

# Michael E Gehm

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

79  
papers

3,543  
citations

20  
h-index

59  
g-index

101  
ext. papers

4,213  
ext. citations

4.5  
avg, IF

4.92  
L-index

#	Paper	IF	Citations
79	Improving the Performance of a Cycloidal Coded-Aperture Miniature Mass Spectrometer. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2021</b> , 32, 509-518	3.5	3
78	The Long Neglected Cycloidal Mass Analyzer. <i>Analytical Chemistry</i> , <b>2021</b> , 93, 11357-11363	7.8	1
77	The all-seeing baggage scanner. <i>IEEE Spectrum</i> , <b>2020</b> , 57, 22-27	1.7	3
76	Comparison of thermionic filament and carbon nanotube field emitter-based electron ionization sources in cycloidal coded aperture mass analyzers. <i>International Journal of Mass Spectrometry</i> , <b>2020</b> , 457, 116415	1.9	2
75	A novel sector mass spectrograph design for high-order coded aperture Mass Spectrometry with stigmatic aberration correction. <i>International Journal of Mass Spectrometry</i> , <b>2020</b> , 455, 116374	1.9	
74	Rapid simulation of X-ray scatter measurements for threat detection via GPU-based ray-tracing. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2019</b> , 449, 86-93	1.2	5
73	Three-dimensionally-printed anthropomorphic physical phantom for mammography and digital breast tomosynthesis with custom materials, lesions, and uniform quality control region. <i>Journal of Medical Imaging</i> , <b>2019</b> , 6, 021604	2.6	8
72	Resolution and sampling analysis in digital in-line holography with spherical wave illumination. <i>Optical Engineering</i> , <b>2019</b> , 59, 1	1.1	3
71	Single-shot multispectral imaging through a thin scatterer. <i>Optica</i> , <b>2019</b> , 6, 864	8.6	22
70	Motivations and methods for the analysis of multi-modality x-ray systems for explosives detection <b>2019</b> ,		1
69	Simulation-based x-ray system design and analysis: past, present, and future <b>2019</b> ,		1
68	Effects of Magnetic and Electric Field Uniformity on Coded Aperture Imaging Quality in a Cycloidal Mass Analyzer. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2018</b> , 29, 352-359	3.5	4
67	Implementing Sparse Sub-Sampling Methods for Low-Dose/High Speed STEM. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 1952-1953	0.5	1
66	3D printed anthropomorphic physical phantom for mammography and DBT with high contrast custom materials, lesions and uniform chest wall region <b>2018</b> ,		2
65	Multi-carrier channeled polarimetry for photoelastic modulator systems. <i>Optics Letters</i> , <b>2018</b> , 43, 5789-5792		5
64	An information theoretic approach to system optimization accounting for material variability <b>2018</b> ,		1
63	Rapid simulation of X-ray transmission imaging for baggage inspection via GPU-based ray-tracing. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2018</b> , 415, 100-109	1.2	8

62	Proof of Concept Coded Aperture Miniature Mass Spectrometer Using a Cycloidal Sector Mass Analyzer, a Carbon Nanotube (CNT) Field Emission Electron Ionization Source, and an Array Detector. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2018</b> , 29, 360-372	3.5	10
61	Single-shot memory-effect video. <i>Scientific Reports</i> , <b>2018</b> , 8, 13402	4.9	6
60	Third generation anthropomorphic physical phantom for mammography and DBT: incorporating voxelized 3D printing and uniform chest wall QC region <b>2017</b> ,		6
59	Creating an experimental testbed for information-theoretic analysis of architectures for x-ray anomaly detection <b>2017</b> ,		1
58	Coded Apertures in Mass Spectrometry. <i>Annual Review of Analytical Chemistry</i> , <b>2017</b> , 10, 141-156	12.5	8
57	Model-Based Multiscale Gigapixel Image Formation Pipeline on GPU. <i>IEEE Transactions on Computational Imaging</i> , <b>2017</b> , 3, 493-502	4.5	2
56	Compressive Classification for TEM-EELS. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 108-109	0.5	1
55	Design, fabrication, and implementation of voxel-based 3D printed textured phantoms for task-based image quality assessment in CT <b>2016</b> ,		2
54	Compatibility of Spatially Coded Apertures with a Miniature Mattauch-Herzog Mass Spectrograph. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2016</b> , 27, 578-84	3.5	10
53	Second generation anthropomorphic physical phantom for mammography and DBT: Incorporating voxelized 3D printing and inkjet printing of iodinated lesion inserts <b>2016</b> ,		6
52	Computational hyperspectral unmixing using the AFSSI-C <b>2016</b> ,		1
51	Experimental demonstration of an adaptive architecture for direct spectral imaging classification. <i>Optics Express</i> , <b>2016</b> , 24, 18307-21	3.3	9
50	Two-dimensional aperture coding for magnetic sector mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2015</b> , 26, 248-56	3.5	13
49	Order of Magnitude Signal Gain in Magnetic Sector Mass Spectrometry Via Aperture Coding. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2015</b> , 26, 1633-40	3.5	20
48	Terahertz Digital Holographic Imaging of Voids Within Visibly Opaque Dielectrics. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2015</b> , 5, 110-116	3.4	25
47	Hyperspectral Unmixing using the AFSSI-C <b>2015</b> ,		1
46	. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2014</b> , 62, 1799-1807	4.9	183
45	. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2014</b> , 62, 2000-2008	4.9	175

44	Comparison of photoconductive antenna performance on LT-GaAs and SI-GaAs substrates <b>2014</b> ,		1
43	Compressive mass analysis on quadrupole ion trap systems. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2014</b> , 25, 1295-304	3.5	8
42	Millimeter wave luneburg lens antenna fabricated by polymer jetting rapid prototyping <b>2014</b> ,		10
41	Direct rapid-prototyping fabrication of computer-generated volume holograms in the millimeter-wave and terahertz regime. <i>Optics Express</i> , <b>2014</b> , 22, 3349-55	3.3	8
40	Petapixel photography and the limits of camera information capacity <b>2013</b> ,		1
39	High gain dielectric reflectarray antennas for THz applications <b>2013</b> ,		8
38	Computational optical sensing and imaging: introduction to feature issue. <i>Applied Optics</i> , <b>2013</b> , 52, COSI1-2	1.2	1
37	Multiscale gigapixel photography. <i>Nature</i> , <b>2012</b> , 486, 386-9	50.4	174
36	Terahertz Horn Antenna Based on Hollow-Core Electromagnetic Crystal (EMXT) Structure. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2012</b> , 60, 5557-5563	4.9	41
35	Gigapixel Imaging with the AWARE Multiscale Camera. <i>Optics and Photonics News</i> , <b>2012</b> , 23, 31	1.9	9
34	Development of a scalable image formation pipeline for multiscale gigapixel photography. <i>Optics Express</i> , <b>2012</b> , 20, 22048-62	3.3	13
33	Static compressive tracking. <i>Optics Express</i> , <b>2012</b> , 20, 21160-72	3.3	4
32	Terahertz all-dielectric EMXT waveguide to planar microstrip transition structure <b>2011</b> ,		3
31	An X-band Luneburg Lens antenna fabricated by rapid prototyping technology <b>2011</b> ,		2
30	Information-theoretic analysis of a stimulated-Brillouin-scattering-based slow-light system. <i>Applied Optics</i> , <b>2011</b> , 50, 6063-72	0.2	5
29	Terahertz electromagnetic crystal waveguide fabricated by polymer jetting rapid prototyping. <i>Optics Express</i> , <b>2011</b> , 19, 3962-72	3.3	77
28	Adaptive feature specific spectroscopy for rapid chemical identification. <i>Optics Express</i> , <b>2011</b> , 19, 4595-610	3.0	20
27	Systematic design study of an all-optical delay line based on Brillouin scattering enhanced cascade coupled ring resonators. <i>Journal of Optics (United Kingdom)</i> , <b>2010</b> , 12, 104012	1.7	4

26	Terahertz electromagnetic crystal (EMXT) based waveguide and horn antenna <b>2010</b> ,		2
25	Hollow-core electromagnetic band gap (EBG) waveguide fabricated by rapid prototyping for low-loss terahertz guiding <b>2010</b> ,		2
24	Investigation of several terahertz electromagnetic band gap structures. <i>Microwave and Optical Technology Letters</i> , <b>2010</b> , 52, 678-686	1.2	8
23	All-dielectric low-loss terahertz waveguide fabricated by rapid prototyping <b>2009</b> ,		2
22	Novel Applications of Rapid Prototyping in Gamma-ray and X-ray Imaging. <i>IEEE Nuclear Science Symposium Conference Record</i> , <b>2009</b> , 2009, 3322-3326		9
21	Compressive measurement for target tracking in persistent, pervasive surveillance applications <b>2009</b> ,		1
20	High-throughput, multiplexed pushbroom hyperspectral microscopy. <i>Optics Express</i> , <b>2008</b> , 16, 11032-43	3.3	22
19	Rapid and inexpensive fabrication of terahertz electromagnetic bandgap structures. <i>Optics Express</i> , <b>2008</b> , 16, 16442-51	3.3	73
18	Multiple order coded aperture spectrometer. <i>Optics Express</i> , <b>2007</b> , 15, 5625-30	3.3	15
17	Longwave infrared (LWIR) coded aperture dispersive spectrometer. <i>Optics Express</i> , <b>2007</b> , 15, 5742-53	3.3	18
16	Single-shot compressive spectral imaging with a dual-disperser architecture. <i>Optics Express</i> , <b>2007</b> , 15, 14013-27	3.3	361
15	Performance comparison of aperture codes for multimodal, multiplex spectroscopy. <i>Applied Optics</i> , <b>2007</b> , 46, 4932-42	1.7	21
14	Large-Aperture Raman Spectroscopy for Quantitative Chemometrics. <i>Optics and Photonics News</i> , <b>2006</b> , 17, 42	1.9	20
13	Static two-dimensional aperture coding for multimodal, multiplex spectroscopy. <i>Applied Optics</i> , <b>2006</b> , 45, 2965-74	1.7	75
12	Coded aperture Raman spectroscopy for quantitative measurements of ethanol in a tissue phantom. <i>Applied Spectroscopy</i> , <b>2006</b> , 60, 663-71	3.1	42
11	Compressive sampling strategies for integrated microspectrometers <b>2006</b> ,		3
10	Evidence for superfluidity in a resonantly interacting Fermi gas. <i>Physical Review Letters</i> , <b>2004</b> , 92, 150402	7.4	617
9	Measurement-efficient optical wavemeters. <i>Optics Express</i> , <b>2004</b> , 12, 6219-29	3.3	7

8	Optically Trapped Fermi Gases. <i>American Scientist</i> , <b>2004</b> , 92, 238	2.7	10
7	All-optical production of a degenerate Fermi gas. <i>Physical Review Letters</i> , <b>2002</b> , 88, 120405	7.4	197
6	Observation of a strongly interacting degenerate Fermi gas of atoms. <i>Science</i> , <b>2002</b> , 298, 2179-82	33.3	807
5	Stable, strongly attractive, two-state mixture of lithium fermions in an optical trap. <i>Physical Review Letters</i> , <b>2000</b> , 85, 2092-5	7.4	46
4	Quantum-diffractive background gas collisions in atom-trap heating and loss. <i>Physical Review A</i> , <b>1999</b> , 60, R29-R32	2.6	48
3	Ultrastable CO <sub>2</sub> Laser Trapping of Lithium Fermions. <i>Physical Review Letters</i> , <b>1999</b> , 82, 4204-4207	7.4	87
2	Raman-induced magnetic resonance imaging of atoms in a magneto-optical trap. <i>Physical Review A</i> , <b>1999</b> , 60, 4788-4795	2.6	6
1	Dynamics of noise-induced heating in atom traps. <i>Physical Review A</i> , <b>1998</b> , 58, 3914-3921	2.6	105