

Marie-Claire Schanne-Klein

List of Publications by Year in descending order

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124
papers

5,582
citations

117625

34
h-index

82547

72
g-index

134
all docs

134
docs citations

134
times ranked

5070
citing authors

#	ARTICLE	IF	CITATIONS
1	High-throughput tuning of ovarian cancer spheroids for on-chip invasion assays. <i>Micro and Nano Engineering</i> , 2022, 15, 100138.	2.9	5
2	Coreâ€œShell Pure Collagen Threads Extruded from Highly Concentrated Solutions Promote Colonization and Differentiation of C3H10T1/2 Cells. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 626-635.	5.2	1
3	Rapid Evaluation of Novel Therapeutic Strategies Using a 3D Collagen-Based Tissue-Like Model. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 574035.	4.1	2
4	Mueller polarimetric imaging for fast macroscopic mapping of microscopic collagen matrix remodeling by smooth muscle cells. <i>Scientific Reports</i> , 2021, 11, 5901.	3.3	4
5	Structural imaging of keratoconic human corneas using polarization-resolved Second Harmonic Generation microscopy. , 2021, , .		0
6	Quantitative structural imaging of keratoconic corneas using polarization-resolved SHG microscopy. <i>Biomedical Optics Express</i> , 2021, 12, 4163.	2.9	15
7	Electric Field Measurements in Plasmas with E-FISH Using Focused Gaussian Beams. , 2021, , .		0
8	Noninvasive quantitative assessment of collagen degradation in parchments by polarization-resolved SHG microscopy. <i>Science Advances</i> , 2021, 7, .	10.3	7
9	Probing the sub-micrometer scale polarity distribution of out-of-plane collagen fibrils in biological tissues by circular-dichroism SHG microscopy. , 2021, , .		0
10	Polarization-resolved SHG imaging of lamellar organization in keratoconic human corneas. , 2021, , .		0
11	Differentiation of neural-type cells on multi-scale ordered collagen-silica bionanocomposites. <i>Biomaterials Science</i> , 2020, 8, 569-576.	5.4	9
12	Development, structure, and bioengineering of the human corneal stroma: A review of collagen-based implants. <i>Experimental Eye Research</i> , 2020, 200, 108256.	2.6	16
13	Native Collagen: Electrospinning of Pure, Cross-Linker-Free, Self-Supported Membrane. <i>ACS Applied Bio Materials</i> , 2020, 3, 2948-2957.	4.6	21
14	Electric field measurements in plasmas: how focusing strongly distorts the E-FISH signal. <i>Plasma Sources Science and Technology</i> , 2020, 29, 125002.	3.1	39
15	Circular dichroism second-harmonic generation microscopy probes the polarity distribution of collagen fibrils. <i>Optica</i> , 2020, 7, 1469.	9.3	36
16	Multiscale Characterisation of Skin Mechanics Through In Situ Imaging. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , 2019, , 235-263.	1.0	3
17	High-speed polarization-resolved third-harmonic microscopy. <i>Optica</i> , 2019, 6, 385.	9.3	24
18	Combination of Traction Assays and Multiphoton Imaging to Quantify Skin Biomechanics. <i>Methods in Molecular Biology</i> , 2019, 1944, 145-155.	0.9	2

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19	Maturation of the Meniscal Collagen Structure Revealed by Polarization-Resolved and Directional Second Harmonic Generation Microscopy. <i>Scientific Reports</i> , 2019, 9, 18448.	3.3	17
20	Differences between foetal and adult meniscus and cartilage revealed by Polarization Second Harmonic Generation Microscopy. , 2019, , .		0
21	Removing artifacts in Second Harmonic Generation imaging by interferometry. , 2019, , .		0
22	Monitoring dynamic collagen reorganization during skin stretching with fast polarization-resolved second harmonic generation imaging. <i>Journal of Biophotonics</i> , 2019, 12, e201800336.	2.3	31
23	Elimination of imaging artifacts in second harmonic generation microscopy using interferometry. <i>Biomedical Optics Express</i> , 2019, 10, 3938.	2.9	6
24	Implementation of artifact-free circular dichroism SHG imaging of collagen. <i>Optics Express</i> , 2019, 27, 22685.	3.4	16
25	Label-free THG imaging of bone tissue microstructure: effect of low gravity on the lacuno-canalicular network. , 2019, , .		0
26	Correlative multiphoton microscopy and infrared nanospectroscopy of label-free collagen. , 2019, , .		2
27	Fast P-THG microscopy for the characterization of biomaterials. , 2019, , .		0
28	Highly concentrated collagen solutions leading to transparent scaffolds of controlled three-dimensional organizations for corneal epithelial cell colonization. <i>Biomaterials Science</i> , 2018, 6, 1492-1502.	5.4	21
29	Cell viability and shock wave amplitudes in the endothelium of porcine cornea exposed to ultrashort laser pulses. <i>Graefe's Archive for Clinical and Experimental Ophthalmology</i> , 2017, 255, 945-953.	1.9	5
30	Affine kinematics in planar fibrous connective tissues: an experimental investigation. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 1459-1473.	2.8	18
31	A novel microstructural interpretation for the biomechanics of mouse skin derived from multiscale characterization. <i>Acta Biomaterialia</i> , 2017, 50, 302-311.	8.3	49
32	Stabilization of Collagen Fibrils by Gelatin Addition: A Study of Collagen/Gelatin Dense Phases. <i>Langmuir</i> , 2017, 33, 12916-12925.	3.5	13
33	Stromal striae: a new insight into corneal physiology and mechanics. <i>Scientific Reports</i> , 2017, 7, 13584.	3.3	35
34	How aging impacts skin biomechanics: a multiscale study in mice. <i>Scientific Reports</i> , 2017, 7, 13750.	3.3	43
35	Label-free imaging of bone multiscale porosity and interfaces using third-harmonic generation microscopy. <i>Scientific Reports</i> , 2017, 7, 3419.	3.3	62
36	Evolution of the Skin Microstructural Organization During a Mechanical Assay. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 45-52.	0.5	0

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37	Easy xeno-free and feeder-free method for isolating and growing limbal stromal and epithelial stem cells of the human cornea. PLoS ONE, 2017, 12, e0188398.	2.5	13
38	Efficient second-harmonic imaging of collagen in histological slides using Bessel beam excitation. Scientific Reports, 2016, 6, 29863.	3.3	22
39	Probing the 3D structure of cornea-like collagen liquid crystals with polarization-resolved SHG microscopy. Optics Express, 2016, 24, 16084.	3.4	23
40	Correlative nonlinear optical microscopy and infrared nanoscopy reveals collagen degradation in altered parchments. Scientific Reports, 2016, 6, 26344.	3.3	49
41	Special Section Guest Editorial: Antonello De Martino (1954–2014): in memoriam. Journal of Biomedical Optics, 2016, 21, 071101.	2.6	4
42	Forward versus backward polarization-resolved SHG imaging of collagen structure in tissues. Proceedings of SPIE, 2016, , .	0.8	1
43	Simultaneous microstructural and mechanical characterization of human corneas at increasing pressure. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 93-105.	3.1	40
44	Ex vivo multiscale quantitation of skin biomechanics in wild-type and genetically-modified mice using multiphoton microscopy. Scientific Reports, 2015, 5, 17635.	3.3	80
45	Optimization of Picosirius red staining protocol to determine collagen fiber orientations in vaginal and uterine cervical tissues by Mueller polarized microscopy. Microscopy Research and Technique, 2015, 78, 723-730.	2.2	16
46	Second Harmonic Generation quantitative measurements on collagen fibrils through correlation to electron microscopy. Proceedings of SPIE, 2015, , .	0.8	0
47	Cell viability in the endothelium of porcine cornea exposed to ultrashort laser pulses. , 2015, , .		0
48	Theoretical, numerical and experimental study of geometrical parameters that affect anisotropy measurements in polarization-resolved SHG microscopy. Optics Express, 2015, 23, 9313.	3.4	26
49	Determination of collagen fiber orientation in histological slides using Mueller microscopy and validation by second harmonic generation imaging. Optics Express, 2014, 22, 22561.	3.4	77
50	Fibrillogenesis from nanosurfaces: multiphoton imaging and stereological analysis of collagen 3D self-assembly dynamics. Soft Matter, 2014, 10, 6651-6657.	2.7	13
51	Determination of collagen fibril size via absolute measurements of second-harmonic generation signals. Nature Communications, 2014, 5, 4920.	12.8	107
52	Multiphoton microscopy: an efficient tool for in-situ study of cultural heritage artifacts. Proceedings of SPIE, 2013, , .	0.8	1
53	A Bottom-Up Approach to Build the Hyperpolarizability of Peptides and Proteins from their Amino Acids. Journal of Physical Chemistry B, 2013, 117, 9877-9881.	2.6	21
54	Achievement of cornea-like organizations in dense collagen I solutions: clues to the physico-chemistry of cornea morphogenesis. Soft Matter, 2013, 9, 11241.	2.7	25

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55	Probing Ordered Lipid Assemblies with Polarized Third-Harmonic-Generation Microscopy. <i>Physical Review X</i> , 2013, 3, .	8.9	20
56	Multiscale analysis of polarization-resolved third-harmonic generation microscopy from ordered lipid assemblies. , 2013, , .		0
57	Intracellular dynamics of archaeal FANCM homologue Hef in response to halted DNA replication. <i>Nucleic Acids Research</i> , 2013, 41, 10358-10370.	14.5	24
58	Numerical simulation of polarization-resolved second-harmonic microscopy in birefringent media. <i>Physical Review A</i> , 2013, 88, .	2.5	23
59	Polarization-resolved SHG microscopy of rat-tail tendon with controlled mechanical strain. , 2013, , .		0
60	Multimodal Highlighting of Structural Abnormalities in Diabetic Rat and Human Corneas. <i>Translational Vision Science and Technology</i> , 2013, 2, 3.	2.2	14
61	In situ three-dimensional monitoring of collagen fibrillogenesis using SHG microscopy. <i>Biomedical Optics Express</i> , 2012, 3, 1446.	2.9	23
62	3D resolved mapping of optical aberrations in thick tissues. <i>Biomedical Optics Express</i> , 2012, 3, 1898.	2.9	37
63	In situ 3D characterization of historical coatings and wood using multimodal nonlinear optical microscopy. <i>Optics Express</i> , 2012, 20, 24623.	3.4	50
64	In vivo structural imaging of the cornea by polarization-resolved second harmonic microscopy. <i>Biomedical Optics Express</i> , 2012, 3, 1.	2.9	123
65	Polarization-Resolved Second-Harmonic Generation in Tendon upon Mechanical Stretching. <i>Biophysical Journal</i> , 2012, 102, 2220-2229.	0.5	130
66	Hyperglycemia-Induced Abnormalities in Rat and Human Corneas: The Potential of Second Harmonic Generation Microscopy. <i>PLoS ONE</i> , 2012, 7, e48388.	2.5	22
67	Imaging and 3D morphological analysis of collagen fibrils. <i>Journal of Microscopy</i> , 2012, 247, 161-175.	1.8	33
68	Quantitative assessment of collagen I liquid crystal organizations: role of ionic force and acidic solvent, and evidence of new phases. <i>Soft Matter</i> , 2011, 7, 11203.	2.7	26
69	Monitoring micrometer-scale collagen organization in rat-tail tendon upon mechanical strain using second harmonic microscopy. <i>Journal of Biomechanics</i> , 2011, 44, 2047-2052.	2.1	60
70	Nonlinear optical response of the collagen triple helix and second harmonic microscopy of collagen liquid crystals. , 2010, , .		0
71	Multimodal Nonlinear Imaging of the Human Cornea. , 2010, 51, 2459.		143
72	Multiphoton microscopy of engineered dermal substitutes: assessment of 3D collagen matrix remodeling induced by fibroblasts contraction. <i>Proceedings of SPIE</i> , 2010, , .	0.8	3

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73	Multiphoton microscopy of engineered dermal substitutes: assessment of 3-D collagen matrix remodeling induced by fibroblast contraction. <i>Journal of Biomedical Optics</i> , 2010, 15, 1.	2.6	31
74	Harmonic microscopy of isotropic and anisotropic microstructure of the human cornea. <i>Optics Express</i> , 2010, 18, 5028.	3.4	60
75	Polarization-resolved Second Harmonic microscopy in anisotropic thick tissues. <i>Optics Express</i> , 2010, 18, 19339.	3.4	108
76	Nonlinear optical imaging of lyotropic cholesteric liquid crystals. <i>Optics Express</i> , 2010, 18, 1113.	3.4	26
77	Simulating second harmonic generation from tendon Do we see fibrils ?. , 2010, , .		3
78	Measurement of the Second-Order Hyperpolarizability of the Collagen Triple Helix and Determination of Its Physical Origin. <i>Journal of Physical Chemistry B</i> , 2009, 113, 13437-13445.	2.6	106
79	Second harmonic microscopy to quantify renal interstitial fibrosis and arterial remodeling. <i>Journal of Biomedical Optics</i> , 2008, 13, 054041.	2.6	68
80	Nonlinear microscopy of collagen fibers. , 2007, , .		0
81	Second harmonic imaging and scoring of collagen in fibrotic tissues. <i>Optics Express</i> , 2007, 15, 4054.	3.4	268
82	Three-dimensional investigation and scoring of extracellular matrix remodeling during lung fibrosis using multiphoton microscopy. <i>Microscopy Research and Technique</i> , 2007, 70, 162-170.	2.2	126
83	Spectroscopic analysis of skin intrinsic signals for multiphoton microscopy. , 2006, , .		0
84	Imaging lipid bodies in cells and tissues using third-harmonic generation microscopy. <i>Nature Methods</i> , 2006, 3, 47-53.	19.0	522
85	Micrometer scale Ex Vivo multiphoton imaging of unstained arterial wall structure. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2006, 69A, 20-26.	1.5	83
86	Multiphoton microscopy using intrinsic signals for pharmacological studies in unstained cardiac and vascular tissue. , 2005, , .		1
87	In vivo analysis of <i>Drosophila</i> embryo developmental dynamics by femtosecond pulse-induced ablation and multimodal nonlinear microscopy. , 2005, 5700, 256.		0
88	Chiroptical Effects in the Second Harmonic Signal of Collagens I and IV. <i>Journal of the American Chemical Society</i> , 2005, 127, 10314-10322.	13.7	91
89	Spectroscopic analysis of keratin endogenous signal for skin multiphoton microscopy. <i>Optics Express</i> , 2005, 13, 6268.	3.4	144
90	Spectroscopic analysis of keratin endogenous signal for skin multiphoton microscopy: erratum. <i>Optics Express</i> , 2005, 13, 6667.	3.4	12

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91	Second-harmonic microscopy of unstained living cardiac myocytes: measurements of sarcomere length with 20-nm accuracy. <i>Optics Letters</i> , 2004, 29, 2031.	3.3	100
92	Velocimetric third-harmonic generation microscopy: micrometer-scale quantification of morphogenetic movements in unstained embryos. <i>Optics Letters</i> , 2004, 29, 2881.	3.3	52
93	Polarization Rotation in a Second Harmonic Reflection Experiment from an Isotropic Surface of Chiral Tröger Base. <i>Journal of Physical Chemistry B</i> , 2003, 107, 5261-5266.	2.6	15
94	Chiral chromophores for second harmonic microscopy. , 2003, 5139, 121.		0
95	Wavelength dependence of nonlinear circular dichroism in a chiral ruthenium-tris(bipyridyl) solution. <i>Physical Review A</i> , 2002, 66, .	2.5	20
96	Application of microscopic models of chirality to second harmonic reflection. <i>Synthetic Metals</i> , 2002, 127, 63-66.	3.9	3
97	Third-order nonlinear circular dichroism in a liquid of chiral molecules. <i>Synthetic Metals</i> , 2002, 127, 135-138.	3.9	9
98	Nonlinear optical activity in chiral molecules: surface second harmonic generation and nonlinear circular dichroism. <i>Comptes Rendus Physique</i> , 2002, 3, 429-437.	0.9	7
99	Strong chiroptical effects in surface second harmonic generation obtained for molecules exhibiting excitonic coupling chirality. <i>Chemical Physics Letters</i> , 2002, 362, 103-108.	2.6	27
100	Optique non-linéaire et chiralité. <i>European Physical Journal Special Topics</i> , 2002, 12, 77-83.	0.2	0
101	Magnetic chiroptical effects in surface second harmonic reflection. <i>Chemical Physics Letters</i> , 2001, 338, 159-166.	2.6	25
102	Experimental observation of nonlinear circular dichroism in a pump-probe experiment. <i>Chemical Physics Letters</i> , 2001, 338, 269-276.	2.6	26
103	Application of classical models of chirality to surface second harmonic generation. <i>Journal of Chemical Physics</i> , 2001, 115, 6707-6715.	3.0	50
104	Effets chiroptiques magnétiques en réflexion de second harmonique par un film de molécules chirales. <i>European Physical Journal Special Topics</i> , 2000, 10, Pr8-111.	0.2	0
105	Theoretical investigation of the nonlinear circular dichroism in a liquid of chiral molecules. <i>European Physical Journal Special Topics</i> , 2000, 10, Pr8-241.	0.2	0
106	Nonlinear circular dichroism in a liquid of chiral molecules: A theoretical investigation. <i>Physical Review B</i> , 1999, 60, 6405-6411.	3.2	27
107	Symmetry and phase determination of second-harmonic reflection from calcite surfaces. <i>Physical Review B</i> , 1999, 59, 3210-3217.	3.2	12
108	Investigation of the phase of the second-order susceptibility measured in off-resonant surface second-harmonic generation. <i>Applied Physics B: Lasers and Optics</i> , 1999, 68, 321-323.	2.2	4

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109	Effects of a modulation of the pump-polarization in a degenerate pump/probe experiment. <i>European Physical Journal D</i> , 1999, 5, 447-452.	1.3	6
110	Off resonance second order optical activity of isotropic layers of chiral molecules: Observation of electric and magnetic contributions. <i>Journal of Chemical Physics</i> , 1998, 108, 9436-9443.	3.0	59
111	The role of photodarkening and Auger recombination in the dynamics of the optical response for Cd(S,Se) nanoparticles. <i>Journal of Luminescence</i> , 1996, 70, 212-221.	3.1	27
112	Origin of the resonant optical Kerr nonlinearity in Cd(S, Se)-doped glasses and related topics. <i>Applied Physics B: Lasers and Optics</i> , 1995, 61, 17-26.	2.2	8
113	The size dependence of the resonant Kerr nonlinearity of Cd(S,Se)-doped glasses revisited. <i>Applied Physics Letters</i> , 1995, 67, 579-581.	3.3	14
114	Mécanismes et dépendance en taille des non-linéarités optiques résonances des verres dopés par nanocristaux de Cd(S,Se). <i>Annales De Physique</i> , 1995, 20, 591-592.	0.2	0
115	Dielectric confinement and the linear and nonlinear optical properties of semiconductor-doped glasses. <i>Optics Communications</i> , 1994, 108, 311-318.	2.1	64
116	Absorption and intensity-dependent photoluminescence measurements on CdSe quantum dots: assignment of the first electronic transitions: erratum. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1994, 11, 524.	2.1	7
117	Absorption and intensity-dependent photoluminescence measurements on CdSe quantum dots: assignment of the first electronic transitions. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1993, 10, 100.	2.1	723
118	Time-resolved measurements of carrier recombination in experimental semiconductor-doped glasses: Confirmation of the role of Auger recombination. <i>Applied Physics Letters</i> , 1993, 62, 78-80.	3.3	112
119	Optical phase conjugation in Schott CdSSe-doped glasses: origin of the nonlinear response. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1992, 9, 2234.	2.1	19
120	Photoluminescence study of Schott commercial and experimental CdSSe-doped glasses: observation of surface states. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1991, 8, 1802.	2.1	73
121	V Nonlinear Optics in Composite Materials: 1. Semiconductor and Metal Crystallites in Dielectrics. <i>Progress in Optics</i> , 1991, 29, 321-411.	0.6	141
122	Some considerations of the size dependence of optical properties of solids and aggregates. <i>Optics Communications</i> , 1991, 86, 531-537.	2.1	3
123	Period-doubling and period-quadrupling for an actively mode-locked laser diode with extended cavity. <i>Journal of Applied Physics</i> , 1990, 67, 7615-7617.	2.5	3
124	Size dependence of electron-phonon coupling in semiconductor nanospheres: The case of CdSe. <i>Physical Review B</i> , 1990, 42, 11123-11132.	3.2	526