

Bruce J Tromberg

List of Publications by Year in descending order

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100
papers

5,348
citations

117625

34
h-index

85541

71
g-index

100
all docs

100
docs citations

100
times ranked

5418
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitation and mapping of tissue optical properties using modulated imaging. <i>Journal of Biomedical Optics</i> , 2009, 14, 024012.	2.6	520
2	Modulated imaging: quantitative analysis and tomography of turbid media in the spatial-frequency domain. <i>Optics Letters</i> , 2005, 30, 1354.	3.3	387
3	Assessing the future of diffuse optical imaging technologies for breast cancer management. <i>Medical Physics</i> , 2008, 35, 2443-2451.	3.0	289
4	Broad bandwidth frequency domain instrument for quantitative tissue optical spectroscopy. <i>Review of Scientific Instruments</i> , 2000, 71, 2500-2513.	1.3	249
5	Noninvasive measurements of breast tissue optical properties using frequency domain photon migration. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 1997, 352, 661-668.	4.0	242
6	Imaging in breast cancer: Diffuse optics in breast cancer: detecting tumors in pre-menopausal women and monitoring neoadjuvant chemotherapy. <i>Breast Cancer Research</i> , 2005, 7, 279-85.	5.0	228
7	Review of short-wave infrared spectroscopy and imaging methods for biological tissue characterization. <i>Journal of Biomedical Optics</i> , 2015, 20, 030901.	2.6	225
8	Diffuse optical imaging using spatially and temporally modulated light. <i>Journal of Biomedical Optics</i> , 2012, 17, 0713111.	2.6	189
9	Special Section Guest Editorial: Translational Biophotonics. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	187
10	Rapid Scaling Up of Covid-19 Diagnostic Testing in the United States – The NIH RADx Initiative. <i>New England Journal of Medicine</i> , 2020, 383, 1071-1077.	27.0	182
11	PTEN Deficiency and AMPK Activation Promote Nutrient Scavenging and Anabolism in Prostate Cancer Cells. <i>Cancer Discovery</i> , 2018, 8, 866-883.	9.4	141
12	CDCP1 drives triple-negative breast cancer metastasis through reduction of lipid-droplet abundance and stimulation of fatty acid oxidation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E6556-E6565.	7.1	134
13	Identification of cholesterol crystals in plaques of atherosclerotic mice using hyperspectral CARS imaging. <i>Journal of Lipid Research</i> , 2011, 52, 2177-2186.	4.2	108
14	Predicting Responses to Neoadjuvant Chemotherapy in Breast Cancer: ACRIN 6691 Trial of Diffuse Optical Spectroscopic Imaging. <i>Cancer Research</i> , 2016, 76, 5933-5944.	0.9	105
15	In Vivo Multiphoton Microscopy of Basal Cell Carcinoma. <i>JAMA Dermatology</i> , 2015, 151, 1068.	4.1	102
16	Distinguishing between Benign and Malignant Melanocytic Nevi by In Vivo Multiphoton Microscopy. <i>Cancer Research</i> , 2014, 74, 2688-2697.	0.9	95
17	Wavelength optimization for rapid chromophore mapping using spatial frequency domain imaging. <i>Journal of Biomedical Optics</i> , 2010, 15, 1.	2.6	94
18	Imaging cortical absorption, scattering, and hemodynamic response during ischemic stroke using spatially modulated near-infrared illumination. <i>Journal of Biomedical Optics</i> , 2009, 14, 024033.	2.6	84

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19	Imaging mitochondrial dynamics in human skin reveals depth-dependent hypoxia and malignant potential for diagnosis. <i>Science Translational Medicine</i> , 2016, 8, 367ra169.	12.4	82
20	Correlating two-photon excited fluorescence imaging of breast cancer cellular redox state with seahorse flux analysis of normalized cellular oxygen consumption. <i>Journal of Biomedical Optics</i> , 2016, 21, 060503.	2.6	70
21	Two-Photon Laser Scanning Microscopy of Epithelial Cell-Modulated Collagen Density in Engineered Human Lung Tissue. <i>Tissue Engineering</i> , 2001, 7, 191-202.	4.6	64
22	Multispectral imaging of tissue absorption and scattering using spatial frequency domain imaging and a computed-tomography imaging spectrometer. <i>Journal of Biomedical Optics</i> , 2011, 16, 011015.	2.6	64
23	Development of a novel indwelling balloon applicator for optimizing light delivery in photodynamic therapy. <i>Lasers in Surgery and Medicine</i> , 2001, 29, 406-412.	2.1	60
24	Laser speckle imaging in the spatial frequency domain. <i>Biomedical Optics Express</i> , 2011, 2, 1553.	2.9	54
25	Noncontact imaging of absorption and scattering in layered tissue using spatially modulated structured light. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	53
26	Spatial frequency domain tomography of protoporphyrin IX fluorescence in preclinical glioma models. <i>Journal of Biomedical Optics</i> , 2012, 17, 056008.	2.6	53
27	Advanced demodulation technique for the extraction of tissue optical properties and structural orientation contrast in the spatial frequency domain. <i>Journal of Biomedical Optics</i> , 2014, 19, 056013.	2.6	53
28	<i>In vivo</i> measurements of cutaneous melanin across spatial scales: using multiphoton microscopy and spatial frequency domain spectroscopy. <i>Journal of Biomedical Optics</i> , 2015, 20, 066005.	2.6	53
29	<i>In vivo</i> multiphoton microscopy of picosecond laser-induced optical breakdown in human skin. <i>Lasers in Surgery and Medicine</i> , 2017, 49, 555-562.	2.1	52
30	Diffuse optical spectroscopic imaging reveals distinct early breast tumor hemodynamic responses to metronomic and maximum tolerated dose regimens. <i>Breast Cancer Research</i> , 2020, 22, 29.	5.0	52
31	Cell and brain tissue imaging of the flavonoid fisetin using label-free two-photon microscopy. <i>Neurochemistry International</i> , 2015, 89, 243-248.	3.8	48
32	Performance assessment of diffuse optical spectroscopic imaging instruments in a 2-year multicenter breast cancer trial. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	41
33	Mapping breast cancer blood flow index, composition, and metabolism in a human subject using combined diffuse optical spectroscopic imaging and diffuse correlation spectroscopy. <i>Journal of Biomedical Optics</i> , 2017, 22, 045003.	2.6	40
34	Compressed single pixel imaging in the spatial frequency domain. <i>Journal of Biomedical Optics</i> , 2017, 22, 030501.	2.6	39
35	Quantitative real-time optical imaging of the tissue metabolic rate of oxygen consumption. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	2.6	36
36	Highly Selective Targeting of Ovarian Cancer with the Photosensitizer PEG-THPC in a Rat Model. <i>Photochemistry and Photobiology</i> , 1999, 70, 624-629.	2.5	35

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37	Quantitative short-wave infrared multispectral imaging of <i>in vivo</i> tissue optical properties. <i>Journal of Biomedical Optics</i> , 2014, 19, 086011.	2.6	33
38	Rapid mesoscale multiphoton microscopy of human skin. <i>Biomedical Optics Express</i> , 2016, 7, 4375.	2.9	32
39	Tissue oxygen saturation predicts response to breast cancer neoadjuvant chemotherapy within 10 days of treatment. <i>Journal of Biomedical Optics</i> , 2018, 24, 1.	2.6	32
40	Optical imaging in an Alzheimer's mouse model reveals amyloid- β -dependent vascular impairment. <i>Neurophotonics</i> , 2014, 1, 011005.	3.3	31
41	In vivo multiphoton microscopy of melasma. <i>Pigment Cell and Melanoma Research</i> , 2019, 32, 403-411.	3.3	31
42	ATR Mutations Promote the Growth of Melanoma Tumors by Modulating the Immune Microenvironment. <i>Cell Reports</i> , 2017, 18, 2331-2342.	6.4	30
43	Cerebral blood flow is decoupled from blood pressure and linked to EEG bursting after resuscitation from cardiac arrest. <i>Biomedical Optics Express</i> , 2016, 7, 4660.	2.9	29
44	Wearable speckle plethysmography (SPG) for characterizing microvascular flow and resistance. <i>Biomedical Optics Express</i> , 2018, 9, 3937.	2.9	29
45	Multifrequency synthesis and extraction using square wave projection patterns for quantitative tissue imaging. <i>Journal of Biomedical Optics</i> , 2015, 20, 116005.	2.6	28
46	Feature characterization of scarring and non-scarring types of alopecia by multiphoton microscopy. <i>Lasers in Surgery and Medicine</i> , 2019, 51, 95-103.	2.1	28
47	Real-time simultaneous single snapshot of optical properties and blood flow using coherent spatial frequency domain imaging (cSFDI). <i>Biomedical Optics Express</i> , 2016, 7, 870.	2.9	27
48	High-speed spatial frequency domain imaging of rat cortex detects dynamic optical and physiological properties following cardiac arrest and resuscitation. <i>Neurophotonics</i> , 2017, 4, 1.	3.3	27
49	Quantitative determination of dynamical properties using coherent spatial frequency domain imaging. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2011, 28, 2108.	1.5	24
50	Visualization of Breast Cancer Metabolism Using Multimodal Nonlinear Optical Microscopy of Cellular Lipids and Redox State. <i>Cancer Research</i> , 2018, 78, 2503-2512.	0.9	24
51	Two-Photon Excitation Laser Scanning Microscopy of Human, Porcine, and Rabbit Nasal Septal Cartilage. <i>Tissue Engineering</i> , 2001, 7, 599-606.	4.6	23
52	AUTOFLUORESCENCE SPECTROSCOPY OF OPTICALLY TRAPPED CELLS. <i>Photochemistry and Photobiology</i> , 1995, 62, 830-835.	2.5	23
53	Quantitative, depth-resolved determination of particle motion using multi-exposure, spatial frequency domain laser speckle imaging. <i>Biomedical Optics Express</i> , 2013, 4, 2880.	2.9	21
54	Sub-400nm, 1060nm Yb-fiber laser enhances penetration depth in nonlinear optical microscopy of human skin. <i>Journal of Biomedical Optics</i> , 2015, 20, 120501.	2.6	21

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55	Noninvasive depth estimation using tissue optical properties and a dual-wavelength fluorescent molecular probe in vivo. <i>Biomedical Optics Express</i> , 2017, 8, 3095.	2.9	21
56	In vivo optical signatures of neuronal death in a mouse model of Alzheimer's disease. <i>Lasers in Surgery and Medicine</i> , 2014, 46, 27-33.	2.1	20
57	The RhoJ-BAD signaling network: An Achilles™ heel for BRAF mutant melanomas. <i>PLoS Genetics</i> , 2017, 13, e1006913.	3.5	20
58	Feasibility of direct digital sampling for diffuse optical frequency domain spectroscopy in tissue. <i>Measurement Science and Technology</i> , 2013, 24, 045501.	2.6	19
59	Hyperspectral imaging in the spatial frequency domain with a supercontinuum source. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	18
60	An indwelling brachytherapy balloon catheter: potential use as an intracranial light applicator for photodynamic therapy. <i>Journal of Neuro-Oncology</i> , 1999, 44, 15-21.	2.9	17
61	Imaging Breast Cancer Chemotherapy Response with Light. <i>Clinical Cancer Research</i> , 2010, 16, 2486-2488.	7.0	17
62	Characterisation of impaired wound healing in a preclinical model of induced diabetes using wide-field imaging and conventional immunohistochemistry assays. <i>International Wound Journal</i> , 2019, 16, 144-152.	2.9	16
63	Giant cell formation in cells exposed to 740 nm and 760 nm optical traps. , 1997, 21, 159-165.		14
64	Hyperspectral optical tomography of intrinsic signals in the rat cortex. <i>Neurophotonics</i> , 2015, 2, 045003.	3.3	14
65	Remote Digital Monitoring for Medical Product Development. <i>Clinical and Translational Science</i> , 2021, 14, 94-101.	3.1	14
66	Real-time, wide-field, and quantitative oxygenation imaging using spatiotemporal modulation of light. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	14
67	Noninvasive optical imaging of resistance training adaptations in human muscle. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	12
68	Noninvasive optical biopsy by multiphoton microscopy identifies the live morphology of common melanocytic nevi. <i>Pigment Cell and Melanoma Research</i> , 2020, 33, 869-877.	3.3	11
69	Biomedical optics centers: forty years of multidisciplinary clinical translation for improving human health. <i>Journal of Biomedical Optics</i> , 2016, 21, 124001.	2.6	10
70	Lipid remodeling in response to methionine stress in MDA-MBA-468 triple-negative breast cancer cells. <i>Journal of Lipid Research</i> , 2021, 62, 100056.	4.2	10
71	Animal model for thoracoscopic laser ablation of emphysematous pulmonary bullae. , 1996, 18, 191-196.		8
72	Differential diagnosis of breast masses in South Korean premenopausal women using diffuse optical spectroscopic imaging. <i>Journal of Biomedical Optics</i> , 2016, 21, 074001.	2.6	8

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73	Dissociation of Cerebral Blood Flow and Femoral Artery Blood Pressure Pulsatility After Cardiac Arrest and Resuscitation in a Rodent Model: Implications for Neurological Recovery. <i>Journal of the American Heart Association</i> , 2020, 9, e012691.	3.7	8
74	Diffuse optical spectroscopic imaging for the investigation of human lactation physiology: a case study on mammary involution. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	7
75	Sample size and power determination when limited preliminary information is available. <i>BMC Medical Research Methodology</i> , 2017, 17, 75.	3.1	6
76	Non-invasive Dual-Channel Broadband Diffuse Optical Spectroscopy of Massive Hemorrhage and Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) in Swine. <i>Military Medicine</i> , 2018, 183, 150-156.	0.8	6
77	Vertical-cavity surface-emitting laser sources for gigahertz-bandwidth, multiwavelength frequency-domain photon migration. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	6
78	HBS: a Handheld Breast Cancer detector based on frequency domain photon migration with full heterodyne. , 2006, , .		5
79	Differential pathlength factor informs evoked stimulus response in a mouse model of Alzheimer's disease. <i>Neurophotonics</i> , 2015, 2, 045001.	3.3	5
80	Kinetic Analysis of Lipid Metabolism in Breast Cancer Cells via Nonlinear Optical Microscopy. <i>Biophysical Journal</i> , 2020, 119, 258-264.	0.5	5
81	Breast cancer differential diagnosis using diffuse optical spectroscopic imaging and regression with z-score normalized data. <i>Journal of Biomedical Optics</i> , 2021, 26, .	2.6	5
82	High-speed quantitative optical imaging of absolute metabolism in the rat cortex. <i>Neurophotonics</i> , 2021, 8, 025001.	3.3	5
83	Comparison of continuous versus pulsed CO ₂ and Nd:YAG laser-induced pulmonary parenchymal lung injury in a rabbit model. , 1996, 19, 416-423.		3
84	Fluorescence resonance energy transfer: FRET studies of ligand binding to cell surface receptors. <i>Journal of Fluorescence</i> , 1998, 8, 13-20.	2.5	3
85	Photodynamic Therapy of Human Glioma Spheroids Using 5-Aminolevulinic Acid. <i>Photochemistry and Photobiology</i> , 2007, 72, 128-134.	2.5	3
86	Monitoring Tumor Response During Photodynamic Therapy Using Near-infrared Photon-migration Spectroscopy. <i>Photochemistry and Photobiology</i> , 2001, 73, 669-677.	2.5	3
87	Multi-modal diffuse optical spectroscopy for high-speed monitoring and wide-area mapping of tissue optical properties and hemodynamics. <i>Journal of Biomedical Optics</i> , 2021, 26, .	2.6	3
88	Highly Selective Targeting of Ovarian Cancer with the Photosensitizer PEG-m-THPC in a Rat Model. <i>Photochemistry and Photobiology</i> , 1999, 70, 624.	2.5	2
89	Spatial-Frequency-Domain Imaging for quality assessment of apples. , 2006, , .		1
90	Measuring and Mapping Optical Properties and Chromophore Changes During Brain Injury in the Near-Infrared Spectral Range Using Spatial Modulation of Light: Initial Results. , 2007, , .		1

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91	Special Section Guest Editorial: Translational biophotonics. Journal of Biomedical Optics, 2016, 21, 124002.	2.6	1
92	InÂvivo multiphoton microscopy of scabies. JAAD Case Reports, 2018, 4, 985-987.	0.8	1
93	Special Section Guest Editorial: Translational Biophotonics. Journal of Biomedical Optics, 2019, 24, 1.	2.6	1
94	hyperspectral characterization of tissue simulating phantoms using a supercontinuum laser in a spatial frequency domain imaging instrument. , 2018, , .		1
95	Characterizing tourniquet induced hemodynamics during total knee arthroplasty using diffuse optical spectroscopy. Journal of Orthopaedic Research, 2022, , .	2.3	1
96	Macrophage Targeted Photodynamic Regulation of Wound Healing. Microscopy and Microanalysis, 1998, 4, 1090-1091.	0.4	0
97	Effects of Combined Photodynamic Therapy and Ionizing Radiationon Human Glioma SpheroidsÂ¶. Photochemistry and Photobiology, 2007, 76, 411-416.	2.5	0
98	Diffuse Optical Spectroscopy and Imaging in Breast Cancer. , 2011, , 135-157.		0
99	Quantitative measurement of optical properties and Hb concentration in a rodent model of inflammatory Meibomian gland dysfunction using spatial frequency domain imaging. Biomedical Optics Express, 2022, 13, 1261.	2.9	0
100	Diffuse optical spectroscopic method for tissue and body composition assessment. Journal of Biomedical Optics, 2022, 27, .	2.6	0