Vadim Backman

List of Publications by Year
in descending order

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232 papers	9,471 citations	36203 51 h-index	49773 87 g-index

243 all docs	243 docs citations	243 times ranked	7530 citing authors

#	Article	IF	Citations
1	Photonic nanojet enhancement of backscattering of light by nanoparticles: a potential novel visible-light ultramicroscopy technique. Optics Express, 2004, 12, 1214.	1.7	706
2	Imaging human epithelial properties with polarized light-scattering spectroscopy. Nature Medicine, 2001, 7, 1245-1248.	15.2	383
3	Photonic Nanojets. Journal of Computational and Theoretical Nanoscience, 2009, 6, 1979-1992.	0.4	335
4	Optical analysis of nanoparticles via enhanced backscattering facilitated by 3-D photonic nanojets. Optics Express, 2005, 13, 526.	1.7	312
5	Chromatin histone modifications and rigidity affect nuclear morphology independent of lamins. Molecular Biology of the Cell, 2018, 29, 220-233.	0.9	257
6	Trimodal spectroscopy for the detection and characterization of cervical precancers in vivo. American Journal of Obstetrics and Gynecology, 2002, 186, 374-382.	0.7	232
7	Cellular Organization and Substructure Measured Using Angle-Resolved Low-Coherence Interferometry. Biophysical Journal, 2002, 82, 2256-2264.	0.2	229
8	Visible-light optical coherence tomography for retinal oximetry. Optics Letters, 2013, 38, 1796.	1.7	151
9	A physical sciences network characterization of non-tumorigenic and metastatic cells. Scientific Reports, 2013, 3, 1449.	1.6	146
10	Photonic nanojet-enabled optical data storage. Optics Express, 2008, 16, 13713.	1.7	140
11	Visible light optical coherence tomography measures retinal oxygen metabolic response to systemic oxygenation. Light: Science and Applications, 2015, 4, e334-e334.	7.7	133
12	In vivo capture and label-free detection of early metastatic cells. Nature Communications, 2015, 6, 8094.	5.8	133
13	Evidence for possible association of vitamin D status with cytokine storm and unregulated inflammation in COVID-19 patients. Aging Clinical and Experimental Research, 2020, 32, 2141-2158.	1.4	131
14	Nanoscale Cellular Changes in Field Carcinogenesis Detected by Partial Wave Spectroscopy. Cancer Research, 2009, 69, 5357-5363.	0.4	124
15	Highly efficient optical coupling and transport phenomena in chains of dielectric microspheres. Optics Letters, 2006, 31, 389.	1.7	121
16	Optical methodology for detecting histologically unapparent nanoscale consequences of genetic alterations in biological cells. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20118-20123.	3.3	119
17	Microscopic Imaging and Spectroscopy with Scattered Light. Annual Review of Biomedical Engineering, 2010, 12, 285-314.	5.7	114
18	HDAC Up-Regulation in Early Colon Field Carcinogenesis Is Involved in Cell Tumorigenicity through Regulation of Chromatin Structure. PLoS ONE, 2013, 8, e64600.	1.1	114

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19	Four-dimensional elastic light-scattering fingerprints as preneoplastic markers in the rat model of colon carcinogenesisâ˜†. Gastroenterology, 2004, 126, 1071-1081.	0.6	113
20	Subdiffraction optical resolution of a gold nanosphere located within the nanojet of a Mie-resonant dielectric microsphere. Optics Express, 2007, 15, 17334.	1.7	111
21	Tissue Self-Affinity and Polarized Light Scattering in the Born Approximation: A New Model for Precancer Detection. Physical Review Letters, 2006, 97, 138102.	2.9	109
22	Modulation of Light-Enhancement to Symbiotic Algae by Light-Scattering in Corals and Evolutionary Trends in Bleaching. PLoS ONE, 2013, 8, e61492.	1.1	106
23	Nonscalar elastic light scattering from continuous random media in the Born approximation. Optics Letters, 2009, 34, 1891.	1.7	105
24	Experimental confirmation of backscattering enhancement induced by a photonic jet. Applied Physics Letters, 2006, 89, 221118.	1.5	100
25	Quasi one-dimensional light beam generated by a graded-index microsphere. Optics Express, 2009, 17, 3722.	1.7	100
26	Partial-wave microscopic spectroscopy detects subwavelength refractive index fluctuations: an application to cancer diagnosis. Optics Letters, 2009, 34, 518.	1.7	99
27	Imaging a full set of optical scattering properties of biological tissue by inverse spectroscopic optical coherence tomography. Optics Letters, 2012, 37, 4443.	1.7	91
28	Super-resolution spectroscopic microscopy via photon localization. Nature Communications, 2016, 7, 12290.	5.8	91
29	Consensus thermotolerance ranking for 110 Symbiodinium phylotypes: an exemplar utilization of a novel iterative partialâ€rank aggregation tool with broad application potential. Functional Ecology, 2017, 31, 172-183.	1.7	91
30	Enhanced Survival with Implantable Scaffolds That Capture Metastatic Breast Cancer Cells In Vivo. Cancer Research, 2016, 76, 5209-5218.	0.4	86
31	Coherent backscattering spectroscopy. Optics Letters, 2004, 29, 1906.	1.7	83
32	Physicochemical mechanotransduction alters nuclear shape and mechanics via heterochromatin formation. Molecular Biology of the Cell, 2019, 30, 2320-2330.	0.9	77
33	Engineering sub-100 nm multi-layer nanoshells. Nanotechnology, 2006, 17, 5435-5440.	1.3	75
34	Coral bleaching response index: a new tool to standardize and compare susceptibility to thermal bleaching. Global Change Biology, 2016, 22, 2475-2488.	4.2	75
35	Investigation of depth selectivity of polarization gating for tissue characterization. Optics Express, 2005, 13, 601.	1.7	73
36	Elastic backscattering spectroscopic microscopy. Optics Letters, 2005, 30, 2445.	1.7	72

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37	Macromolecular Crowding as a Regulator of Gene Transcription. Biophysical Journal, 2014, 106, 1801-1810.	0.2	72
38	Experimental confirmation at visible light wavelengths of the backscattering enhancement phenomenon of the photonic nanojet. Optics Express, 2011, 19, 7084.	1.7	70
39	Nanoscale changes in chromatin organization represent the initial steps of tumorigenesis: a transmission electron microscopy study. BMC Cancer, 2014, 14, 189.	1.1	69
40	Spectroscopic diagnosis and imaging of invisible pre-cancer. Faraday Discussions, 2004, 126, 265.	1.6	66
41	Modeling Light Scattering in Tissue as Continuous Random Media Using a Versatile Refractive Index Correlation Function. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 173-186.	1.9	65
42	The effects of chemical fixation on the cellular nanostructure. Experimental Cell Research, 2017, 358, 253-259.	1.2	64
43	Association between Rectal Optical Signatures and Colonic Neoplasia: Potential Applications for Screening. Cancer Research, 2009, 69, 4476-4483.	0.4	63
44	Spectroscopic Microvascular Blood Detection From the Endoscopically Normal Colonic Mucosa: Biomarker for Neoplasia Risk. Gastroenterology, 2008, 135, 1069-1078.	0.6	62
45	Role of Cytoskeleton in Controlling the Disorder Strength of Cellular Nanoscale Architecture. Biophysical Journal, 2010, 99, 989-996.	0.2	59
46	Can OCT be sensitive to nanoscale structural alterations in biological tissue?. Optics Express, 2013, 21, 9043.	1.7	59
47	Optical Detection of Buccal Epithelial Nanoarchitectural Alterations in Patients Harboring Lung Cancer: Implications for Screening. Cancer Research, 2010, 70, 7748-7754.	0.4	56
48	Nanocytology of Rectal Colonocytes to Assess Risk of Colon Cancer Based on Field Cancerization. Cancer Research, 2012, 72, 2720-2727.	0.4	56
49	Label-free imaging of the native, living cellular nanoarchitecture using partial-wave spectroscopic microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6372-E6381.	3.3	56
50	Superresolution intrinsic fluorescence imaging of chromatin utilizing native, unmodified nucleic acids for contrast. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9716-9721.	3.3	56
51	Structural length-scale sensitivities of reflectance measurements in continuous random media under the Born approximation. Optics Letters, 2012, 37, 5220.	1.7	55
52	Endogenous optical biomarkers of normal and human papillomavirus immortalized epithelial cells. International Journal of Cancer, 2008, 122, 363-371.	2.3	54
53	In vivo functional microangiography by visible-light optical coherence tomography. Biomedical Optics Express, 2014, 5, 3603.	1.5	53
54	Crowding-Induced Structural Alterations of Random-Loop Chromosome Model. Physical Review Letters, 2011, 106, 168102.	2.9	52

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55	Optical Markers in Duodenal Mucosa Predict the Presence of Pancreatic Cancer. Clinical Cancer Research, 2007, 13, 4392-4399.	3.2	50
56	Superenhanced backscattering of light by nanoparticles. Optics Letters, 2006, 31, 196.	1.7	49
57	Advances in Biophotonics Detection of Field Carcinogenesis for Colon Cancer Risk Stratification. Journal of Cancer, 2013, 4, 251-261.	1.2	49
58	Robust detection of deeply subwavelength pits in simulated optical data-storage disks using photonic jets. Applied Physics Letters, 2008, 92, 211102.	1.5	48
59	Macrogenomic engineering via modulation of the scaling of chromatin packing density. Nature Biomedical Engineering, 2017, 1, 902-913.	11.6	47
60	Measuring mucosal blood supply in vivo with a polarization-gating probe. Applied Optics, 2008, 47, 6046.	2.1	46
61	Light-Scattering Technologies for Field Carcinogenesis Detection: A Modality for Endoscopic Prescreening. Gastroenterology, 2011, 140, 35-41.e5.	0.6	46
62	Generation of an incident focused light pulse in FDTD. Optics Express, 2008, 16, 19208.	1.7	45
63	Single Realization Stochastic FDTD for Weak Scattering Waves in Biological Random Media. IEEE Transactions on Antennas and Propagation, 2013, 61, 818-828.	3.1	45
64	Optimal spectral reshaping for resolution improvement in optical coherence tomography. Optics Express, 2006, 14, 5909.	1.7	43
65	Skeletal light-scattering accelerates bleaching response in reef-building corals. BMC Ecology, 2016, 16, 10.	3.0	43
66	Risk Stratification of Colon Carcinogenesis through Enhanced Backscattering Spectroscopy Analysis of the Uninvolved Colonic Mucosa. Clinical Cancer Research, 2006, 12, 961-968.	3.2	41
67	Depth-resolved low-coherence enhanced backscattering. Optics Letters, 2005, 30, 741.	1.7	39
68	Spatially resolved optical and ultrastructural properties of colorectal and pancreatic field carcinogenesis observed by inverse spectroscopic optical coherence tomography. Journal of Biomedical Optics, 2014, 19, 036013.	1.4	37
69	Nanoscale chromatin imaging and analysis platform bridges 4D chromatin organization with molecular function. Science Advances, 2021, 7, .	4.7	37
70	ASPirin Intervention for the REDuction of colorectal cancer risk (ASPIRED): a study protocol for a randomized controlled trial. Trials, 2017, 18, 50.	0.7	36
71	Metabolic reprogramming of the premalignant colonic mucosa is an early event in carcinogenesis. Oncotarget, 2017, 8, 20543-20557.	0.8	36
72	Optimal design of structured nanospheres for ultrasharp light-scattering resonances as molecular imaging multilabels. Journal of Biomedical Optics, 2005, 10, 024005.	1.4	35

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73	Low-coherence enhanced backscattering: review of principles and applications for colon cancer screening. Journal of Biomedical Optics, 2006, 11, 041125.	1.4	35
74	Rectal Mucosal Microvascular Blood Supply Increase Is Associated with Colonic Neoplasia. Clinical Cancer Research, 2009, 15, 3110-3117.	3.2	34
75	Disordered chromatin packing regulates phenotypic plasticity. Science Advances, 2020, 6, eaax6232.	4.7	34
76	Down-regulation of SNAIL suppresses MIN mouse tumorigenesis: modulation of apoptosis, proliferation, and fractal dimension. Molecular Cancer Therapeutics, 2004, 3, 1159-65.	1.9	34
77	ADE-FDTD Scattered-Field Formulation for Dispersive Materials. IEEE Microwave and Wireless Components Letters, 2008, 18, 4-6.	2.0	33
78	The influence of chromosome density variations on the increase in nuclear disorder strength in carcinogenesis. Physical Biology, 2011, 8, 015004.	0.8	33
79	Computation of tightly-focused laser beams in the FDTD method. Optics Express, 2013, 21, 87.	1.7	33
80	Super-resolution two-photon microscopy via scanning patterned illumination. Physical Review E, 2015, 91, 042703.	0.8	33
81	Accurately quantifying low-abundant targets amid similar sequences by revealing hidden correlations in oligonucleotide microarray data. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13629-13634.	3.3	32
82	Physical and data structure of 3D genome. Science Advances, 2020, 6, eaay4055.	4.7	32
83	Circular polarization memory effect in low-coherence enhanced backscattering of light. Optics Letters, 2006, 31, 2744.	1.7	31
84	Insights into the field carcinogenesis of ovarian cancer based on the nanocytology of endocervical and endometrial epithelial cells. International Journal of Cancer, 2013, 133, 1143-1152.	2.3	31
85	Subsurface Super-resolution Imaging of Unstained Polymer Nanostructures. Scientific Reports, 2016, 6, 28156.	1.6	31
86	Nanoparticle sizing with a resolution beyond the diffraction limit using UV light scattering spectroscopy. Optics Communications, 2003, 228, 1-7.	1.0	30
87	Accuracy of the Born approximation in calculating the scattering coefficient of biological continuous random media. Optics Letters, 2009, 34, 2679.	1.7	30
88	Spectral biomarkers for chemoprevention of colonic neoplasia: a placebo-controlled double-blinded trial with aspirin. Gut, 2017, 66, 285-292.	6.1	30
89	Nanoscale markers of esophageal field carcinogenesis: potential implications for esophageal cancer screening. Endoscopy, 2013, 45, 983-988.	1.0	29
90	A predictive model of backscattering at subdiffusion length scales. Biomedical Optics Express, 2010, 1, 1034.	1.5	28

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91	Ultrastructural alterations in field carcinogenesis measured by enhanced backscattering spectroscopy. Journal of Biomedical Optics, 2013, 18, 097002.	1.4	28
92	Nanocytological Field Carcinogenesis Detection to Mitigate Overdiagnosis of Prostate Cancer: A Proof of Concept Study. PLoS ONE, 2015, 10, e0115999.	1.1	27
93	Exact solution of Maxwellâ€™s equations for optical interactions with a macroscopic random medium. Optics Letters, 2004, 29, 1393.	1.7	26
94	Characterization of Light Transport in Scattering Media at Subdiffusion Length Scales with Low-Coherence Enhanced Backscattering. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 619-626.	1.9	26
95	Investigating Population Risk Factors of Pancreatic Cancer by Evaluation of Optical Markers in the Duodenal Mucosa. Disease Markers, 2008, 25, 313-321.	0.6	25
96	Open source software for electric field Monte Carlo simulation of coherent backscattering in biological media containing birefringence. Journal of Biomedical Optics, 2012, 17, 115001.	1.4	25
97	Polarized Enhanced Backscattering Spectroscopy for Characterization of Biological Tissues at Subdiffusion Length Scales. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1313-1325.	1.9	25
98	Monte Carlo Investigation of Optical Coherence Tomography Retinal Oximetry. IEEE Transactions on Biomedical Engineering, 2015, 62, 2308-2315.	2.5	25
99	Optical Detection of Early Damage in Retinal Ganglion Cells in a Mouse Model of Partial Optic Nerve Crush Injury. , 2016, 57, 5665.		25
100	The Greater Genomic Landscape: The Heterogeneous Evolution of Cancer. Cancer Research, 2016, 76, 5605-5609.	0.4	25
101	Inducible nitric oxide synthase (iNOS) mediates the early increase of blood supply (EIBS) in colon carcinogenesis. FEBS Letters, 2007, 581, 3857-3862.	1.3	24
102	Analysis of pressure, angle and temporal effects on tissue optical properties from â€¨polarization-gated spectroscopic probe measurements. Biomedical Optics Express, 2010, 1, 489.	1.5	24
103	Endâ€‰binding protein 1 (EB1) upâ€‰regulation is an early event in colorectal carcinogenesis. FEBS Letters, 2014, 588, 829-835.	1.3	24
104	Theoretical model for optical oximetry at the capillary level: exploring hemoglobin oxygen saturation through backscattering of single red blood cells. Journal of Biomedical Optics, 2017, 22, 025002.	1.4	24
105	Spectral contrast optical coherence tomography angiography enables single-scan vessel imaging. Light: Science and Applications, 2019, 8, 7.	7.7	24
106	Spectral Markers in Preneoplastic Intestinal Mucosa: An Accurate Predictor of Tumor Risk in the MIN Mouse. Cancer Epidemiology Biomarkers and Prevention, 2005, 14, 1639-1645.	1.1	23
107	Neo-angiogenesis and the premalignant micro-circulatory augmentation of early colon carcinogenesis. Cancer Letters, 2011, 306, 205-213.	3.2	23
108	Spectroscopic Applications in Gastrointestinal Endoscopy. Clinical Gastroenterology and Hepatology, 2012, 10, 1335-1341.	2.4	23

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109	What structural length scales can be detected by the spectral variance of a microscope image?. Optics Letters, 2014, 39, 4290.	1.7	23
110	Review of interferometric spectroscopy of scattered light for the quantification of subdiffractional structure of biomaterials. Journal of Biomedical Optics, 2017, 22, 030901.	1.4	23
111	Chemoprevention of colon carcinogenesis by polyethylene glycol: suppression of epithelial proliferation via modulation of SNAIL/Î²-catenin signaling. Molecular Cancer Therapeutics, 2006, 5, 2060-2069.	1.9	22
112	Quantification of nanoscale density fluctuations by electron microscopy: probing cellular alterations in early carcinogenesis. Physical Biology, 2011, 8, 026012.	0.8	21
113	Origin of low-coherence enhanced backscattering. Optics Letters, 2006, 31, 1459.	1.7	20
114	Measurement of the spatial backscattering impulse-response at short length scales with polarized enhanced backscattering. Optics Letters, 2011, 36, 4737.	1.7	20
115	Network signatures of nuclear and cytoplasmic density alterations in a model of pre and postmetastatic colorectal cancer. Journal of Biomedical Optics, 2014, 19, 016016.	1.4	20
116	Subdiffusion reflectance spectroscopy to measure tissue ultrastructure and microvasculature: model and inverse algorithm. Journal of Biomedical Optics, 2015, 20, 097002.	1.4	20
117	Parallel Three-Dimensional Tracking of Quantum Rods Using Polarization-Sensitive Spectroscopic Photon Localization Microscopy. ACS Photonics, 2017, 4, 1747-1752.	3.2	20
118	Single capillary oximetry and tissue ultrastructural sensing by dual-band dual-scan inverse spectroscopic optical coherence tomography. Light: Science and Applications, 2018, 7, 57.	7.7	20
119	Equivalent volume-averaged light scattering behavior of randomly inhomogeneous dielectric spheres in the resonant range. Optics Letters, 2003, 28, 765.	1.7	19
120	Simulation of enhanced backscattering of light by numerically solving Maxwell's equations without heuristic approximations. Optics Express, 2005, 13, 3666.	1.7	19
121	Pseudospectral time domain simulations of multiple light scattering in three-dimensional macroscopic random media. Radio Science, 2006, 41, n/a-n/a.	0.8	19
122	Colon Cancer Screening. Archives of Internal Medicine, 2006, 166, 2177.	4.3	19
123	A fiber optic probe design to measure depth- limited optical properties in-vivo with Low-coherence Enhanced Backscattering (LEBS) Spectroscopy. Optics Express, 2012, 20, 19643.	1.7	19
124	Fractal Characterization of Chromatin Decompaction in Live Cells. Biophysical Journal, 2015, 109, 2218-2226.	0.2	19
125	Analytical techniques for addressing forward and inverse problems of light scattering by irregularly shaped particles. Optics Letters, 2004, 29, 1239.	1.7	18
126	Colonoscopy and Optical Biopsy: Bridging Technological Advances to Clinical Practice. Gastroenterology, 2011, 140, 1863-1867.	0.6	18

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127	Buccal Spectral Markers for Lung Cancer Risk Stratification. PLoS ONE, 2014, 9, e110157.	1.1	18
128	Analysis of three-dimensional chromatin packing domains by chromatin scanning transmission electron microscopy (ChromSTEM). Scientific Reports, 2022, 12, .	1.6	18
129	A biodegradable vascularizing membrane: A feasibility study. Acta Biomaterialia, 2007, 3, 631-642.	4.1	17
130	Quantification of nanoscale density fluctuations using electron microscopy: Light-localization properties of biological cells. Applied Physics Letters, 2010, 97, 243704.	1.5	17
131	Numerical simulation of partially coherent broadband optical imaging using the finite-difference time-domain method. Optics Letters, 2011, 36, 1596.	1.7	17
132	High-speed spectral nanocytology for early cancer screening. Journal of Biomedical Optics, 2013, 18, 117002.	1.4	17
133	Rectal Optical Markers for In Vivo Risk Stratification of Premalignant Colorectal Lesions. Clinical Cancer Research, 2015, 21, 4347-4355.	3.2	17
134	Multimodal interference-based imaging of nanoscale structure and macromolecular motion uncovers UV induced cellular paroxysm. Nature Communications, 2019, 10, 1652.	5.8	16
135	Nanocytology for field carcinogenesis detection: novel paradigm for lung cancer risk stratification. Future Oncology, 2011, 7, 1-3.	1.1	15
136	The Microscope in a Computer: Image Synthesis from Three-Dimensional Full-Vector Solutions of Maxwellâ€™s Equations at the Nanometer Scale. Progress in Optics, 2012, 57, 1-91.	0.4	15
137	Buccal microRNA dysregulation in lung field carcinogenesis: Gender-specific implications. International Journal of Oncology, 2014, 45, 1209-1215.	1.4	15
138	Dynamic Crowding Regulates Transcription. Biophysical Journal, 2020, 118, 2117-2129.	0.2	15
139	Penetration depth of low-coherence enhanced backscattered light in subdiffusion regime. Physical Review E, 2007, 75, 041914.	0.8	14
140	Evidence-based Guidelines for Precision Risk Stratification-Based Screening (PRSBS) for Colorectal Cancer: Lessons learned from the US Armed Forces: Consensus and Future Directions. Journal of Cancer, 2013, 4, 172-192.	1.2	14
141	Quantitative analysis of depolarization of backscattered light by stochastically inhomogeneous dielectric particles. Optics Letters, 2005, 30, 902.	1.7	13
142	Optical Measurement of Rectal Microvasculature as an Adjunct to Flexible Sigmoidosocopy: Gender-Specific Implications. Cancer Prevention Research, 2010, 3, 844-851.	0.7	13
143	In vivo measurement of the shape of the tissue-refractive-index correlation function and its applicationto detection of colorectal field carcinogenesis. Journal of Biomedical Optics, 2012, 17, 047005.	1.4	13
144	Angora: A Free Software Package for Finite-Difference Time-Domain Electromagnetic Simulation. IEEE Antennas and Propagation Magazine, 2013, 55, 80-93.	1.2	13

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145	Colocalization of cellular nanostructure using confocal fluorescence and partial wave spectroscopy. Journal of Biophotonics, 2017, 10, 377-384.	1.1	13
146	Atomic Force Microscopy Detects the Difference in Cancer Cells of Different Neoplastic Aggressiveness via Machine Learning. Advanced NanoBiomed Research, 2021, 1, 2000116.	1.7	13
147	Spectral Slope from the Endoscopically-Normal Mucosa Predicts Concurrent Colonic Neoplasia: A Pilot Ex-Vivo Clinical Study. Diseases of the Colon and Rectum, 2008, 51, 1381-1386.	0.7	12
148	Biological Mechanisms Underlying Structural Changes Induced by Colorectal Field Carcinogenesis Measured with Low-Coherence Enhanced Backscattering (LEBS) Spectroscopy. PLoS ONE, 2013, 8, e57206.	1.1	12
149	Nano-Architectural Alterations in Mucus Layer Fecal Colonocytes in Field Carcinogenesis: Potential for Screening. Cancer Prevention Research, 2013, 6, 1111-1119.	0.7	12
150	In Vivo Risk Analysis of Pancreatic Cancer Through Optical Characterization of Duodenal Mucosa. Pancreas, 2015, 44, 735-741.	0.5	12
151	Detection of extracellular matrix modification in cancer models with inverse spectroscopic optical coherence tomography. Physics in Medicine and Biology, 2016, 61, 6892-6904.	1.6	12
152	Correlating colorectal cancer risk with field carcinogenesis progression using partial wave spectroscopic microscopy. Cancer Medicine, 2018, 7, 2109-2120.	1.3	12
153	Phylogenetic analysis of symbiont transmission mechanisms reveal evolutionary patterns in thermotolerance and host specificity that enhance bleaching resistance among vertically transmitted Symbiodinium. European Journal of Phycology, 2018, 53, 443-459.	0.9	12
154	A Frequency-Domain Near-Field-to-Far-Field Transform for Planar Layered Media. IEEE Transactions on Antennas and Propagation, 2012, 60, 1878-1885.	3.1	11
155	Higher Order Chromatin Modulator Cohesin SA1 Is an Early Biomarker for Colon Carcinogenesis: Race-Specific Implications. Cancer Prevention Research, 2016, 9, 844-854.	0.7	11
156	Characterizing chromatin packing scaling in whole nuclei using interferometric microscopy. Optics Letters, 2020, 45, 4810.	1.7	11
157	Colonic Mucosal Fatty Acid Synthase as an Early Biomarker for Colorectal Neoplasia: Modulation by Obesity and Gender. Cancer Epidemiology Biomarkers and Prevention, 2014, 23, 2413-2421.	1.1	10
158	Nanoscale refractive index fluctuations detected via sparse spectral microscopy. Biomedical Optics Express, 2016, 7, 883.	1.5	10
159	Measuring Nanoscale Chromatin Heterogeneity with Partial Wave Spectroscopic Microscopy. Methods in Molecular Biology, 2018, 1745, 337-360.	0.4	10
160	Polarization gating spectroscopy of normal-appearing duodenal mucosa to detect pancreatic cancer. Gastrointestinal Endoscopy, 2014, 80, 786-793.e2.	0.5	9
161	Depth-resolved measurement of mucosal microvascular blood content using â€˜low-coherence enhanced backscattering spectroscopy. Biomedical Optics Express, 2010, 1, 1196.	1.5	8
162	Alternate formulation of enhanced backscattering as phase conjugation and diffraction: derivation and experimental observation. Optics Express, 2011, 19, 11922.	1.7	8

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163	Near-field penetrating optical microscopy: a live cell nanoscale refractive index measurement technique for quantification of internal macromolecular density. Optics Letters, 2012, 37, 506.	1.7	8
164	Finite-difference time-domain-based optical microscopy simulation of dispersive media facilitates the development of optical imaging techniques. Journal of Biomedical Optics, 2016, 21, 065004.	1.4	8
165	The transformation of the nuclear nanoarchitecture in human field carcinogenesis. Future Science OA, 2017, 3, FSO206.	0.9	8
166	Quantitative quality-control metrics for in vivo oximetry in small vessels by visible light optical coherence tomography angiography. Biomedical Optics Express, 2019, 10, 465.	1.5	8
167	Investigation of the noise-like structures of the total scattering cross-section of random media. Optics Express, 2005, 13, 6127.	1.7	7
168	Spectroscopic translation of cellâ€“material interactions. Biomaterials, 2007, 28, 162-174.	5.7	7
169	Structured interference optical coherence tomography. Optics Letters, 2012, 37, 3048.	1.7	7
170	Using electron microscopy to calculate optical properties of biological samples. Biomedical Optics Express, 2016, 7, 4749.	1.5	7
171	Bleaching response of coral species in the context of assemblage response. Coral Reefs, 2017, 36, 395-400.	0.9	7
172	Single Nucleotide Polymorphism Facilitated Down-Regulation of the Cohesin Stromal Antigen-1: Implications for Colorectal Cancer Racial Disparities. Neoplasia, 2018, 20, 289-294.	2.3	7
173	Quasi one-dimensional light beam generated by a graded-index microsphere: errata. Optics Express, 2010, 18, 3973.	1.7	6
174	Spectroscopic microscopy can quantify the statistics of subdiffractional refractive-index fluctuations in media with random rough surfaces. Optics Letters, 2015, 40, 4931.	1.7	6
175	In vivo broadband visible light optical coherence tomography probe enables inverse spectroscopic analysis. Optics Letters, 2018, 43, 619.	1.7	6
176	Early increase in blood supply (EIBS) is associated with tumor risk in the Azoxymethane model of colon cancer. BMC Cancer, 2018, 18, 814.	1.1	6
177	Physicochemical mechanotransduction alters nuclear shape and mechanics via heterochromatin formation. Molecular Biology of the Cell, 2019, , mbc.E19-05-0286.	0.9	6
178	Nanoscale Differences Assessed by Partial Wave Spectroscopy in the Field of Esophageal Cancer and Barrett's Esophagus. Gastroenterology, 2011, 140, S-752.	0.6	5
179	911 A Novel Use of Angiotensin II Receptor Blocker (ARB) Losartan to Inhibit AOM Induced Tumorigenesis and Neoangiogenesis in Experimental Colon Cancer. Gastroenterology, 2015, 148, S-172.	0.6	5
180	Automated Cell Selection Using Support Vector Machine for Application to Spectral Nanocytology. BioMed Research International, 2016, 2016, 1-10.	0.9	5

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181	Stochastic fluorescence switching of nucleic acids under visible light illumination. Optics Express, 2017, 25, 7929.	1.7	5
182	Uncovering the role of Symbiodiniaceae assemblage composition and abundance in coral bleaching response by minimizing sampling and evolutionary biases. BMC Microbiology, 2020, 20, 124.	1.3	5
183	Spike-in normalization for single-cell RNA-seq reveals dynamic global transcriptional activity mediating anticancer drug response. NAR Genomics and Bioinformatics, 2021, 3, lqab054.	1.5	5
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