3.0	11
119	Production of hyperpolarized [1,4- ¹³ C ₂]malate from [1,4- ¹³ C ₂]fumarate is a marker of cell necrosis and treatment response in tumors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 19801-19806.	7.1	328
120	The Multidimensional Integrated Intelligent Imaging project (MI-3). <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 604, 196-198.	1.6	12
121	Characterization and Testing of LAS: A Prototype 'Large Area Sensor' With Performance Characteristics Suitable for Medical Imaging Applications. <i>IEEE Transactions on Nuclear Science</i> , 2009, 56, 2938-2946.	2.0	26
122	A CMOS Image Sensor With In-Pixel ADC, Timestamp, and Sparse Readout. <i>IEEE Sensors Journal</i> , 2009, 9, 20-28.	4.7	16
123	A non-free-space propagation x-ray phase contrast imaging method sensitive to phase effects in two directions simultaneously. <i>Applied Physics Letters</i> , 2009, 94, 044108.	3.3	41
124	Comparison of Methods for Estimating the Conversion Gain of CMOS Active Pixel Sensors. <i>IEEE Sensors Journal</i> , 2008, 8, 1734-1744.	4.7	46
125	A CMOS active pixel sensor system for laboratory-based x-ray diffraction studies of biological tissue. <i>Physics in Medicine and Biology</i> , 2008, 53, 655-672.	3.0	40
126	A 54mm x 54mm — 1.8Megapixel CMOS image sensor for medical imaging. , 2008, , .		6

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127	Development of a prototype sensor system for ultra-high-speed LDA-PIV. , 2008, , .		1
128	Correlation of energy dispersive diffraction signatures and microCT of small breast tissue samples with pathological analysis. Physics in Medicine and Biology, 2007, 52, 6151-6164.	3.0	41
129	Empirical electro-optical and x-ray performance evaluation of CMOS active pixels sensor for low dose, high resolution x-ray medical imaging. Medical Physics, 2007, 34, 4612-4625.	3.0	49
130	Characterization studies of two novel active pixel sensors. Optical Engineering, 2007, 46, 124003.	1.0	23
131	Optical and x-ray characterization of two novel CMOS image sensors. , 2007, , .		3
132	Characterisation of Vanilla™ A novel active pixel sensor for radiation detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 581, 287-290.	1.6	13
133	First evidence of phase-contrast imaging with laboratory sources and active pixel sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 581, 776-782.	1.6	19
134	Curriculum blues. Physics World, 2002, 15, 18-18.	0.0	0