Bruce J Tromberg

List of Publications by Year
in descending order

100	5,348	117453	85405
papers	citations	34 h-index	71 g-index

100	100	100	5418
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantitation and mapping of tissue optical properties using modulated imaging. Journal of Biomedical Optics, 2009, 14, 024012.	1.4	520
2	Modulated imaging: quantitative analysis and tomography of turbid media in the spatial-frequency domain. Optics Letters, 2005, 30, 1354.	1.7	387
3	Assessing the future of diffuse optical imaging technologies for breast cancer management. Medical Physics, 2008, 35, 2443-2451.	1.6	289
4	Broad bandwidth frequency domain instrument for quantitative tissue optical spectroscopy. Review of Scientific Instruments, 2000, 71, 2500-2513.	0.6	249
5	Nonâ€“invasive measurements of breast tissue optical properties using frequencyâ€“domain photon migration. Philosophical Transactions of the Royal Society B: Biological Sciences, 1997, 352, 661-668.	1.8	242
6	Imaging in breast cancer: Diffuse optics in breast cancer: detecting tumors in pre-menopausal women and monitoring neoadjuvant chemotherapy. Breast Cancer Research, 2005, 7, 279-85.	2.2	228
7	Review of short-wave infrared spectroscopy and imaging methods for biological tissue characterization. Journal of Biomedical Optics, 2015, 20, 030901.	1.4	225
8	Diffuse optical imaging using spatially and temporally modulated light. Journal of Biomedical Optics, 2012, 17, 0713111.	1.4	189
9	Special Section Guest Editorial: Translational Biophotonics. Journal of Biomedical Optics, 2017, 22, 1.	1.4	187
10	Rapid Scaling Up of Covid-19 Diagnostic Testing in the United States â€” The NIH RADx Initiative. New England Journal of Medicine, 2020, 383, 1071-1077.	13.9	182
11	PTEN Deficiency and AMPK Activation Promote Nutrient Scavenging and Anabolism in Prostate Cancer Cells. Cancer Discovery, 2018, 8, 866-883.	7.7	141
12	CDCP1 drives triple-negative breast cancer metastasis through reduction of lipid-droplet abundance and stimulation of fatty acid oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6556-E6565.	3.3	134
13	Identification of cholesterol crystals in plaques of atherosclerotic mice using hyperspectral CARS imaging. Journal of Lipid Research, 2011, 52, 2177-2186.	2.0	108
14	Predicting Responses to Neoadjuvant Chemotherapy in Breast Cancer: ACRIN 6691 Trial of Diffuse Optical Spectroscopic Imaging. Cancer Research, 2016, 76, 5933-5944.	0.4	105
15	In Vivo Multiphoton Microscopy of Basal Cell Carcinoma. JAMA Dermatology, 2015, 151, 1068.	2.0	102
16	Distinguishing between Benign and Malignant Melanocytic Nevi by In Vivo Multiphoton Microscopy. Cancer Research, 2014, 74, 2688-2697.	0.4	95
17	Wavelength optimization for rapid chromophore mapping using spatial frequency domain imaging. Journal of Biomedical Optics, 2010, 15, 1.	1.4	94
18	Imaging cortical absorption, scattering, and hemodynamic response during ischemic stroke using spatially modulated near-infrared illumination. Journal of Biomedical Optics, 2009, 14, 024033.	1.4	84

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19	Imaging mitochondrial dynamics in human skin reveals depth-dependent hypoxia and malignant potential for diagnosis. Science Translational Medicine, 2016, 8, 367ra169.	5.8	82
20	Correlating two-photon excited fluorescence imaging of breast cancer cellular redox state with seahorse flux analysis of normalized cellular oxygen consumption. Journal of Biomedical Optics, 2016, 21, 060503.	1.4	70
21	Two-Photon Laser Scanning Microscopy of Epithelial Cell-Modulated Collagen Density in Engineered Human Lung Tissue. Tissue Engineering, 2001, 7, 191-202.	4.9	64
22	Multispectral imaging of tissue absorption and scattering using spatial frequency domain imaging and a computed-tomography imaging spectrometer. Journal of Biomedical Optics, 2011, 16, 011015.	1.4	64
23	Development of a novel indwelling balloon applicator for optimizing light delivery in photodynamic therapy. Lasers in Surgery and Medicine, 2001, 29, 406-412.	1.1	60
24	Laser speckle imaging in the spatial frequency domain. Biomedical Optics Express, 2011, 2, 1553.	1.5	54
25	Noncontact imaging of absorption and scattering in layered tissue using spatially modulated structured light. Journal of Applied Physics, 2009, 105, .	1.1	53
26	Spatial frequency domain tomography of protoporphyrin IX fluorescence in preclinical glioma models. Journal of Biomedical Optics, 2012, 17, 056008.	1.4	53
27	Advanced demodulation technique for the extraction of tissue optical properties and structural orientation contrast in the spatial frequency domain. Journal of Biomedical Optics, 2014, 19, 056013.	1.4	53
28	In vivomeasurements of cutaneous melanin across spatial scales: using multiphoton microscopy and spatial frequency domain spectroscopy. Journal of Biomedical Optics, 2015, 20, 066005.	1.4	53
29	In vivo multiphotonâ€microscopy of picosecondâ€laserâ€induced optical breakdown in human skin. Lasers in Surgery and Medicine, 2017, 49, 555-562.	1.1	52
30	Diffuse optical spectroscopic imaging reveals distinct early breast tumor hemodynamic responses to metronomic and maximum tolerated dose regimens. Breast Cancer Research, 2020, 22, 29.	2.2	52
31	Cell and brain tissue imaging of the flavonoid fisetin using label-free two-photon microscopy. Neurochemistry International, 2015, 89, 243-248.	1.9	48
32	Performance assessment of diffuse optical spectroscopic imaging instruments in a 2-year multicenter breast cancer trial. Journal of Biomedical Optics, 2017, 22, 1.	1.4	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. Journal of Biomedical Optics, 2017, 22, 045003.	1.4	40
34	Compressed single pixel imaging in the spatial frequency domain. Journal of Biomedical Optics, 2017, 22, 030501.	1.4	39
35	Quantitative real-time optical imaging of the tissue metabolic rate of oxygen consumption. Journal of Biomedical Optics, 2018, 23, 1.	1.4	36
36	Highly Selective Targeting of Ovarian Cancer with the Photosensitizer PEGâ€mâ€THPC in a Rat Model. Photochemistry and Photobiology, 1999, 70, 624-629.	1.3	35

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37	Quantitative short-wave infrared multispectral imaging ofin vivotissue optical properties. Journal of Biomedical Optics, 2014, 19, 086011.	1.4	33
38	Rapid mesoscale multiphoton microscopy of human skin. Biomedical Optics Express, 2016, 7, 4375.	1.5	32
39	Tissue oxygen saturation predicts response to breast cancer neoadjuvant chemotherapy within 10 days of treatment. Journal of Biomedical Optics, 2018, 24, 1.	1.4	32
40	Optical imaging in an Alzheimerâ€™s mouse model reveals amyloid-Î²-dependent vascular impairment. Neurophotonics, 2014, 1, 011005.	1.7	31
41	In vivo multiphoton microscopy of melasma. Pigment Cell and Melanoma Research, 2019, 32, 403-411.	1.5	31
42	ATR Mutations Promote the Growth of Melanoma Tumors by Modulating the Immune Microenvironment. Cell Reports, 2017, 18, 2331-2342.	2.9	30
43	Cerebral blood flow is decoupled from blood pressure and linked to EEG bursting after resuscitation from cardiac arrest. Biomedical Optics Express, 2016, 7, 4660.	1.5	29
44	Wearable speckle plethysmography (SPG) for characterizing microvascular flow and resistance. Biomedical Optics Express, 2018, 9, 3937.	1.5	29
45	Multifrequency synthesis and extraction using square wave projection patterns for quantitative tissue imaging. Journal of Biomedical Optics, 2015, 20, 116005.	1.4	28
46	Feature characterization of scarring and nonâ€scarring types of alopecia by multiphoton microscopy. Lasers in Surgery and Medicine, 2019, 51, 95-103.	1.1	28
47	Real-time simultaneous single snapshot of optical properties and blood flow using coherent spatial frequency domain imaging (cSFDI). Biomedical Optics Express, 2016, 7, 870.	1.5	27
48	High-speed spatial frequency domain imaging of rat cortex detects dynamic optical and physiological properties following cardiac arrest and resuscitation. Neurophotonics, 2017, 4, 1.	1.7	27
49	Quantitative determination of dynamical properties using coherent spatial frequency domain imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 2108.	0.8	24
50	Visualization of Breast Cancer Metabolism Using Multimodal Nonlinear Optical Microscopy of Cellular Lipids and Redox State. Cancer Research, 2018, 78, 2503-2512.	0.4	24
51	Two-Photon Excitation Laser Scanning Microscopy of Human, Porcine, and Rabbit Nasal Septal Cartilage. Tissue Engineering, 2001, 7, 599-606.	4.9	23
52	AUTOFLUORESCENCE SPECTROSCOPY OF OPTICALLY TRAPPED CELLS. Photochemistry and Photobiology, 1995, 62, 830-835.	1.3	23
53	Quantitative, depth-resolved determination of particle motion using multi-exposure, spatial frequency domain laser speckle imaging. Biomedical Optics Express, 2013, 4, 2880.	1.5	21
54	Subâ€40Âfs, 1060â€nm Ybâ€fiber laser enhances penetration depth in nonlinear optical microscopy of human skin. Journal of Biomedical Optics, 2015, 20, 120501.	1.4	21

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55	Noninvasive depth estimation using tissue optical properties and a dual-wavelength fluorescent molecular probe in vivo. Biomedical Optics Express, 2017, 8, 3095.	1.5	21
56	In vivo optical signatures of neuronal death in a mouse model of Alzheimer's disease. Lasers in Surgery and Medicine, 2014, 46, 27-33.	1.1	20
57	The RhoJ-BAD signaling network: An Achillesâ€™ heel for BRAF mutant melanomas. PLoS Genetics, 2017, 13, e1006913.	1.5	20
58	Feasibility of direct digital sampling for diffuse optical frequency domain spectroscopy in tissue. Measurement Science and Technology, 2013, 24, 045501.	1.4	19
59	Hyperspectral imaging in the spatial frequency domain with a supercontinuum source. Journal of Biomedical Optics, 2019, 24, 1.	1.4	18
60	An indwelling brachytherapy balloon catheter: potential use as an intracranial light applicator for photodynamic therapy. Journal of Neuro-Oncology, 1999, 44, 15-21.	1.4	17
61	Imaging Breast Cancer Chemotherapy Response with Light. Clinical Cancer Research, 2010, 16, 2486-2488.	3.2	17
62	Characterisation of impaired wound healing in a preclinical model of induced diabetes using wideâ€field imaging and conventional immunohistochemistry assays. International Wound Journal, 2019, 16, 144-152.	1.3	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. Neurophotonics, 2015, 2, 045003.	1.7	14
65	Remote Digital Monitoring for Medical Product Development. Clinical and Translational Science, 2021, 14, 94-101.	1.5	14
66	Real-time, wide-field, and quantitative oxygenation imaging using spatiotemporal modulation of light. Journal of Biomedical Optics, 2019, 24, 1.	1.4	14
67	Noninvasive optical imaging of resistance training adaptations in human muscle. Journal of Biomedical Optics, 2017, 22, 1.	1.4	12
68	Nonâ€invasive optical biopsy by multiphoton microscopy identifies the live morphology of common melanocytic nevi. Pigment Cell and Melanoma Research, 2020, 33, 869-877.	1.5	11
69	Biomedical optics centers: forty years of multidisciplinary clinical translation for improving human health. Journal of Biomedical Optics, 2016, 21, 124001.	1.4	10
70	Lipid remodeling in response to methionine stress in MDA-MBA-468 triple-negative breast cancer cells. Journal of Lipid Research, 2021, 62, 100056.	2.0	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. Journal of Biomedical Optics, 2016, 21, 074001.	1.4	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. Journal of the American Heart Association, 2020, 9, e012691.	1.6	8
74	Diffuse optical spectroscopic imaging for the investigation of human lactation physiology: a case study on mammary involution. Journal of Biomedical Optics, 2019, 24, 1.	1.4	7
75	Sample size and power determination when limited preliminary information is available. BMC Medical Research Methodology, 2017, 17, 75.	1.4	6
76	Non-invasive Dual-Channel Broadband Diffuse Optical Spectroscopy of Massive Hemorrhage and Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) in Swine. Military Medicine, 2018, 183, 150-156.	0.4	6
77	Vertical-cavity surface-emitting laser sources for gigahertz-bandwidth, multiwavelength frequency-domain photon migration. Journal of Biomedical Optics, 2017, 22, 1.	1.4	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 Alzheimerâ€™s disease. Neurophotonics, 2015, 2, 045001.	1.7	5
80	Kinetic Analysis of Lipid Metabolism in Breast Cancer Cells via Nonlinear Optical Microscopy. Biophysical Journal, 2020, 119, 258-264.	0.2	5
81	Breast cancer differential diagnosis using diffuse optical spectroscopic imaging and regression with z-score normalized data. Journal of Biomedical Optics, 2021, 26, .	1.4	5
82	High-speed quantitative optical imaging of absolute metabolism in the rat cortex. Neurophotonics, 2021, 8, 025001.	1.7	5
83	Comparison of continuous versus pulsed CO2 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. Journal of Fluorescence, 1998, 8, 13-20.	1.3	3
85	Photodynamic Therapy of Human Glioma Spheroids Using 5-Aminolevulinic Acid Â¶. Photochemistry and Photobiology, 2007, 72, 128-134.	1.3	3
86	Monitoring Tumor Response During Photodynamic Therapy Using Near-infrared Photon-migration SpectroscopyÂ¶. Photochemistry and Photobiology, 2001, 73, 669-677.	1.3	3
87	Multi-modal diffuse optical spectroscopy for high-speed monitoring and wide-area mapping of tissue optical properties and hemodynamics. Journal of Biomedical Optics, 2021, 26, .	1.4	3
88	Highly Selective Targeting of Ovarian Cancer with the Photosensitizer PEG-m-THPC in a Rat Model. Photochemistry and Photobiology, 1999, 70, 624.	1.3	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.	1.4	1
92	InÂvivo multiphoton microscopy of scabies. JAAD Case Reports, 2018, 4, 985-987.	0.4	1
93	Special Section Guest Editorial: Translational Biophotonics. Journal of Biomedical Optics, 2019, 24, 1.	1.4	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, , .	1.2	1
96	Macrophage Targeted Photodynamic Regulation of Wound Healing. Microscopy and Microanalysis, 1998, 4, 1090-1091.	0.2	0
97	Effects of Combined Photodynamic Therapy and Ionizing Radiationon Human Glioma SpheroidsÂ¶. Photochemistry and Photobiology, 2007, 76, 411-416.	1.3	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.	1.5	0
100	Diffuse optical spectroscopic method for tissue and body composition assessment. Journal of Biomedical Optics, 2022, 27, .	1.4	0