

Andrey V Dunaev

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

858
citations

471509

17
h-index

610901

24
g-index

103
all docs

103
docs citations

103
times ranked

479
citing authors

#	ARTICLE	IF	CITATIONS
1	Interaction of Oxidative Stress and Misfolded Proteins in the Mechanism of Neurodegeneration. <i>Life</i> , 2020, 10, 101.	2.4	53
2	Individual variability analysis of fluorescence parameters measured in skin with different levels of nutritive blood flow. <i>Medical Engineering and Physics</i> , 2015, 37, 574-583.	1.7	48
3	Multimodal optical measurement for study of lower limb tissue viability in patients with diabetes mellitus. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	40
4	Investigating tissue respiration and skin microhaemocirculation under adaptive changes and the synchronization of blood flow and oxygen saturation rhythms. <i>Physiological Measurement</i> , 2014, 35, 607-621.	2.1	39
5	Spectral analysis of the blood flow in the foot microvascular bed during thermal testing in patients with diabetes mellitus. <i>Microvascular Research</i> , 2018, 120, 13-20.	2.5	36
6	Dynamic evaluation of blood flow microcirculation by combined use of the laser Doppler flowmetry and high-speed videocapillaroscopy methods. <i>Journal of Biophotonics</i> , 2019, 12, e201800317.	2.3	33
7	Substantiation of medical and technical requirements for noninvasive spectrophotometric diagnostic devices. <i>Journal of Biomedical Optics</i> , 2013, 18, 107009.	2.6	27
8	How the melanin concentration in the skin affects the fluorescence-spectroscopy signal formation. <i>Journal of Optical Technology (A Translation of Opticheskii Zhurnal)</i> , 2016, 83, 43.	0.4	24
9	Adrenaline induces calcium signal in astrocytes and vasoconstriction via activation of monoamine oxidase. <i>Free Radical Biology and Medicine</i> , 2020, 159, 15-22.	2.9	24
10	Combined use of laser Doppler flowmetry and skin thermometry for functional diagnostics of intradermal finger vessels. <i>Journal of Biomedical Optics</i> , 2017, 22, 040502.	2.6	23
11	Computational model of bladder tissue based on its measured optical properties. <i>Journal of Biomedical Optics</i> , 2016, 21, 025006.	2.6	22
12	Optical redox ratio and endogenous porphyrins in the detection of urinary bladder cancer: A patient biopsy analysis. <i>Journal of Biophotonics</i> , 2017, 10, 1062-1073.	2.3	21
13	Optical percutaneous needle biopsy of the liver: a pilot animal and clinical study. <i>Scientific Reports</i> , 2020, 10, 14200.	3.3	21
14	Laser speckle contrast imaging of blood microcirculation in pancreatic tissues during laparoscopic interventions. <i>Quantum Electronics</i> , 2020, 50, 33-40.	1.0	21
15	Analysis of skin blood microflow oscillations in patients with rheumatic diseases. <i>Journal of Biomedical Optics</i> , 2017, 22, 070501.	2.6	20
16	Non-invasive biomedical research and diagnostics enabled by innovative compact lasers. <i>Progress in Quantum Electronics</i> , 2017, 56, 1-14.	7.0	19
17	Biophotonics methods for functional monitoring of complications of diabetes mellitus. <i>Journal of Biophotonics</i> , 2020, 13, e202000203.	2.3	19
18	Fiber-Optic System for Intraoperative Study of Abdominal Organs during Minimally Invasive Surgical Interventions. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 217.	2.5	17

#	ARTICLE	IF	CITATIONS
19	Impairments of cerebral blood flow microcirculation in rats brought on by cardiac cessation and respiratory arrest. <i>Journal of Biophotonics</i> , 2021, 14, e202100216.	2.3	16
20	Wearable Laser Doppler Flowmetry Sensor: A Feasibility Study with Smoker and Non-Smoker Volunteers. <i>Biosensors</i> , 2020, 10, 201.	4.7	15
21	Changes in autofluorescence based organoid model of muscle invasive urinary bladder cancer. <i>Biomedical Optics Express</i> , 2016, 7, 1193.	2.9	14
22	Metrological Support of Methods and Devices for Noninvasive Medical Spectrophotometry. <i>Bio-Medical Engineering</i> , 2010, 44, 66-70.	0.5	13
23	Evaluation of microcirculatory disturbances in patients with rheumatic diseases by the method of diffuse reflectance spectroscopy. <i>Human Physiology</i> , 2017, 43, 222-228.	0.4	13
24	Detection of angiospastic disorders in the microcirculatory bed using laser diagnostics technologies. <i>Journal of Innovative Optical Health Sciences</i> , 2018, 11, 1750016.	1.0	13
25	Multimodal Optical Diagnostics of the Microhaemodynamics in Upper and Lower Limbs. <i>Frontiers in Physiology</i> , 2019, 10, 416.	2.8	13
26	<i>In vivo</i> noninvasive measurement of skin autofluorescence biomarkers relate to cardiovascular disease in mice. <i>Journal of Microscopy</i> , 2014, 255, 42-48.	1.8	12
27	Noninvasive control of the transport function of fluorescent coloured liposomal nanoparticles. <i>Laser Physics Letters</i> , 2017, 14, 065603.	1.4	11
28	Wavelet Analysis of the Temporal Dynamics of the Laser Speckle Contrast in Human Skin. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 67, 1-1.	4.2	11
29	Functional Changes in Blood Microcirculation in the Skin of the Foot during Heating Tests in Patients with Diabetes Mellitus. <i>Human Physiology</i> , 2017, 43, 693-699.	0.4	10
30	Optical Diagnostics of the Maxillary Sinuses by Digital Diaphanoscopy Technology. <i>Diagnostics</i> , 2021, 11, 77.	2.6	10
31	Laser Doppler Spectrum Analysis Based on Calculation of Cumulative Sums Detects Changes in Skin Capillary Blood Flow in Type 2 Diabetes Mellitus. <i>Diagnostics</i> , 2021, 11, 267.	2.6	9
32	Laser Doppler flowmetry in blood and lymph monitoring, technical aspects and analysis. <i>Proceedings of SPIE</i> , 2017, , .	0.8	8
33	A Complex Approach to Noninvasive Estimation of Microcirculatory Tissue Impairments in Feet of Patients with Diabetes Mellitus using Spectroscopy. <i>Optics and Spectroscopy (English Translation of) Tj ETQq1 1 0o784314 rgBT /Ove</i>		
34	Novel wearable VCSEL-based blood perfusion sensor. , 2018, , .		8
35	Machine Learning Aided Photonic Diagnostic System for Minimally Invasive Optically Guided Surgery in the Hepatoduodenal Area. <i>Diagnostics</i> , 2020, 10, 873.	2.6	8
36	Fluorescence lifetime needle optical biopsy discriminates hepatocellular carcinoma. <i>Biomedical Optics Express</i> , 2022, 13, 633.	2.9	8

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37	The development of attenuation compensation models of fluorescence spectroscopy signals. Proceedings of SPIE, 2016, , .	0.8	7
38	Optical probe pressure effects on cutaneous blood flow. Clinical Hemorheology and Microcirculation, 2019, 72, 259-267.	1.7	7
39	Spatial heterogeneity of cutaneous blood flow respiratory-related oscillations quantified via laser speckle contrast imaging. PLoS ONE, 2021, 16, e0252296.	2.5	7
40	Monitoring oxidative metabolism while modeling pancreatic ischemia in mice using a multimodal spectroscopy technique. Laser Physics Letters, 2020, 17, 115605.	1.4	7
41	Novel measure for the calibration of laser Doppler flowmetry devices. , 2014, , .		6
42	A novel excitation-emission wavelength model to facilitate the diagnosis of urinary bladder diseases. , 2015, , .		6
43	Study of the functional state of peripheral vessels in fingers of rheumatological patients by means of laser Doppler flowmetry and cutaneous thermometry measurements. , 2016, , .		6
44	The blood perfusion and NADH/FAD content combined analysis in patients with diabetes foot. Proceedings of SPIE, 2016, , .	0.8	6
45	Allocation of rhodamine-loaded nanocapsules from blood circulatory system to adjacent tissues assessed in vivo by fluorescence spectroscopy. Laser Physics Letters, 2018, 15, 105601.	1.4	6
46	Diagnosis of Skin Vascular Complications Revealed by Time-Frequency Analysis and Laser Doppler Spectrum Decomposition. IEEE Transactions on Biomedical Engineering, 2023, 70, 3-14.	4.2	6
47	Laser reflectance oximetry and Doppler flowmetry in assessment of complex physiological parameters of cutaneous blood microcirculation. , 2013, , .		5
48	The influence of local pressure on evaluation parameters of skin blood perfusion and fluorescence. Proceedings of SPIE, 2017, , .	0.8	5
49	Wearable sensor system for multipoint measurements of blood perfusion: pilot studies in patients with diabetes mellitus. , 2019, , .		5
50	Optical non-invasive diagnostics of microcirculatory-tissue systems of the human body: questions of metrological and instrumentation provision. Journal of Biomedical Photonics and Engineering, 2016, 2, 040305.	0.7	5
51	A Method and a Device for Diagnostics of the Functional State of Peripheral Vessels of the Upper Limbs. Bio-Medical Engineering, 2017, 51, 46-51.	0.5	4
52	Testing a Fine-Needle Optical Probe for Recording Changes in the Fluorescence of Coenzymes of Cellular Respiration. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2020, 128, 742-751.	0.6	4
53	Optical fine-needle aspiration biopsy in a rat model. , 2019, , .		4
54	Functional status of microcirculatory-tissue systems during the cold pressor test. Human Physiology, 2015, 41, 652-658.	0.4	3

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55	Evaluation of blood microcirculation parameters by combined use of laser Doppler flowmetry and videocapillaroscopy methods. Proceedings of SPIE, 2017, , .	0.8	3
56	Possibilities of Using Dynamically Controlled Semiconductor Light Sources During Surgical Operations. , 2018, , .		3
57	A complex morphofunctional approach for zinc toxicity evaluation in rats. Heliyon, 2020, 6, e03768.	3.2	3
58	Optical Diagnostics in Human Diseases. Diagnostics, 2021, 11, 873.	2.6	3
59	Optical fine-needle biopsy approach for intraoperative multimodal diagnostics in minimally invasive abdominal surgery. , 2019, , .		3
60	Fibre-optic probe for fluorescence diagnostics with blood influence compensation. , 2018, , .		3
61	Optical diagnostics of bile duct tissues state with tumor compression. , 2019, , .		3
62	Method and Device for Metrological Control of Laser Doppler Flowmetry Devices. Bio-Medical Engineering, 2014, 48, 191-195.	0.5	2
63	Investigation of Doppler spectra of laser radiation scattered inside hand skin during occlusion test. Journal of Physics: Conference Series, 2017, 929, 012063.	0.4	2
64	The study of the spectral characteristics of biological tissues for optimization of surgical lamp parameters. Journal of Physics: Conference Series, 2019, 1400, 066024.	0.4	2
65	Optimization of Spectral Characteristics of the Controlled Color-Dynamic Surgical Light Source for Visualization of Organs and Tissues of Laboratory Animals. , 2019, , .		2
66	Novel wearable VCSEL-based sensors for multipoint measurements of blood perfusion. , 2019, , .		2
67	Pilot studies of age-related changes in blood perfusion in two different types of skin. , 2019, , .		2
68	Studies of age-related changes in blood perfusion coherence using wearable blood perfusion sensor system. , 2019, , .		2
69	Peculiarities of local blood microcirculation in patients with psoriasis. , 2018, , .		2
70	Optical noninvasive diagnostics of dynamic changes in the level of blood microcirculation and oxidative metabolism using temperature tests. , 2020, , .		2
71	Is there a stimulation of blood microcirculation at low level laser irradiation. Proceedings of SPIE, 2014, , .	0.8	1
72	Application of optical non-invasive methods to diagnose the state of the lower limb tissues in patients with diabetes mellitus. Journal of Physics: Conference Series, 2017, 929, 012069.	0.4	1

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73	Heterogeneity of cutaneous blood flow respiratory-related oscillations quantified via LSCI wavelet decomposition. , 2020, , .		1
74	The Discrete Analysis of the Tissue Biopsy Images With Metamaterial Formalization: Identifying Tumor Locus. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-8.	2.9	1
75	Laser doppler spectrum decomposition applied in diagnostics of microcirculatory disturbances. , 2018, , .		1
76	Wearable laser Doppler flowmetry for the analysis of microcirculatory changes during intravenous infusion in patients with diabetes mellitus. , 2020, , .		1
77	Wearable laser Doppler sensors for evaluating the nutritive and shunt blood flow. , 2020, , .		1
78	Application of the fluorescence spectroscopy for the analysis of the state of abdominal cavity organs tissues in mini-invasive surgery. , 2018, , .		1
79	Blood flow oscillations as a signature of microvascular abnormalities. , 2018, , .		1
80	Brain metabolism changes in cases of impaired breathing or blood circulation in rodents evaluated by real time optical spectroscopy methods. , 2020, , .		1
81	Analysis of experimental surgical lighting parameters in organs in vivo. , 2020, , .		1
82	Multimodal Optical Diagnostic in Minimally Invasive Surgery. , 2020, , 397-424.		1
83	Tissue mimicking phantoms for fluorescence imaging. , 2020, , .		1
84	Method and installation used for testing of the absorbed dose of radiation during low-level laser therapy. , 2007, 6440, 253.		0
85	The study of synchronization of rhythms of microvascular blood flow and oxygen saturation during adaptive changes. Proceedings of SPIE, 2014, , .	0.8	0
86	Evaluating adaptation options of microcirculatory-tissue systems based on the physiological link of nutritive blood flow and redox ratio. Proceedings of SPIE, 2015, , .	0.8	0
87	Non-invasive control of influence of polyethylene glycol on transport function of fluorescent colored liposomal nanoparticles. Proceedings of SPIE, 2017, , .	0.8	0
88	Assessment of tissue ischemia of nail fold precapillary zones using a fluorescence capillaroscopy. Proceedings of SPIE, 2017, , .	0.8	0
89	Noninvasive control of rhodamine-loaded capsules distribution in vivo. , 2018, , .		0
90	Evaluation of microvascular disturbances in rheumatic diseases by analysis of skin blood flow oscillations. , 2018, , .		0

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91	Use of fluorescent optical fibre probe for recording parameters of brain metabolism in rat model. , 2018, , .		0
92	Investigation of blood microcirculation parameters in patients with rheumatic diseases by videocapillaroscopy and laser Doppler flowmetry during cold pressor test. , 2019, , .		0
93	Laser speckle contrast imaging of abdominal organs in mouse model. , 2019, , .		0
94	Fluorescence spectroscopy approach for blood influence compensation. , 2019, , .		0
95	Analysis of changes in blood flow oscillations under different probe pressure using laser Doppler spectrum decomposition. , 2019, , .		0
96	Diagnosis of inflammatory diseases of the paranasal sinuses using digital diaphanoscopy. , 2019, , .		0
97	Monte Carlo simulation of signals in digital diaphanoscopy of the maxillary sinuses. , 2020, , .		0
98	Time-frequency analysis and laser Doppler spectrum decomposition to reveal new feature space for diagnosis of diabetes mellitus vascular complications. , 2020, , .		0
99	Ð-Method and a Device for Evaluating the Functional State of Microcirculatory-Tissue Systems of the Human Body Based on Multiparametric Optical Diagnostics. Journal of the Russian Universities Radioelectronics, 2020, 23, 77-91.	0.2	0
100	Multimodal Laparoscopic System for Biological Tissue Perfusion and Metabolism Assessment. , 2021, , .		0
101	Fluorescence lifetime optical biopsy of the hepatocellular carcinoma in murine model. , 2021, , .		0