Shudong Jiang

List of Publications by Year
in descending order

82 papers	4,008 citations	136950 32 h-index	118850 62 g-index
82 all docs	82 docs citations	82 times ranked	1934 citing authors

#	Article	IF	Citations
1	Deep-learning based image reconstruction for MRI-guided near-infrared spectral tomography. Optica, 2022, 9, 264.	9.3	18
2	Dynamic contrast-enhanced fluorescence imaging compared with MR imaging in evaluating bone perfusion during open orthopedic surgery. , 2022, , .		0
3	Spatial and temporal patterns in dynamic-contrast enhanced intraoperative fluorescence imaging enable classification of bone perfusion in patients undergoing leg amputation. Biomedical Optics Express, 2022, 13, 3171.	2.9	4
4	High-Resolution pO2 Imaging Improves Quantification of the Hypoxic Fraction in Tumors During Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2021, 109, 603-613.	0.8	9
5	Performance assessment of MRI guided continuous wave near-infrared spectral tomography for breast imaging. Biomedical Optics Express, 2021, 12, 7657.	2.9	1
6	Intraoperative assessment of patient bone viability using texture analysis of dynamic contrast-enhanced fluorescence imaging. , 2021, , .		0
7	X-ray-Induced Cherenkov Optical Triggering of Caged Doxorubicin Released to the Nucleus for Chemoradiation Activation. ACS Applied Materials & Interfaces, 2020, 12, 44383-44392.	8.0	10
8	Tissue pO2 distributions in xenograft tumors dynamically imaged by Cherenkov-excited phosphorescence during fractionated radiation therapy. Nature Communications, 2020, 11, 573.	12.8	45
9	Implantable sensor for local Cherenkov-excited luminescence imaging of tumor pO2 during radiotherapy. Journal of Biomedical Optics, 2020, 25, .	2.6	6
10	Intraoperative fluorescence perfusion assessment should be corrected by a measured subject-specific arterial input function. Journal of Biomedical Optics, 2020, 25, 1.	2.6	19
11	Time-gated luminescence imaging for background free in vivo tracking of single circulating tumor cells. Optics Letters, 2020, 45, 3761.	3.3	4
12	Perspective on optical imaging for functional assessment in musculoskeletal extremity trauma surgery. Journal of Biomedical Optics, 2020, 25, .	2.6	2
13	Endosteal and periosteal blood flow quantified with dynamic contrast-enhanced fluorescence to guide open orthopaedic surgery. , 2020, 11222, .		5
14	Evaluation of bone perfusion during open orthopedic surgery using quantitative dynamic contrast-enhanced fluorescence imaging. Biomedical Optics Express, 2020, 11, 6458.	2.9	15
15	Single pixel hyperspectral Cherenkov-excited fluorescence imaging with LINAC X-ray sheet scanning and spectral unmixing. Optics Letters, 2020, 45, 6130.	3.3	6
16	Boneâ€specific kinetic model to quantify periosteal and endosteal blood flow using indocyanine green in fluorescence guided orthopedic surgery. Journal of Biophotonics, 2019, 12, e201800427.	2.3	19
17	Tomographic Cherenkov-excited luminescence scanned imaging with multiple pinhole beams recovered via back-projection reconstruction. Optics Letters, 2019, 44, 1552.	3.3	8
18	Direct Regularization From Co-Registered Contrast MRI Improves Image Quality of MRI-Guided Near-Infrared Spectral Tomography of Breast Lesions. IEEE Transactions on Medical Imaging, 2018, 37, 1247-1252.	8.9	5

#	Article	IF	Citations
19	Weighting function effects in a direct regularization method for image-guided near-infrared spectral tomography of breast cancer. Biomedical Optics Express, 2018, 9, 3266.	2.9	4
20	Observation of short wavelength infrared (SWIR) Cherenkov emission. Optics Letters, 2018, 43, 3854.	3.3	17
21	Tissue oxygen saturation predicts response to breast cancer neoadjuvant chemotherapy within 10 days of treatment. Journal of Biomedical Optics, 2018, 24, 1.	2.6	32
22	Cherenkov excited short-wavelength infrared fluorescence imaging in vivo with external beam radiation. Journal of Biomedical Optics, 2018, 24, 1.	2.6	11
23	Correlation of near-infrared spectral tomography (NIRST) with residual cancer burden (RCB) for prognostic assessment subsequent to neoadjuvant chemotherapy (NAC) in breast cancer.. Journal of Clinical Oncology, 2018, 36, e12655-e12655.	1.6	2
24	Beam and tissue factors affecting Cherenkov image intensity for quantitative entrance and exit dosimetry on human tissue. Journal of Biophotonics, 2017, 10, 645-656.	2.3	29
25	Optimization of fluorescent imaging in the operating room through pulsed acquisition and gating to ambient background cycling. Biomedical Optics Express, 2017, 8, 2635.	2.9	17
26	Collagen quantification in breast tissue using a 12-wavelength near infrared spectral tomography (NIRST) system. Biomedical Optics Express, 2017, 8, 4217.	2.9	10
27	Addition of T2-guided optical tomography improves noncontrast breast magnetic resonance imaging diagnosis. Breast Cancer Research, 2017, 19, 117.	5.0	16
28	Performance assessment of diffuse optical spectroscopic imaging instruments in a 2-year multicenter breast cancer trial. Journal of Biomedical Optics, 2017, 22, 1.	2.6	41
29	Portable, parallel 9-wavelength near-infrared spectral tomography (NIRST) system for efficient characterization of breast cancer within the clinical oncology infusion suite. Biomedical Optics Express, 2016, 7, 2186.	2.9	14
30	Predicting Responses to Neoadjuvant Chemotherapy in Breast Cancer: ACRIN 6691 Trial of Diffuse Optical Spectroscopic Imaging. Cancer Research, 2016, 76, 5933-5944.	0.9	105
31	A Comparison of Near-Infrared Diffuse Optical Imaging and 18F-FDG PET/CT for the Early Prediction of Breast Cancer Response to Neoadjuvant Chemotherapy. Journal of Nuclear Medicine, 2016, 57, 1166-1167.	5.0	4
32	Multiobjective guided priors improve the accuracy of near-infrared spectral tomography for breast imaging. Journal of Biomedical Optics, 2016, 21, 090506.	2.6	14
33	MR-Guided Near-Infrared Spectral Tomography Increases Diagnostic Performance of Breast MRI. Clinical Cancer Research, 2015, 21, 3906-3912.	7.0	29
34	Optimization of image reconstruction for magnetic resonance imagingâ€“guided near-infrared diffuse optical spectroscopy in breast. Journal of Biomedical Optics, 2015, 20, 056009.	2.6	19
35	Direct regularization from co-registered anatomical images for MRI-guided near-infrared spectral tomographic image reconstruction. Biomedical Optics Express, 2015, 6, 3618.	2.9	43
36	Pre-treatment Near-Infrared Spectral Tomography (NIRST) to predict pathologic complete response to neoadjuvant chemotherapy (NAC) in women with locally advanced breast cancer (LABC).. Journal of Clinical Oncology, 2015, 33, 1047-1047.	1.6	0

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37	Sensitivity of MRI-guided near-infrared spectroscopy clinical breast exam data and its impact on diagnostic performance. Biomedical Optics Express, 2014, 5, 3103.	2.9	27
38	Predicting Breast Tumor Response to Neoadjuvant Chemotherapy with Diffuse Optical Spectroscopic Tomography prior to Treatment. Clinical Cancer Research, 2014, 20, 6006-6015.	7.0	63
39	Adaptable Near-Infrared Spectroscopy Fiber Array for Improved Coupling to Different Breast Sizes During Clinical MRI. Academic Radiology, 2014, 21, 141-150.	2.5	19
40	Cherenkov Video Imaging Allows for the First Visualization of Radiation Therapy in Real Time. International Journal of Radiation Oncology Biology Physics, 2014, 89, 615-622.	0.8	95
41	Hybrid photomultiplier tube and photodiode parallel detection array for wideband optical spectroscopy of the breast guided by magnetic resonance imaging. Journal of Biomedical Optics, 2013, 19, 011010.	2.6	32
42	Pilot study assessment of dynamic vascular changes in breast cancer with near-infrared tomography from prospectively targeted manipulations of inspired end-tidal partial pressure of oxygen and carbon dioxide. Journal of Biomedical Optics, 2013, 18, 076011.	2.6	10
43	Automatic and robust calibration of optical detector arrays for biomedical diffuse optical spectroscopy. Biomedical Optics Express, 2012, 3, 2339.	2.9	7
44	Tumor Angiogenesis Change Estimated by Using Diffuse Optical Spectroscopic Tomography: Demonstrated Correlation in Women Undergoing Neoadjuvant Chemotherapy for Invasive Breast Cancer?. Radiology, 2011, 259, 365-374.	7.3	67
45	MR-GUIDED PULSE OXIMETRY IMAGING OF BREAST IN VIVO. Journal of Innovative Optical Health Sciences, 2011, 04, 199-208.	1.0	1
46	Near-infrared tomography of breast cancer hemoglobin, water, lipid, and scattering using combined frequency domain and cw measurement. Optics Letters, 2010, 35, 82.	3.3	45
47	Rapid magnetic resonance-guided near-infrared mapping to image pulsatile hemoglobin in the breast. Optics Letters, 2010, 35, 3964.	3.3	12
48	<i>In vivo</i> quantitative imaging of normal and cancerous breast tissue using broadband diffuse optical tomography. Medical Physics, 2010, 37, 3715-3724.	3.0	66
49	Evaluation of Breast Tumor Response to Neoadjuvant Chemotherapy with Tomographic Diffuse Optical Spectroscopy: Case Studies of Tumor Region-of-Interest Changes. Radiology, 2009, 252, 551-560.	7.3	111
50	Measurement of pressure-displacement kinetics of hemoglobin in normal breast tissue with near-infrared spectral imaging. Applied Optics, 2009, 48, D130.	2.1	24
51	Developments in Quantitative Oxygen-Saturation Imaging of Breast Tissue In Vivo Using Multispectral Near-Infrared Tomography. Antioxidants and Redox Signaling, 2007, 9, 1143-1156.	5.4	32
52	Image-guided optical spectroscopy provides molecular-specific information in vivo: MRI-guided spectroscopy of breast cancer hemoglobin, water, and scatterer size. Optics Letters, 2007, 32, 933.	3.3	140
53	Image-guided diffuse optical fluorescence tomography implemented with Laplacian-type regularization. Optics Express, 2007, 15, 4066.	3.4	238
54	Structural information within regularization matrices improves near infrared diffuse optical tomography. Optics Express, 2007, 15, 8043.	3.4	220

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55	In Vivo Hemoglobin and Water Concentrations, Oxygen Saturation, and Scattering Estimates From Near-Infrared Breast Tomography Using Spectral Reconstruction1. Academic Radiology, 2006, 13, 195-202.	2.5	66
56	Spectrally resolved bioluminescence optical tomography. Optics Letters, 2006, 31, 365.	3.3	172
57	Imaging breast adipose and fibroglandular tissue molecular signatures by using hybrid MRI-guided near-infrared spectral tomography. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 8828-8833.	7.1	228
58	Near-Infrared Characterization of Breast Tumors <i>In Vivo</i> using Spectrally-Constrained Reconstruction. Technology in Cancer Research and Treatment, 2005, 4, 513-526.	1.9	118
59	Instrumentation for video-rate near-infrared diffuse optical tomography. Review of Scientific Instruments, 2005, 76, 124301.	1.3	15
60	Spectral priors improve near-infrared diffuse tomography more than spatial priors. Optics Letters, 2005, 30, 1968.	3.3	71
61	Video-rate near-infrared optical tomography using spectrally encoded parallel light delivery. Optics Letters, 2005, 30, 2593.	3.3	21
62	Magnetic resonance-guided near-infrared tomography of the breast. Review of Scientific Instruments, 2004, 75, 5262-5270.	1.3	102
63	Characterization of hemoglobin, water, and NIR scattering in breast tissue: analysis of intersubject variability and menstrual cycle changes. Journal of Biomedical Optics, 2004, 9, 541.	2.6	196
64	Improved quantification of small objects in near-infrared diffuse optical tomography. Journal of Biomedical Optics, 2004, 9, 1161.	2.6	38
65	In vivo near-infrared spectral detection of pressure-induced changes in breast tissue. Optics Letters, 2003, 28, 1212.	3.3	71
66	Near-infrared breast tomography calibration with optoelastic tissue simulating phantoms. Journal of Electronic Imaging, 2003, 12, 613.	0.9	46
67	Comparisons of three alternative breast modalities in a common phantom imaging experiment. Medical Physics, 2003, 30, 2194-2205.	3.0	18
68	Quantitative analysis of near-infrared tomography: sensitivity to the tissue-simulating precalibration phantom. Journal of Biomedical Optics, 2003, 8, 308.	2.6	49
69	Interpreting hemoglobin and water concentration, oxygen saturation, and scattering measured in vivo by near-infrared breast tomography. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 12349-12354.	7.1	263
70	Multispectral near-infrared tomography: a case study in compensating for water and lipid content in hemoglobin imaging of the breast. Journal of Biomedical Optics, 2002, 7, 72.	2.6	87
71	Statistical analysis of nonlinearly reconstructed near-infrared tomographic images. I. Theory and simulations. IEEE Transactions on Medical Imaging, 2002, 21, 755-763.	8.9	30
72	Statistical analysis of nonlinearly reconstructed near-infrared tomographic images. II. Experimental interpretation. IEEE Transactions on Medical Imaging, 2002, 21, 764-772.	8.9	23

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73	Initial studies of in vivo absorbing and scattering heterogeneity in near-infrared tomographic breast imaging. Optics Letters, 2001, 26, 822.	3.3	83
74	A parallel-detection frequency-domain near-infrared tomography system for hemoglobin imaging of the breast in vivo. Review of Scientific Instruments, 2001, 72, 1817.	1.3	169
75	Reflection-Resonance-Type Photon Scanning Tunneling Microscope. Japanese Journal of Applied Physics, 1994, 33, L55-L58.	1.5	8
76	Highly controllable fabrication of fiber probe for photon scanning tunneling microscope. Scanning, 1994, 16, 362-367.	1.5	21
77	Highly localized photochemical processes in LB films of photo chromic material by using a photon scanning tunneling microscope. Optics Communications, 1994, 106, 173-177.	2.1	79
78	Nanometric Scale Biosample Observation Using a Photon Scanning Tunneling Microscope. Japanese Journal of Applied Physics, 1992, 31, 2282-2287.	1.5	55
79	Temperature-Modulated Semiconductor Laser for Widely Tunable and Power-Controlled Operation. Japanese Journal of Applied Physics, 1992, 31, 2432-2434.	1.5	0
80	Reproducible Fabrication Technique of Nanometric Tip Diameter Fiber Probe for Photon Scanning Tunneling Microscope. Japanese Journal of Applied Physics, 1992, 31, L1302-L1304.	1.5	144
81	A Photon Scanning Tunneling Microscope Using an AlGaAs Laser. Japanese Journal of Applied Physics, 1991, 30, 2107-2111.	1.5	43
82	Photon Scanning Tunneling Microscope.. The Review of Laser Engineering, 1991, 19, 839-848.	0.0	0