Martin Villiger

List of Publications by Year
in descending order

73 papers	1,905 citations	218677 26 h-index	276875 41 g-index
73 all docs	73 docs citations	73 times ranked	1865 citing authors

#	Article	IF	Citations
1	Confocal 3D reflectance imaging through multimode fiber without wavefront shaping. Optica, 2022, 9, 112.	9.3	12
2	Detection of lipid at video rate with spectroscopic transient-mode photo-thermal optical coherence tomography (TM-PT-OCT). , 2022, , .		1
3	Measuring collagen injury depth for burn severity determination using polarization sensitive optical coherence tomography. Scientific Reports, 2022, 12, .	3.3	6
4	Polarization-Sensitive Endobronchial Optical Coherence Tomography for Microscopic Imaging of Fibrosis in Interstitial Lung Disease. American Journal of Respiratory and Critical Care Medicine, 2022, 206, 905-910.	5.6	8
5	Rapid non-destructive volumetric tumor yield assessment in fresh lung core needle biopsies using polarization sensitive optical coherence tomography. Biomedical Optics Express, 2021, 12, 5597.	2.9	9
6	Polarimetric Signatures of Coronary Thrombus in Patients With Acute Coronary Syndrome. Circulation Journal, 2021, 85, 1806-1813.	1.6	4
7	Spectral- and Polarization-Dependent Scattering of Gold Nanobipyramids for Exogenous Contrast in Optical Coherence Tomography. Nano Letters, 2021, 21, 8595-8601.	9.1	8
8	Transient-Mode Photothermal Optical Coherence Tomography. Optics Letters, 2021, 46, 5703-5706.	3.3	8
9	Transient-mode photothermal optical coherence tomography. , 2021, , .		1
10	Biomechanical Stress Profiling of Coronary Atherosclerosis. JACC: Cardiovascular Imaging, 2020, 13, 804-816.	5.3	32
11	Intravascular Polarimetry in Patients With Coronary Artery Disease. JACC: Cardiovascular Imaging, 2020, 13, 790-801.	5.3	35
12	A topological encoding convolutional neural network for segmentation of 3D multiphoton images of brain vasculature using persistent homology. , 2020, 2020, 4262-4271.		11
13	Reciprocity-induced symmetry in the round-trip transmission through complex systems. APL Photonics, 2020, 5, .	5.7	8
14	Intravascular Polarimetry: Clinical Translation and Future Applications of Catheter-Based Polarization Sensitive Optical Frequency Domain Imaging. Frontiers in Cardiovascular Medicine, 2020, 7, 146.	2.4	10
15	Vectorial birefringence imaging by optical coherence microscopy for assessing fibrillar microstructures in the cornea and limbus. Biomedical Optics Express, 2020, 11, 1122.	2.9	20
16	Forward multiple scattering dominates speckle decorrelation in whole-blood flowmetry using optical coherence tomography. Biomedical Optics Express, 2020, 11, 1947.	2.9	13
17	Single-shot depth profiling by spatio-temporal encoding with a multimode fiber. Optics Express, 2020, 28, 1124.	3.4	6
18	Automated noise estimation in polarization-sensitive optical coherence tomography. Optics Letters, 2020, 45, 2748.	3.3	6

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19	Linear-in-wavenumber actively-mode-locked wavelength-swept laser. Optics Letters, 2020, 45, 5327.	3.3	7
20	In vivo imaging of the depth-resolved optic axis of birefringence in human skin. Optics Letters, 2020, 45, 4919.	3.3	17
21	Future Development. , 2020, , 175-191.		1
22	Effects of lipid composition on photothermal optical coherence tomography signals. Journal of Biomedical Optics, 2020, 25, .	2.6	12
23	Polarimetric Signatures of Vascular Tissue Response to Drug-Eluting Stent Implantation in Patients. JACC: Cardiovascular Imaging, 2020, 13, 2695-2696.	5.3	5
24	Influence of tissue fixation on depth-resolved birefringence of oral cavity tissue samples. Journal of Biomedical Optics, 2020, 25, .	2.6	0
25	Influence of tissue fixation on depth-resolved birefringence of oral cavity tissue samples. Journal of Biomedical Optics, 2020, 25, .	2.6	1
26	Distinguishing Tumor from Associated Fibrosis to Increase Diagnostic Biopsy Yield with Polarization-Sensitive Optical Coherence Tomography. Clinical Cancer Research, 2019, 25, 5242-5249.	7.0	28
27	Intravascular Polarimetry for Tissue Characterization of Coronary Atherosclerosis. Circulation Reports, 2019, 1, 550-557.	1.0	6
28	Polarization-Sensitive Optical Coherence Tomography with a Single Input Polarization State. , 2019, , .		0
29	Quantitative depolarization measurements for fiberâ€based polarizationâ€sensitive optical frequency domain imaging of the retinal pigment epithelium. Journal of Biophotonics, 2019, 12, e201800156.	2.3	19
30	Depth-resolved birefringence imaging of collagen fiber organization in the human oral mucosa in vivo. Biomedical Optics Express, 2019, 10, 1942.	2.9	41
31	Balloon catheter-based radiofrequency ablation monitoring in porcine esophagus using optical coherence tomography. Biomedical Optics Express, 2019, 10, 2067.	2.9	14
32	Constrained polarization evolution simplifies depth-resolved retardation measurements with polarization-sensitive optical coherence tomography. Biomedical Optics Express, 2019, 10, 5207.	2.9	12
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34	Coronary Plaque Microstructure and Composition Modify Optical Polarization. JACC: Cardiovascular Imaging, 2018, 11, 1666-1676.	5.3	54
35	Repeatability Assessment of Intravascular Polarimetry in Patients. IEEE Transactions on Medical Imaging, 2018, 37, 1618-1625.	8.9	18
36	Skin regeneration with all accessory organs following ablation with irreversible electroporation. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 98-113.	2.7	22

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37	Wide-Field Functional Microscopy of Peripheral Nerve Injury and Regeneration. Scientific Reports, 2018, 8, 14004.	3.3	23
38	Rejuvenation of aged rat skin with pulsed electric fields. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 2309-2318.	2.7	8
39	Robust wavenumber and dispersion calibration for Fourier-domain optical coherence tomography. Optics Express, 2018, 26, 9081.	3.4	26
40	Robust reconstruction of local optic axis orientation with fiber-based polarization-sensitive optical coherence tomography. Biomedical Optics Express, 2018, 9, 5437.	2.9	48
41	Optic axis mapping with catheter-based polarization-sensitive optical coherence tomography. Optica, 2018, 5, 1329.	9.3	68
42	Optimal selection of laser modulation parameters in photothermal optical coherence tomography. , 2017, , .		1
43	Depolarization signatures map gold nanorods within biological tissue. Nature Photonics, 2017, 11, 583-588.	31.4	25
44	Laser thermal therapy monitoring using complex differential variance in optical coherence tomography. Journal of Biophotonics, 2017, 10, 84-91.	2.3	17
45	Prediction of Scar Size in Rats Six Months after Burns Based on Early Post-injury Polarization-Sensitive Optical Frequency Domain Imaging. Frontiers in Physiology, 2017, 8, 967.	2.8	6
46	Intravascular optical coherence tomography [Invited]. Biomedical Optics Express, 2017, 8, 2660.	2.9	67
47	Tissue-like phantoms for quantitative birefringence imaging. Biomedical Optics Express, 2017, 8, 4454.	2.9	23
48	Extended bandwidth wavelength swept laser source for high resolution optical frequency domain imaging. Optics Express, 2017, 25, 8255.	3.4	20
49	Neoatherosclerosis development following bioresorbable vascular scaffold implantation in diabetic and non-diabetic swine. PLoS ONE, 2017, 12, e0183419.	2.5	5
50	Definitive depolarization signatures in nanomedicine. , 2017, , .		0
51	Automatic classification of atherosclerotic plaques imaged with intravascular OCT. Biomedical Optics Express, 2016, 7, 4069.	2.9	45
52	Deep tissue volume imaging of birefringence through fibre-optic needle probes for the delineation of breast tumour. Scientific Reports, 2016, 6, 28771.	3.3	119
53	Preventing Scars after Injury with Partial Irreversible Electroporation. Journal of Investigative Dermatology, 2016, 136, 2297-2304.	0.7	22
54	Birefringence microscopy platform for assessing airway smooth muscle structure and function in vivo. Science Translational Medicine, 2016, 8, 359ra131.	12.4	92

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55	Longitudinal three-dimensional visualisation of autoimmune diabetes by functional optical coherence imaging. Diabetologia, 2016, 59, 550-559.	6.3	30
56	First-in-man assessment of plaque rupture by polarization-sensitive optical frequency domain imagingin vivo. European Heart Journal, 2016, 37, 1932-1932.	2.2	33
57	Longitudinal, 3D Imaging ofÂCollagen Remodeling in MurineÂHypertrophic ScarsÂIn Vivo Using Polarization-Sensitive Optical Frequency Domain Imaging. Journal of Investigative Dermatology, 2016, 136, 84-92.	0.7	40
58	Ultrahigh-resolution optical coherence elastography. Optics Letters, 2016, 41, 21.	3.3	42
59	An automated image processing method to quantify collagen fibre organization within cutaneous scar tissue. Experimental Dermatology, 2015, 24, 78-80.	2.9	34
60	Laser tissue coagulation and concurrent optical coherence tomography through a double-clad fiber coupler. Biomedical Optics Express, 2015, 6, 1293.	2.9	37
61	Single input state, single-mode fiber-based polarization-sensitive optical frequency domain imaging by eigenpolarization referencing. Optics Letters, 2015, 40, 2025.	3.3	20
62	Degree of polarization (uniformity) and depolarization index: unambiguous depolarization contrast for optical coherence tomography. Optics Letters, 2015, 40, 3954.	3.3	46
63	Practical decomposition for physically admissible differential Mueller matrices. Optics Letters, 2014, 39, 1779.	3.3	27
64	Quantitative technique for robust and noise-tolerant speed measurements based on speckle decorrelation in optical coherence tomography. Optics Express, 2014, 22, 24411.	3.4	59
65	All-fiber wavelength swept ring laser based on Fabry-Perot filter for optical frequency domain imaging. Optics Express, 2014, 22, 25805.	3.4	39
66	Artifacts in polarization-sensitive optical coherence tomography caused by polarization mode dispersion. Optics Letters, 2013, 38, 923.	3.3	54
67	Seeing beyond the Bronchoscope to Increase the Diagnostic Yield of Bronchoscopic Biopsy. American Journal of Respiratory and Critical Care Medicine, 2013, 187, 125-129.	5.6	52
68	Spectral binning for mitigation of polarization mode dispersion artifacts in catheter-based optical frequency domain imaging. Optics Express, 2013, 21, 16353.	3.4	113
69	Diabetes imagingâ€"quantitative assessment of islets of Langerhans distribution in murine pancreas using extended-focus optical coherence microscopy. Biomedical Optics Express, 2012, 3, 1365.	2.9	19
70	Fast three-dimensional imaging of gold nanoparticles in living cells with photothermal optical lock-in Optical Coherence Microscopy. Optics Express, 2012, 20, 21385.	3.4	65
71	Label-Free Imaging of Cerebral Î²-Amyloidosis with Extended-Focus Optical Coherence Microscopy. Journal of Neuroscience, 2012, 32, 14548-14556.	3.6	52
72	Injury depth control from combined wavelength and power tuning in scanned beam laser thermal therapy. Journal of Biomedical Optics, 2011, 16, 118001.	2.6	11

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73	Dark-field optical coherence microscopy. Optics Letters, 2010, 35, 3489.	3.3	62