

# Martin C Fischer

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

1,707  
citations

304743

22  
h-index

289244

40  
g-index

84  
all docs

84  
docs citations

84  
times ranked

2203  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-cost measurement of face mask efficacy for filtering expelled droplets during speech. <i>Science Advances</i> , 2020, 6, .	10.3	252
2	Experimental evidence for non-exponential decay in quantum tunnelling. <i>Nature</i> , 1997, 387, 575-577.	27.8	178
3	Invited Review Article: Pump-probe microscopy. <i>Review of Scientific Instruments</i> , 2016, 87, 031101.	1.3	178
4	Dynamical Bloch Band Suppression in an Optical Lattice. <i>Physical Review Letters</i> , 1998, 81, 5093-5096.	7.8	156
5	Observation of Rabi oscillations between Bloch bands in an optical potential. <i>Physical Review A</i> , 1998, 58, R2648-R2651.	2.5	51
6	Femtosecond pump-probe microscopy generates virtual cross-sections in historic artwork. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 1708-1713.	7.1	49
7	Understanding the Role of Aggregation in the Broad Absorption Bands of Eumelanin. <i>ACS Nano</i> , 2018, 12, 12050-12061.	14.6	49
8	Phasor analysis for nonlinear pump-probe microscopy. <i>Optics Express</i> , 2012, 20, 17082.	3.4	44
9	Two-photon absorption and self-phase modulation measurements with shaped femtosecond laser pulses. <i>Optics Letters</i> , 2005, 30, 1551.	3.3	43
10	Hyperpolarized <sup>3</sup> He MRI in Asthma. <i>Academic Radiology</i> , 2005, 12, 1362-1370.	2.5	37
11	Observation of the Wannier-Stark fan and the fractional ladder in an accelerating optical lattice. <i>Physical Review A</i> , 1999, 60, R1767-R1770.	2.5	35
12	Measurements of Regional Alveolar Oxygen Pressure Using Hyperpolarized <sup>3</sup> He MRI. <i>Academic Radiology</i> , 2005, 12, 1430-1439.	2.5	35
13	Cross-phase modulation imaging. <i>Optics Letters</i> , 2012, 37, 800.	3.3	34
14	Self-phase modulation signatures of neuronal activity. <i>Optics Letters</i> , 2008, 33, 219.	3.3	33
15	Cross-phase modulation spectral shifting: nonlinear phase contrast in a pump-probe microscope. <i>Biomedical Optics Express</i> , 2012, 3, 854.	2.9	33
16	Simultaneous self-phase modulation and two-photon absorption measurement by a spectral homodyne Z-scan method. <i>Optics Express</i> , 2008, 16, 4192.	3.4	30
17	Pump-probe imaging of historical pigments used in paintings. <i>Optics Letters</i> , 2012, 37, 1310.	3.3	30
18	Direct Optical Imaging of Graphene In Vitro by Nonlinear Femtosecond Laser Spectral Reshaping. <i>Nano Letters</i> , 2012, 12, 5936-5940.	9.1	29

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19	Early changes of lung function and structure in an elastase model of emphysema—a hyperpolarized <sup>3</sup> He MRI study. <i>Journal of Applied Physiology</i> , 2008, 104, 773-786.	2.5	27
20	Measurements of nonlinear refractive index in scattering media. <i>Optics Express</i> , 2010, 18, 12727.	3.4	27
21	Pump-probe imaging of pigmented cutaneous melanoma primary lesions gives insight into metastatic potential. <i>Biomedical Optics Express</i> , 2015, 6, 3631.	2.9	27
22	Enhanced Two-Photon Photochromism in Metasurface Perfect Absorbers. <i>Nano Letters</i> , 2018, 18, 6181-6187.	9.1	26
23	Stimulated Raman scattering spectroscopic optical coherence tomography. <i>Optica</i> , 2017, 4, 243.	9.3	21
24	Visualization of vermilion degradation using pump-probe microscopy. <i>Science Advances</i> , 2019, 5, eaaw3136.	10.3	21
25	Unraveling the molecular nature of melanin changes in metastatic cancer. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	21
26	FM spectroscopy in recoil-induced resonances. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2001, 3, 279-287.	1.4	15
27	Imaging physiological parameters with hyperpolarized gas MRI. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2005, 47, 187-212.	7.5	15
28	Optical clearing of archive-compatible paraffin embedded tissue for multiphoton microscopy. <i>Biomedical Optics Express</i> , 2012, 3, 2752.	2.9	15
29	DWDM performance of a packaged reconfigurable optical add-drop multiplexer subsystem supporting modular systems growth. <i>IEEE Photonics Technology Letters</i> , 2003, 15, 1600-1602.	2.5	14
30	Power-Dependent Radiant Flux and Absolute Quantum Yields of Upconversion Nanocrystals under Continuous and Pulsed Excitation. <i>Journal of Physical Chemistry C</i> , 2018, 122, 252-259.	3.1	14
31	Label-Free Imaging of Female Genital Tract Melanocytic Lesions With Pump-Probe Microscopy: A Promising Diagnostic Tool. <i>Journal of Lower Genital Tract Disease</i> , 2017, 21, 137-144.	1.9	12
32	Probing the Spatial Heterogeneity of Carrier Relaxation Dynamics in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Thin Films with Femtosecond Time-Resolved Nonlinear Optical Microscopy. <i>Advanced Optical Materials</i> , 2019, 7, 1901185.	7.3	12
33	Rapid pulse shaping with homodyne detection for measuring nonlinear optical signals. <i>Optics Letters</i> , 2008, 33, 1482.	3.3	11
34	High-resolution, three-dimensional imaging of pigments and support in paper and textiles. <i>Journal of Cultural Heritage</i> , 2016, 20, 583-588.	3.3	11
35	10-Gb/s transmission over 200-km conventional fiber without dispersion compensation using the bias control technique. <i>IEEE Photonics Technology Letters</i> , 2002, 14, 1746-1748.	2.5	10
36	Femtosecond pulse shaping enables detection of optical Kerr-effect (OKE) dynamics for molecular imaging. <i>Optics Letters</i> , 2014, 39, 4788.	3.3	10

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37	Flexible digital signal processing architecture for narrowband and spread-spectrum lock-in detection in multiphoton microscopy and time-resolved spectroscopy. <i>Review of Scientific Instruments</i> , 2015, 86, 033707.	1.3	10
38	Phase-cycling coherent anti-Stokes Raman scattering using shaped femtosecond laser pulses. <i>Optics Express</i> , 2010, 18, 25825.	3.4	9
39	Dispersion-based stimulated Raman scattering spectroscopy, holography, and optical coherence tomography. <i>Optics Express</i> , 2016, 24, 485.	3.4	9
40	Imaging melanin by two-photon absorption microscopy. , 2006, , .		8
41	Structural, Optical, and Electronic Properties of Two Quaternary Chalcogenide Semiconductors: $\text{Ag}_2\text{SrSi}_4$ and $\text{Ag}_2\text{SrGeS}_4$ . <i>Inorganic Chemistry</i> , 2021, 60, 12206-12217.	4.0	8
42	Multicontrast nonlinear optical microscopy with a compact and rapid pulse shaper. <i>Optics Letters</i> , 2012, 37, 2763.	3.3	7
43	Spectroscopic Differentiation and Microscopic Imaging of Red Organic Pigments Using Optical Pump-Probe Contrast. <i>Analytical Chemistry</i> , 2018, 90, 12686-12691.	6.5	5
44	Beyond intensity modulation: new approaches to pump-probe microscopy. <i>Optics Letters</i> , 2021, 46, 1474.	3.3	5
45	Tissue imaging with shaped femtosecond laser pulses. <i>Springer Series in Chemical Physics</i> , 2007, , 807-809.	0.2	5
46	FEC performance under optical power transient conditions. <i>IEEE Photonics Technology Letters</i> , 2003, 15, 1654-1656.	2.5	4
47	Femtosecond pulse train shaping improves two-photon excited fluorescence measurements. <i>Optics Letters</i> , 2014, 39, 5606.	3.3	4
48	Comparison of pump-probe and hyperspectral imaging in unstained histology sections of pigmented lesions. <i>Biomedical Optics Express</i> , 2017, 8, 3882.	2.9	4
49	Controllable ultrabroadband slow light in a warm rubidium vapor. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 2578.	2.1	3
50	Visualizing the impact of chloride addition on the microscopic carrier dynamics of MAPbI <sub>3</sub> thin films using femtosecond transient absorption microscopy. <i>Journal of Chemical Physics</i> , 2019, 151, 234710.	3.0	3
51	Self-phase modulation and two-photon absorption imaging of cells and active neurons. , 2007, , .		2
52	Ultrafast pump-probe dynamics of iron oxide based earth pigments for applications to ancient pottery manufacture. <i>Proceedings of SPIE</i> , 2015, , .	0.8	2
53	Crossed-beam pump-probe microscopy. <i>Optics Express</i> , 2020, 28, 11259.	3.4	2
54	Design, Manufacture, and Analysis of Photonic Materials for Historical and Modern Visual Art: feature issue introduction. <i>Optical Materials Express</i> , 2019, 9, 2128.	3.0	2

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55	Optical clearing of archive-compatible paraffin embedded tissue for multiphoton microscopy: erratum. Biomedical Optics Express, 2013, 4, 219.	2.9	1
56	Nonlinear Optical Imaging in Art Conservation and Heritage Science. , 2015, , .		1
57	Separating higher-order nonlinearities in transient absorption microscopy. , 2015, , .		1
58	Enhancing two-color absorption, self-phase modulation, and Raman microscopy signatures in tissue with femtosecond laser pulse shaping. , 2009, , .		0
59	Accessing nonlinear phase contrast in biological tissue using femtosecond laser pulse shaping. , 2011, , .		0
60	Adapting phasor analysis for nonlinear pump-probe microscopy. , 2013, , .		0
61	Shedding new light on old art. Physics World, 2013, 26, 19-23.	0.0	0
62	Optical clearing and multiphoton imaging of paraffin-embedded specimens. Proceedings of SPIE, 2013, , .	0.8	0
63	Enhancing Pigmented or Transparent Tissue Imaging with Laser Pulse Shaping. , 2015, , .		0
64	Dispersion-based stimulated Raman scattering spectroscopy, holography, and optical coherence tomography (Conference Presentation). , 2016, , .		0
65	Real-time digital signal processing in multiphoton and time-resolved microscopy. Proceedings of SPIE, 2016, , .	0.8	0
66	Accessing Nonlinear Contrast in Imaging Using Rapid Pulse Shaping Techniques. , 2008, , .		0
67	Intrinsic Nonlinear Optical Signatures of Neuronal Activity. , 2008, , .		0
68	New nonlinear signatures in spectroscopy and imaging. , 2008, , .		0
69	Experiments on Quantum Transport of Ultra-Cold Atoms in Optical Potentials. Lecture Notes in Physics, 2009, , 205-237.	0.7	0
70	Enhancing Coherent anti-Stokes Raman Scattering Background Suppression with Phase Cycled Structured Femtosecond Laser Pulses. , 2010, , .		0
71	Femtosecond Laser Pulse Shaping Improves Self-phase Modulation Measurements In Scattering Media. , 2010, , .		0
72	Cross-phase Modulation Microscopy. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
73	Femtosecond Pulse Shaping Enables Nonlinear Imaging in Highly Scattering Materials. , 2011, , .		0
74	Optimizing Shape of Femtosecond Laser Pulses for Homodyne Detection of Nonlinear Optical Signals. , 2011, , .		0
75	Nonlinear phase contrast imaging in neuronal tissue. , 2011, , .		0
76	Nonlinear Cross-Phase Modulation Microscopy Using Spectral Shifting. , 2012, , .		0
77	Historical Pigments Revealed by Pump-Probe Microscopy. , 2012, , .		0
78	Nonlinear Pump-Probe Techniques for Multi-Contrast Microscopy. , 2013, , .		0
79	Femtosecond pulse train shaping for accurate two-photon excited fluorescence measurements. , 2014, , .		0
80	Melanin-targeted nonlinear microscopy for label-free molecular diagnosis and staging. , 2016, , .		0