Andrea Farina

List of Publications by Year
in descending order

144 papers	2,223 citations	218677 26 h-index	233421 45 g-index
144 all docs	144 docs citations	144 times ranked	1686 citing authors

#	Article	IF	Citations
1	New frontiers in time-domain diffuse optics, a review. Journal of Biomedical Optics, 2016, 21, 091310.	2.6	181
2	Determination of reference values for optical properties of liquid phantoms based on Intralipid and India ink. Biomedical Optics Express, 2014, 5, 2037.	2.9	133
3	Performance assessment of time-domain optical brain imagers, part 1: basic instrumental performance protocol. Journal of Biomedical Optics, 2014, 19, 086010.	2.6	101
4	Towards next-generation time-domain diffuse optics for extreme depth penetration and sensitivity. Biomedical Optics Express, 2015, 6, 1749.	2.9	100
5	Diffuse optical characterization of collagen absorption from 500 to 1700Ânm. Journal of Biomedical Optics, 2017, 22, 015006.	2.6	95
6	Thereâ€™s plenty of light at the bottom: statistics of photon penetration depth in random media. Scientific Reports, 2016, 6, 27057.	3.3	82
7	Adaptive Basis Scan by Wavelet Prediction for Single-Pixel Imaging. IEEE Transactions on Computational Imaging, 2017, 3, 36-46.	4.4	81
8	Fast silicon photomultiplier improves signal harvesting and reduces complexity in time-domain diffuse optics. Optics Express, 2015, 23, 13937.	3.4	68
9	Broadband (600â€“1350 nm) Time-Resolved Diffuse Optical Spectrometer for Clinical Use. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 406-414.	2.9	66
10	Diffuse optical spectroscopy of breast tissue extended to 1100â€‚nm. Journal of Biomedical Optics, 2009, 14, 054030.	2.6	65
11	Calibration of scattering and absorption properties of a liquid diffusive medium at NIR wavelengths. Time-resolved method. Optics Express, 2007, 15, 6589.	3.4	64
12	Time-resolved multispectral imaging based on an adaptive single-pixel camera. Optics Express, 2018, 26, 10550.	3.4	54
13	Portable, large-bandwidth time-resolved system for diffuse optical spectroscopy. Optics Express, 2007, 15, 14482.	3.4	52
14	Time-Resolved Diffuse Optical Spectroscopy up to 1700 nm by Means of a Time-Gated InGaAs/InP Single-Photon Avalanche Diode. Applied Spectroscopy, 2012, 66, 944-950.	2.2	48
15	In-vivo multilaboratory investigation of the optical properties of the human head. Biomedical Optics Express, 2015, 6, 2609.	2.9	48
16	Mechanically switchable solid inhomogeneous phantom for performance tests in diffuse imaging and spectroscopy. Journal of Biomedical Optics, 2015, 20, 121304.	2.6	45
17	A portable UV-fluorescence multispectral imaging system for the analysis of painted surfaces. Review of Scientific Instruments, 2008, 79, 086112.	1.3	38
18	Time-Domain Broadband near Infrared Spectroscopy of the Female Breast: A Focused Review from Basic Principles to Future Perspectives. Journal of Near Infrared Spectroscopy, 2012, 20, 223-235.	1.5	37

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19	Time-resolved reflectance spectroscopy nondestructively reveals structural changes in â€˜Pink LadyÂ®â€™ apples during storage. Procedia Food Science, 2011, 1, 81-89.	0.6	35
20	Effects of time-gated detection in diffuse optical imaging at short source-detector separation. Journal Physics D: Applied Physics, 2015, 48, 045401.	2.8	35
21	High-throughput 3D imaging of single cells with light-sheet fluorescence microscopy on chip. Biomedical Optics Express, 2020, 11, 4397.	2.9	35
22	Time-Resolved Optical Spectroscopy of Wood. Applied Spectroscopy, 2008, 62, 569-574.	2.2	34
23	Diffuse Optical Techniques Applied to Wood Characterisation. Journal of Near Infrared Spectroscopy, 2013, 21, 259-268.	1.5	32
24	Compressed sensing in fluorescence microscopy. Progress in Biophysics and Molecular Biology, 2022, 168, 66-80.	2.9	32
25	Frequency offset Raman spectroscopy (FORS) for depth probing of diffusive media. Optics Express, 2017, 25, 4585.	3.4	30
26	Spectrally Resolved Single-Photon Timing of Silicon Photomultipliers for Time-Domain Diffuse Spectroscopy. IEEE Photonics Journal, 2015, 7, 1-12.	2.0	28
27	Emission Engineering in Germanium Nanoresonators. ACS Photonics, 2015, 2, 53-59.	6.6	27
28	Assessment of variations in moisture content of wood using time-resolved diffuse optical spectroscopy. Applied Optics, 2009, 48, B87.	2.1	25
29	Time-domain diffuse optical tomography using silicon photomultipliers: feasibility study. Journal of Biomedical Optics, 2016, 21, 116002.	2.6	25
30	Bandpass Effects in Time-Resolved Diffuse Spectroscopy. Applied Spectroscopy, 2009, 63, 48-56.	2.2	23
31	Broadband (550â€“1350â€‰nm) diffuse optical characterization of thyroid chromophores. Scientific Reports, 2018, 8, 10015.	3.3	23
32	Multispectral compressive fluorescence lifetime imaging microscopy with a SPAD array detector. Optics Letters, 2021, 46, 1353.	3.3	23
33	In Vivo, Non-Invasive Characterization of Human Bone by Hybrid Broadband (600-1200 nm) Diffuse Optical and Correlation Spectroscopies. PLoS ONE, 2016, 11, e0168426.	2.5	23
34	Time-resolved diffuse optical spectroscopy of small tissue samples. Optics Express, 2007, 15, 3301.	3.4	22
35	Time- and frequency-resolved fluorescence with a single TCSPC detector via a Fourier-transform approach. Optics Express, 2018, 26, 2270.	3.4	22
36	Non-invasive investigation of adipose tissue by time domain diffuse optical spectroscopy. Biomedical Optics Express, 2020, 11, 2779.	2.9	20

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37	Multiple-view diffuse optical tomography system based on time-domain compressive measurements. Optics Letters, 2017, 42, 2822.	3.3	19
38	Towards the use of bioresorbable fibers in timeâ€domain diffuse optics. Journal of Biophotonics, 2018, 11, e201600275.	2.3	19
39	Quantification in time-domain diffuse optical tomography using Mellin-Laplace transforms. Biomedical Optics Express, 2016, 7, 4346.	2.9	17
40	Light diffusion in quenched disorder: Role of step correlations. Physical Review E, 2014, 89, 022141.	2.1	16
41	Time-Domain Functional Diffuse Optical Tomography System Based on Fiber-Free Silicon Photomultipliers. Applied Sciences (Switzerland), 2017, 7, 1235.	2.5	16
42	Nondestructive optical detection of monomer uptake in wood polymer composites. Optics Letters, 2014, 39, 228.	3.3	15
43	Broadband Time Domain Diffuse Optical Reflectance Spectroscopy: A Review of Systems, Methods, and Applications. Applied Sciences (Switzerland), 2019, 9, 5465.	2.5	15
44	Optical signatures of radiofrequency ablation in biological tissues. Scientific Reports, 2021, 11, 6579.	3.3	15
45	Spatially modulated illumination allows for light sheet fluorescence microscopy with an incoherent source and compressive sensing. Biomedical Optics Express, 2019, 10, 5776.	2.9	15
46	Depth sensitivity of frequency domain optical measurements in diffusive media. Biomedical Optics Express, 2017, 8, 2990.	2.9	12
47	Recipes to make organic phantoms for diffusive optical spectroscopy. Applied Optics, 2013, 52, 2494.	1.8	11
48	Time-domain Raman analytical forward solvers. Optics Express, 2016, 24, 20382.	3.4	11
49	Time resolved diffuse optical spectroscopy with geometrically accurate models for bulk parameter recovery. Biomedical Optics Express, 2016, 7, 3784.	2.9	11
50	Broadband diffuse optical characterization of elastin for biomedical applications. Biophysical Chemistry, 2017, 229, 130-134.	2.8	11
51	Chromophore decomposition in multispectral time-resolved diffuse optical tomography. Biomedical Optics Express, 2017, 8, 4772.	2.9	11
52	Non destructive detection of brown heart in â€˜Braeburnâ€™ apples by time-resolved reflectance spectroscopy. Procedia Food Science, 2011, 1, 413-420.	0.6	10
53	Systematic study of the effect of ultrasound gel on the performances of time-domain diffuse optics and diffuse correlation spectroscopy. Biomedical Optics Express, 2019, 10, 3899.	2.9	10
54	Absorption spectroscopy of powdered materials using time-resolved diffuse optical methods. Applied Optics, 2012, 51, 7858.	1.8	9

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55	Giga-voxel multidimensional fluorescence imaging combining single-pixel detection and data fusion. Optics Letters, 2021, 46, 4312.	3.3	9
56	Multi-laboratory performance assessment of diffuse optics instruments: the BitMap exercise. Journal of Biomedical Optics, 2022, 27, .	2.6	9
57	Time-resolved diffused optical characterization of key tissue constituents of human bony prominence locations. Proceedings of SPIE, 2015, , .	0.8	7
58	Above pile-up fluorescence microscopy with a 32 Mc/s single-channel time-resolved SPAD system. Optics Letters, 2022, 47, 82.	3.3	7
59	Assessment of basic instrumental performance of time-domain optical brain imagers. Proceedings of SPIE, 2011, , .	0.8	6
60	Evaluation of a pipeline for simulation, reconstruction, and classification in ultrasound-aided diffuse optical tomography of breast tumors. Journal of Biomedical Optics, 2022, 27, .	2.6	6
61	Accuracy of the nonlinear fitting procedure for time-resolved measurements on diffusive phantoms at NIR wavelengths. , 2009, , .		5
62	Time-resolved laser spectroscopy for the in situ characterization of methacrylate monomer flow within spruce. Wood Science and Technology, 2017, 51, 227-242.	3.2	5
63	Multi Simulation Platform for Time Domain Diffuse Optical Tomography: An Application to a Compact Hand-Held Reflectance Probe. Applied Sciences (Switzerland), 2019, 9, 2849.	2.5	5
64	Three-dimensional bright-field microscopy with isotropic resolution based on multi-view acquisition and image fusion reconstruction. Scientific Reports, 2020, 10, 12771.	3.3	5
65	Note: Comparison between a prism-based and an acousto-optic tunable filter-based spectrometer for diffusive media. Review of Scientific Instruments, 2013, 84, 016109.	1.3	4
66	Broadband time-resolved diffuse optical spectrometer for clinical diagnostics: characterization and in-vivo measurements in the 600-1350 nm spectral range. , 2015, , .		4
67	Novel time-resolved camera based on compressed sensing. Optics Express, 2019, 27, 31889.	3.4	4
68	Photonics for Life. IEEE Pulse, 2011, 2, 16-23.	0.3	3
69	Non-Contact Inclusion Detection in Food Through a Single-Photon Time-of-Flight Imager. IEEE Sensors Journal, 2017, 17, 78-83.	4.7	3
70	Solid heterogeneous phantoms for multimodal ultrasound and diffuse optical imaging: an outcome of the SOLUS project for standardization. , 2019, , .		3
71	Role of collagen scattering for in vivo tissue characterization. , 2010, , .		3
72	Time-resolved diffuse optical spectroscopy of wood. , 2007, 6633, 346.		2

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73	Time-resolved diffuse optical spectroscopy up to 1700 nm using a time-gated InGaAs/InP single-photon avalanche diode. Proceedings of SPIE, 2011, , .	0.8	2
74	In vivo swine myocardial tissue characterization and monitoring during open chest surgery by time-resolved diffuse near-infrared spectroscopy. , 2011, , .		2
75	Time-resolved optical spectroscopy of the chest: is it possible to probe the lung?. , 2013, , .		2
76	Towards next generation time-domain diffuse optics devices. , 2015, , .		2
77	Adaptive acquisitions in biomedical optical imaging based on single pixel camera: Comparison with compressive sensing. , 2016, , .		2
78	Optical properties of recent non-fullerene molecular acceptors for bulk heterojunction solar cells. Results in Physics, 2020, 19, 103633.	4.1	2
79	Time-resolved diffuse optical tomography system based on adaptive structured light illumination and compressive sensing detection. , 2018, , .		2
80	Monitoring radiofrequency ablation of biological tissue using broadband time-resolved diffuse optical spectroscopy. , 2019, , .		2
81	An adaptive scheme for diffuse-optical tomography based on combined structured-light illumination and single-pixel camera detection. , 2019, , .		2
82	Optical Characterisation of Bone Tissue for Diffusion Optical Tomography Applied to Skeletal Implants. , 2007, , .		1
83	Clinically compatible time-resolved diffuse spectroscopy in the 600-1100 nm bandwidth. , 2008, , .		1
84	Time-domain diffuse optical spectroscopy up to 1700 nm using an InGaAs/InP single-photon avalanche diode. Proceedings of SPIE, 2011, , .	0.8	1
85	Time-domain diffuse optical spectroscopy beyond 1100 nm: initial feasibility study. Proceedings of SPIE, 2011, , .	0.8	1
86	First in vivo spectral characterization of breast up to 1300 nm. , 2011, , .		1
87	Comparison of organic phantom recipes and characterization by time-resolved diffuse optical spectroscopy. Proceedings of SPIE, 2013, , .	0.8	1
88	In-vivo optical spectroscopy in the time-domain beyond 1100 nm. , 2013, , .		1
89	Time domain diffuse optical spectroscopy:In vivoquantification of collagen in breast tissue. , 2015, , .		1
90	Time-domain diffuse optics: towards next generation devices. , 2015, , .		1

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91	Non-contact time-domain imaging of functional brain activation and heterogeneity of superficial signals. Proceedings of SPIE, 2017, , .	0.8	1
92	Thyroid tissue constituents characterization and application to in vivo studies by broadband (600-1200) Tj ETQq0 0 0 rgBT /Overlock 10		1
93	Time-domain diffuse optics using bioresorbable fibers: a proof-of-principle study. , 2017, , .		1
94	Semiconducting carbon nanotubes in photovoltaic blends: The case of pTB7:PC60BM:(6,5) SWNT. Journal of Applied Physics, 2019, 125, 083101.	2.5	1
95	Bioresorbable fibers for time-domain diffuse optical measurements: a step toward next generation optical implantable devices. , 2019, , .		1
96	Key features in the optical properties of tissue during and after radiofrequency ablation. , 2020, , .		1
97	Broadband Time-Resolved Diffuse Optical Spectrometer for Clinical Diagnostics: Characterization and in-vivo Measurements in the 600-1350 nm spectral range. , 2015, , .		1
98	In vivo depth heterogeneity of the abdomen assessed by broadband time-domain diffuse optical spectroscopy. , 2017, , .		1
99	Multi-wavelength time domain diffuse optical tomography for breast cancer: initial results on silicone phantoms. , 2019, , .		1
100	Time domain diffuse optical spectroscopy for the monitoring of thermal treatment in biological tissue.. , 2020, , .		1
101	Multi-laboratory efforts for the standardization of performance assessment of diffuse optics instruments â€“ the BitMap Exercise. , 2020, , .		1
102	CW and time domain procedures for accurate calibration of optical properties of liquid diffusive media at NIR wavelengths. Proceedings of SPIE, 2007, , .	0.8	0
103	Time-resolved diffuse optical spectroscopy of small tissue samples. Proceedings of SPIE, 2007, , .	0.8	0
104	Effects of a finite spectral bandwidth light source in time-resolved diffuse spectroscopy. Proceedings of SPIE, 2009, , .	0.8	0
105	Multi-laboratory investigation of the optical properties of the human head. , 2013, , .		0
106	Solid switchable phantom for diffuse optical imaging. , 2015, , .		0
107	Design and construction of a solid switchable phantom for diffuse optical imaging. , 2015, , .		0
108	Diffuse optical tomography by using time-resolved single pixel camera. , 2015, , .		0

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109	Photonics advancements in time-domain diffuse imaging: towards hand-held and wearable devices. , 2016, , .		0
110	Statistics of photon penetration depth in diffusive media. , 2017, , .		0
111	Diffuse optical tomography based on time-resolved compressive sensing. , 2017, , .		0
112	Time-resolved wavelet-based acquisitions using a single-pixel camera. Proceedings of SPIE, 2017, , .	0.8	0
113	Time-resolved analytical model for Raman scattering in a diffusive medium. Proceedings of SPIE, 2017, , .	0.8	0
114	Multiple-view time-resolved diffuse optical tomography based on structured illumination and compressive detection. , 2017, , .		0
115	Performance evaluation of time-domain multispectral diffuse optical tomography in the reflection geometry. , 2017, , .		0
116	Dual-Color Fluorescent Microscope on Chip for 3D Imaging of Single Cells. , 2019, , .		0
117	CW and Time Domain Methods to Prepare Accurately Calibrated Liquid Diffusive Phantoms at NIR Wavelengths. , 2008, , .		0
118	A method to assess the scattering-free absorption properties of nanostructured materials. , 2010, , .		0
119	Spectral distortions due to a finite spectral bandwidth light source in time-resolved diffuse spectroscopy. , 2010, , .		0
120	Spectral Distortions in Time-Resolved Diffuse Optical Spectroscopy Due to AOTFs. , 2012, , .		0
121	Time-domain diffuse optics: towards next generation devices. , 2015, , .		0
122	Quantification of effective absorption perturbations for Time-Resolved Diffuse Optical Tomography with totally absorbing objects. , 2016, , .		0
123	Statistics of the light penetration depth in a diffusive medium. , 2016, , .		0
124	In vivo Time domain Broadband (600 -1200 nm) Diffuse Optical Characterization of Human Bone. , 2016, , .		0
125	Analytical model for time-resolved Raman scattering in a diffusive parallelepiped. , 2016, , .		0
126	Frequency Offset Raman Spectroscopy (FORS) for Subsurface Probing of Highly Scattering Media. , 2018, , .		0

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127	In vivo Study of the Layered Structure on the Abdomen by Broadband Time-Domain Diffuse Optical Spectroscopy. , 2018, , .		0
128	Broadband (600-1100 nm) Diffuse Optical Characterization of Thyroid Tissue Constituents and Application to in vivo Thyroid Studies. , 2018, , .		0
129	A Tool for Quantitative and Systematic Simulation of Diffuse Optical Tomography with a Limited Number of Fixed Sources and Detectors. , 2018, , .		0
130	Novel Technologies for Time-Domain Diffuse Optics: Miniaturized Wearable Devices and Bioresorbable Optical Fibers. , 2018, , .		0
131	Multidistance time domain diffuse optical spectroscopy in the assessment of abdominal fat heterogeneity. , 2018, , .		0
132	Compressive sensing time-domain Raman spectrometer for depth sensing of diffusive media. , 2019, , .		0
133	Effects of ultrasound impedance matching fluids on diffuse optical measurements. , 2019, , .		0
134	Spectral approach to time domain diffuse optical tomography for breast cancer: validation on meat phantoms. , 2019, , .		0
135	Fitting a spectral model for component analysis in diffuse optical tomography. , 2019, , .		0
136	Multispectral Fluorescence Lifetime Imaging with Single- Pixel Cameras and Data Fusion. , 2021, , .		0
137	Time-resolved multi-dimensional fluorescence imaging using a Digital-Micromirror-Device and a SPAD-array detector. , 2020, , .		0
138	Calculated optical properties of donor molecules based on benzo[1,2-b:4,5-bâ€²]dithiophene and its derivatives. AIP Advances, 2021, 11, 125001.	1.3	0
139	32 Mcps time-correlated single photon counting with a single SPAD avoiding pile-up. , 2022, , .		0
140	Multispectral time-resolved fluorescence microscopy based on compressive acquisitions. , 2022, , .		0
141	Multispectral time-resolved fluorescence imaging by single-pixel detection and data fusion. , 2021, , .		0
142	SOLUS: a novel multimodal approach to ultrasound and diffuse optics imaging of breast cancer. , 2021, , .		0
143	Multispectral FLIM microscope based on compressive sensing acquisition. , 2021, , .		0
144	Enlarged Field of View in Spatially Modulated Selective Volume Illumination Microscopy. Microscopy and Microanalysis, 0, , 1-10.	0.4	0