

Riccardo Cicchi

List of Publications by Year in descending order

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133
papers

2,626
citations

172386
29
h-index

206029
48
g-index

136
all docs

136
docs citations

136
times ranked

3139
citing authors

#	ARTICLE	IF	CITATIONS
1	Scoring of collagen organization in healthy and diseased human dermis by multiphoton microscopy. Journal of Biophotonics, 2010, 3, 34-43.	1.1	188
2	Two independent mechanical events in the interaction cycle of skeletal muscle myosin with actin. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 87-92.	3.3	159
3	Photothermally-induced disordered patterns of corneal collagen revealed by SHG imaging. Optics Express, 2009, 17, 4868.	1.7	158
4	From molecular structure to tissue architecture: collagen organization probed by SHG microscopy. Journal of Biophotonics, 2013, 6, 129-142.	1.1	150
5	In-vivo and ex-vivo optical clearing methods for biological tissues: review. Biomedical Optics Express, 2019, 10, 5251.	1.5	133
6	Contrast and depth enhancement in two-photon microscopy of human skin ex vivo by use of optical clearing agents. Optics Express, 2005, 13, 2337.	1.7	109
7	Multidimensional non-linear laser imaging of Basal Cell Carcinoma. Optics Express, 2007, 15, 10135.	1.7	107
8	Real-time terahertz digital holography with a quantum cascade laser. Scientific Reports, 2015, 5, 13566.	1.6	85
9	Piezoelectric barium titanate nanostimulators for the treatment of glioblastoma multiforme. Journal of Colloid and Interface Science, 2019, 538, 449-461.	5.0	75
10	Nonlinear laser imaging of skin lesions. Journal of Biophotonics, 2008, 1, 62-73.	1.1	72
11	Time- and Spectral-resolved two-photon imaging of healthy bladder mucosa and carcinoma in situ. Optics Express, 2010, 18, 3840.	1.7	62
12	Position control and optical manipulation for nanotechnology applications. European Physical Journal B, 2005, 46, 1-8.	0.6	61
13	Convergence of integrins and EGF receptor signaling via PI3K/Akt/FoxO pathway in early gene Egr1 expression. Journal of Cellular Physiology, 2009, 218, 294-303.	2.0	57
14	Optical Methods in the Study of Protein-Protein Interactions. Advances in Experimental Medicine and Biology, 2010, 674, 33-42.	0.8	56
15	Combined non-linear laser imaging (two-photon excitation fluorescence microscopy, fluorescence) experiences. Journal of the European Academy of Dermatology and Venereology, 2009, 23, 314-316.	1.3	53
16	Spectral morphological analysis of skin lesions with a polarization multispectral dermoscope. Optics Express, 2013, 21, 4826.	1.7	53
17	Continuous and time-shared multiple optical tweezers for the study of single motor proteins. Optics and Lasers in Engineering, 2007, 45, 450-457.	2.0	49
18	Morpho-mechanics of human collagen superstructures revealed by all-optical correlative micro-spectroscopies. Communications Biology, 2019, 2, 117.	2.0	49

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19	Non-linear fluorescence lifetime imaging of biological tissues. Analytical and Bioanalytical Chemistry, 2011, 400, 2687-2697.	1.9	47
20	Thermal Transitions of Fibrillar Collagen Unveiled by Second-Harmonic Generation Microscopy of Corneal Stroma. Biophysical Journal, 2012, 103, 1179-1187.	0.2	46
21	Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study. Analytical Chemistry, 2020, 92, 15745-15756.	3.2	46
22	Three-dimensional mapping of the orientation of collagen corneal lamellae in healthy and keratoconic human corneas using SHG microscopy. Journal of Biophotonics, 2017, 10, 75-83.	1.1	39
23	Combined fluorescence-Raman spectroscopic setup for the diagnosis of melanocytic lesions. Journal of Biophotonics, 2014, 7, 86-95.	1.1	38
24	Protein conformation and molecular order probed by second-harmonic-generation microscopy. Journal of Biomedical Optics, 2012, 17, 060901.	1.4	37
25	Multiphoton morpho-functional imaging of healthy colon mucosa, adenomatous polyp and adenocarcinoma. Biomedical Optics Express, 2013, 4, 1204.	1.5	37
26	<i>In vivo</i> non-invasive monitoring of collagen remodelling by two-photon microscopy after microablative fractional laser resurfacing. Journal of Biophotonics, 2014, 7, 914-925.	1.1	37
27	Characterization of collagen and cholesterol deposition in atherosclerotic arterial tissue using nonlinear microscopy. Journal of Biophotonics, 2014, 7, 135-143.	1.1	36
28	Clinical Nonlinear Laser Imaging of Human Skin: A Review. BioMed Research International, 2014, 2014, 1-14.	0.9	35
29	Few Shot Learning in Histopathological Images: Reducing the Need of Labeled Data on Biological Datasets. , 2019, , .		33
30	New techniques in linear and non-linear laser optics in muscle research. Journal of Muscle Research and Cell Motility, 2006, 27, 469-479.	0.9	31
31	In-vivo imaging of psoriatic lesions with polarization multispectral dermoscopy and multiphoton microscopy. Biomedical Optics Express, 2014, 5, 2405.	1.5	31
32	Exploring molecular motors and switches at the single-molecule level. Microscopy Research and Technique, 2004, 65, 194-204.	1.2	24
33	Real-time multispectral fluorescence lifetime imaging using Single Photon Avalanche Diode arrays. Scientific Reports, 2020, 10, 8116.	1.6	24
34	Collagen ultrastructural symmetry and its malignant alterations in human breast cancer revealed by polarization-resolved second-harmonic generation microscopy. Journal of Biophotonics, 2020, 13, e202000159.	1.1	24
35	Autofluorescence enhancement for label-free imaging of myelinated fibers in mammalian brains. Scientific Reports, 2021, 11, 8038.	1.6	24
36	Observation of an improved healing process in superficial skin wounds after irradiation with a blue-LED haemostatic device. Journal of Biophotonics, 2016, 9, 645-655.	1.1	21

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37	Fiber-cap biosensors for SERS analysis of liquid samples. Journal of Materials Chemistry B, 2020, 8, 1629-1639.	2.9	19
38	Non-linear imaging and characterization of atherosclerotic arterial tissue using combined SHG and FLIM microscopy. Journal of Biophotonics, 2015, 8, 347-356.	1.1	17
39	Custom Multiphoton/Raman Microscopy Setup for Imaging and Characterization of Biological Samples. Methods and Protocols, 2019, 2, 51.	0.9	16
40	Multimodal image analysis in tissue diagnostics for skin melanoma. Journal of Chemometrics, 2018, 32, e2963.	0.7	14
41	Multidimensional custom-made non-linear microscope: from ex-vivo to in-vivo imaging. Applied Physics B: Lasers and Optics, 2008, 92, 359.	1.1	13
42	Multimodal nonlinear microscopy: A powerful label-free method for supporting standard diagnostics on biological tissues. Journal of Innovative Optical Health Sciences, 2014, 07, 1330008.	0.5	13
43	Real-time fiber-based fluorescence lifetime imaging with synchronous external illumination: A new path for clinical translation. Journal of Biophotonics, 2020, 13, e201960119.	1.1	13
44	Blue LED light modulates inflammatory infiltrate and improves the healing of superficial wounds. Photodermatology Photoimmunology and Photomedicine, 2020, 36, 166-168.	0.7	13
45	Monitoring Changes in Biochemical and Biomechanical Properties of Collagenous Tissues Using Label-Free and Nondestructive Optical Imaging Techniques. Analytical Chemistry, 2021, 93, 3813-3821.	3.2	13
46	Autofluorescence Image Reconstruction and Virtual Staining for In-Vivo Optical Biopsy. IEEE Access, 2021, 9, 32081-32093.	2.6	12
47	Multimodal fiber-probe spectroscopy allows detecting epileptogenic focal cortical dysplasia in children. Journal of Biophotonics, 2017, 10, 896-904.	1.1	11
48	Nanostars-decorated microfluidic sensors for surface enhanced Raman scattering targeting of biomolecules. JPhys Photonics, 2020, 2, 024008.	2.2	11
49	Supervised learning methods for the recognition of melanoma cell lines through the analysis of their Raman spectra. Journal of Biophotonics, 2021, 14, e202000365.	1.1	11
50	In-vivo tissue imaging using a compact mobile nonlinear microscope. Proceedings of SPIE, 2010, , .	0.8	10
51	Probing Collagen Organization: Practical Guide for Second-Harmonic Generation (SHG) Imaging. Methods in Molecular Biology, 2017, 1627, 409-425.	0.4	10
52	In-Depth Analysis of Egg-Tempera Paint Layers by Multiphoton Excitation Fluorescence Microscopy. Sustainability, 2020, 12, 3831.	1.6	9
53	Analysis on the Characterization of Multiphoton Microscopy Images for Malignant Neoplastic Colon Lesion Detection under Deep Learning Methods. Journal of Pathology Informatics, 2021, 12, 27.	0.8	9
54	Blue LED treatment of superficial abrasions. Proceedings of SPIE, 2013, , .	0.8	7

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55	Multimodal nonlinear imaging of atherosclerotic plaques differentiation of triglyceride and cholesterol deposits. <i>Journal of Innovative Optical Health Sciences</i> , 2014, 07, 1450027.	0.5	7
56	Label-free grading and staging of urothelial carcinoma through multimodal fibre-probe spectroscopy. <i>Journal of Biophotonics</i> , 2019, 12, e201900087.	1.1	7
57	Effects of formalin fixation on tissue optical properties of in-vitro brain samples. <i>Proceedings of SPIE</i> , 2015, , .	0.8	6
58	Improved label-free diagnostics and pathological assessment of atherosclerotic plaques through nonlinear microscopy. <i>Journal of Biophotonics</i> , 2018, 11, e201800106.	1.1	6
59	Multispectral Depth-Resolved Fluorescence Lifetime Spectroscopy Using SPAD Array Detectors and Fiber Probes. <i>Sensors</i> , 2019, 19, 2678.	2.1	6
60	Simultaneous fluorescence lifetime and Raman fiber-based mapping of tissues. <i>Optics Letters</i> , 2020, 45, 2247.	1.7	6
61	Fluorescence Lifetime Phasor Analysis and Raman Spectroscopy of Pigmented Organic Binders and Coatings Used in Artworks. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 179.	1.3	6
62	The New Digital Pathology: Just Say NLO. <i>Digestive Diseases and Sciences</i> , 2014, 59, 1347-1348.	1.1	5
63	Automated Phasor Segmentation of Fluorescence Lifetime Imaging Data for Discriminating Pigments and Binders Used in Artworks. <i>Molecules</i> , 2022, 27, 1475.	1.7	5
64	Novel Pixelwise Co-Registered Hematoxylin-Eosin and Multiphoton Microscopy Image Dataset for Human Colon Lesion Diagnosis. <i>Journal of Pathology Informatics</i> , 2022, 13, 100012.	0.8	5
65	Improved wound healing in blue LED treated superficial abrasions. , 2013, , .		4
66	In vivo detection of murine glioblastoma through Raman and reflectance fiber-probe spectroscopies. <i>Neurophotonics</i> , 2020, 7, 045010.	1.7	4
67	Localized stem heating from the rest to growth phase induces latewood-like cell formation and slower stem radial growth in Norway spruce saplings. <i>Tree Physiology</i> , 2021, , .	1.4	4
68	Multispectral multiphoton lifetime analysis of human bladder tissue. , 2009, , .		3
69	Two-photon imaging and spectroscopy of fresh human colon biopsies. , 2012, , .		3
70	Evaluation of the oxidative stress of psoriatic fibroblasts based on spectral two-photon fluorescence lifetime imaging. <i>Proceedings of SPIE</i> , 2013, , .	0.8	3
71	Estimation of tissue optical properties between different grades and stages of urothelial carcinoma using diffuse reflectance spectroscopy. , 2015, , .		3
72	Nonlinear optical imaging techniques (NLO) for painting investigation. , 2017, , .		3

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73	Multidimensional two-photon imaging of diseased skin. , 2008, , .		2
74	Time- and spectral-resolved multiphoton imaging of fresh bladder biopsies. , 2009, , .		2
75	Healing process study in murine skin superficial wounds treated with the blue LED photocoagulator EMOLED. Proceedings of SPIE, 2015, , .	0.8	2
76	The feasibility of multimodal fiber optic spectroscopy analysis in bladder cancer detection, grading, and staging. Urologia, 2021, 88, 039156032110070.	0.3	2
77	In-vivo wound healing modulation after irradiation with a blue LED photocoagulator. , 2017, , .		2
78	Structural and Biochemical Changes in Pericardium upon Genipin Cross-Linking Investigated Using Nondestructive and Label-Free Imaging Techniques. Analytical Chemistry, 2022, 94, 1575-1584.	3.2	2
79	Combined TPEF and SHG Imaging for the Microstructural Characterization of Different Wood Species Used in Artworks. Photonics, 2022, 9, 170.	0.9	2
80	Multiphoton imaging of basal cell carcinoma (BCC). , 2006, 6090, 136.		1
81	Contrast enhancement in combined two-photon second harmonic imaging of skin by using hyperosmotic agents. , 2006, 6089, 149.		1
82	Time-resolved multiphoton imaging of basal cell carcinoma. , 2007, , .		1
83	Investigation on fibrous collagen modifications during corneal laser welding by second harmonic generation microscopy. , 2009, , .		1
84	Quantitative analysis of thermally-induced alterations of corneal stroma by second-harmonic generation imaging. Proceedings of SPIE, 2010, , .	0.8	1
85	In vivo multiphoton imaging of collagen remodeling after microablative fractional rejuvenation. , 2011, , .		1
86	In-vivo morphologic and spectroscopic investigation of Psoriasis. Proceedings of SPIE, 2011, , .	0.8	1
87	In vivo TPEF-SHG microscopy for detecting collagen remodeling after laser micro-ablative fractional resurfacing treatment. Proceedings of SPIE, 2011, , .	0.8	1
88	Non-linear optical imaging and fibre-based spectroscopy of fresh colon biopsies. Proceedings of SPIE, 2012, , .	0.8	1
89	Non-linear imaging and characterization of atherosclerotic arterial tissue using combined two photon fluorescence, second-harmonic generation and CARS microscopy. Proceedings of SPIE, 2014, , .	0.8	1
90	Irradiation with EMOLED improves the healing process in superficial skin wounds. , 2014, , .		1

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91	Improvement of the healing process in superficial skin wounds after treatment with EMOLED. , 2014, , .		1
92	Multimodal fiber probe spectroscopy for tissue diagnostics applications: a combined Raman-fluorescence approach. , 2014, , .		1
93	Bimodal Spectroscopy of Formalin Fixed Samples to Discriminate Dysplastic and Tumor Brain Tissues. Latvian Journal of Physics and Technical Sciences, 2014, 51, 14-20.	0.4	1
94	Multimodal fiber-probe spectroscopy for the diagnostics and classification of bladder tumors. Proceedings of SPIE, 2017, , .	0.8	1
95	Characterization of atherosclerotic arterial tissue using combined SHG and FLIM microscopy. , 2015, , .		1
96	Fluorescence ratiometric classifier for the detection of skin pathologies. , 2015, , .		1
97	Blue LED treatment of superficial abrasions: in vivo experimental evidence of wound healing improvement. , 2018, , .		1
98	<title>Diffusion of optical clearing agents in skin studied by two-photon microscopy</title>. , 2006, , .		0
99	Multidimensional two-photon imaging and spectroscopy of fresh human bladder biopsies. , 2010, , .		0
100	In-vivo non-linear imaging of collagen before and after laser micro-ablative fractional resurfacing treatment. , 2011, , .		0
101	In-vivo optical investigation of psoriasis. Proceedings of SPIE, 2011, , .	0.8	0
102	3D CARS image reconstruction and pattern recognition on SHG images. , 2012, , .		0
103	Combined fluorescence-Raman spectroscopy measurements with an optical fiber probe for the diagnosis of melanocytic lesions. , 2012, , .		0
104	Double optical fibre-probe device for the diagnosis of melanocytic lesions. , 2012, , .		0
105	Characterization of atherosclerotic arterial tissue using multimodal non-linear optical microscopy. Proceedings of SPIE, 2013, , .	0.8	0
106	A combined Raman-fluorescence spectroscopic probe for tissue diagnostics applications. Proceedings of SPIE, 2013, , .	0.8	0
107	Multidimensional tissue fingerprint. , 2014, , .		0
108	Morpho-chemistry and functionality of diseased biological tissues. , 2014, , .		0

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109	Multimodal Raman-fluorescence spectroscopy of formalin fixed samples is able to discriminate brain tumors from dysplastic tissue. , 2014, , .		0
110	Non-invasive tissue diagnostics using a multimodal spectroscopic device based on fiber probe. Proceedings of SPIE, 2014, , .	0.8	0
111	Analysis of the healing process in superficial skin wounds irradiated with a blue-LED photocoagulator. , 2014, , .		0
112	Improvement of the healing process in superficial skin wounds after treatment with EMOLED. , 2015, , .		0
113	Characterization of atherosclerotic arterial tissue using combined SHG and FLIM microscopy. , 2015, , .		0
114	Non-linear imaging and characterization of atherosclerotic arterial tissue using combined SHG and FLIM microscopy. , 2015, , .		0
115	Tissue classification and diagnostics using a fiber probe for combined Raman and fluorescence spectroscopy. Proceedings of SPIE, 2015, , .	0.8	0
116	Fluorescence ratiometric classifier for the detection of skin pathologies. , 2015, , .		0
117	Tissue classification and diagnostics using a fiber probe for combined Raman and fluorescence spectroscopy. Proceedings of SPIE, 2015, , .	0.8	0
118	Fluorescence spectroscopy incorporating a ratiometric approach for the diagnosis and classification of urothelial carcinoma. , 2016, , .		0
119	Characterization of human arterial tissue affected by atherosclerosis using multimodal nonlinear optical microscopy. Proceedings of SPIE, 2016, , .	0.8	0
120	Probing focal cortical dysplasia in formalin fixed samples using tissue optical spectroscopy. , 2016, , .		0
121	Morphological characterization of keratoconus-affected human corneas by SHG imaging and correlation analysis. , 2016, , .		0
122	Fiber-probe optical spectroscopy discriminates normal brain from focal cortical dysplasia in pediatric subjects. , 2017, , .		0
123	Multimodal fiber-probe spectroscopy as a clinical tool for diagnosing and classifying biological tissues. , 2017, , .		0
124	Three-dimensional mapping of corneal lamellar orientation by means of backward-scattered SHG microscopy. Proceedings of SPIE, 2017, , .	0.8	0
125	Blue LED induced thermal effects in wound healing: experimental evidence in an in vivo model of superficial abrasions. , 2017, , .		0
126	Optical Fiber-Probe Spectroscopy of Brain Tumors. , 2019, , 1-23.		0

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127	Use of Optical Clearing Agents in Human Dermis Imaging by Two Photon Microscopy. , 2005, , .		0
128	Time- And Spectral-Resolved Multiphoton Imaging Of Fresh Bladder Biopsies. , 2009, , .		0
129	Tissue classification and diagnostics using a fiber probe for combined Raman and fluorescence spectroscopy. , 2015, , .		0
130	QCL-Based Real-Time Terahertz Digital Holography. , 2016, , .		0
131	Tissue classification using a fiber probe for combined Raman, fluorescence and reflectance spectroscopy. , 2016, , .		0
132	Tumour detection and staging through multimodal fibre-probe spectroscopy. , 2018, , .		0
133	All-optical correlative micro-spectroscopies in the investigation of stromal collagen morpho-mechanics. , 2020, , .		0