Demetri Psaltis

List of Publications by Year in Descending Order

169 papers	9,632 citations	48 h-index	95 g-index
257 ext. papers	12,304 ext. citations	7.1 avg, IF	6.49 L-index

#	Paper	IF	Citations
169	Photonic waveguide bundles using 3D laser writing and deep neural network image reconstruction.. *Optics Express*, **2022**, 30, 2564-2577	3.3	3
168	Optical Diffraction Tomography Using Nearly In-Line Holography with a Broadband LED Source. *Applied Sciences (Switzerland)*, **2022**, 12, 951	2.6	0
167	Polarization-sensitive optical diffraction tomography. *Optica*, **2021**, 8, 402	8.6	10
166	Reusability report: Predicting spatiotemporal nonlinear dynamics in multimode fibre optics with a recurrent neural network. *Nature Machine Intelligence*, **2021**, 3, 387-391	22.5	3
165	Fluorescence-Based and Fluorescent Label-Free Characterization of Polymer Nanoparticle Decorated T Cells. *Biomacromolecules*, **2021**, 22, 190-200	6.9	6
164	3D reconstruction of weakly scattering objects from 2D intensity-only measurements using the Wolf transform. *Optics Express*, **2021**, 29, 3976-3984	3.3	1
163	A membrane-less electrolyzer with porous walls for high throughput and pure hydrogen production. *Sustainable Energy and Fuels*, **2021**, 5, 2419-2432	5.8	4
162	Predicting optical transmission through complex scattering media from reflection patterns with deep neural networks. *Optics Communications*, **2021**, 492, 126968	2	4
161	Scalable optical learning operator. *Nature Computational Science*, **2021**, 1, 542-549		18
160	High speed, complex wavefront shaping using the digital micro-mirror device. *Scientific Reports*, **2021**, 11, 18837	4.9	1
159	Fabrication of Sub-Micron Polymer Waveguides through Two-Photon Polymerization in Polydimethylsiloxane. *Polymers*, **2020**, 12,	4.5	9
158	Deep Learning-Based Image Classification through a Multimode Fiber in the Presence of Wavelength Drift. *Applied Sciences (Switzerland)*, **2020**, 10, 3816	2.6	6
157	Additive micro-manufacturing of crack-free PDCs by two-photon polymerization of a single, low-shrinkage preceramic resin. *Additive Manufacturing*, **2020**, 35, 101343	6.1	11
156	In Vitro Cytocompatibility Assessment of Ti-Modified, Silicon-oxycarbide-Based, Polymer-Derived, Ceramic-Implantable Electrodes under Pacing Conditions. *ACS Applied Materials & Interfaces*, **2020**, 12, 17244-17253	9.5	10
155	Three-Dimensional Optical Diffraction Tomography With Lippmann-Schwinger Model. *IEEE Transactions on Computational Imaging*, **2020**, 6, 727-738	4.5	22
154	Three-dimensional tomography of red blood cells using deep learning. *Advanced Photonics*, **2020**, 2, 1	8.1	15
153	The Impact of Surfactants on the Inertial Separation of Bubbles in Microfluidic Electrolyzers. *Journal of the Electrochemical Society*, **2020**, 167, 134504	3.9	2

152	Computer generated optical volume elements by additive manufacturing. *Nanophotonics*, **2020**, 9, 4173-4181	6.8	11
151	Actor neural networks for the robust control of partially measured nonlinear systems showcased for image propagation through diffuse media. *Nature Machine Intelligence*, **2020**, 2, 403-410	22.5	17
150	Inference in artificial intelligence with deep optics and photonics. *Nature*, **2020**, 588, 39-47	50.4	114
149	Adaptive Regularization for Three-Dimensional Optical Diffraction Tomography **2020**,		3
148	A method for assessing the fidelity of optical diffraction tomography reconstruction methods using structured illumination. *Optics Communications*, **2020**, 454, 124486	2	5
147	High-fidelity optical diffraction tomography of multiple scattering samples. *Light: Science and Applications*, **2019**, 8, 82	16.7	38
146	A versatile and membrane-less electrochemical reactor for the electrolysis of water and brine. *Energy and Environmental Science*, **2019**, 12, 1592-1604	35.4	42
145	Imaging through multimode fibers using deep learning: The effects of intensity versus holographic recording of the speckle pattern. *Optical Fiber Technology*, **2019**, 52, 101985	2.4	25
144	EditorsWChoiceBolar-Electrochemical Platforms for Sodium Hypochlorite Generation in Developing Countries. *Journal of the Electrochemical Society*, **2019**, 166, E336-E346	3.9	2
143	Learning from droplet flows in microfluidic channels using deep neural networks. *Scientific Reports*, **2019**, 9, 8114	4.9	20
142	Selective femtosecond laser ablation via two-photon fluorescence imaging through a multimode fiber. *Biomedical Optics Express*, **2019**, 10, 423-433	3.5	19
141	Digital staining through the application of deep neural networks to multi-modal multi-photon microscopy. *Biomedical Optics Express*, **2019**, 10, 1339-1350	3.5	18
140	Imaging hair cells through laser-ablated cochlear bone. *Biomedical Optics Express*, **2019**, 10, 5974-5988	3.5	1
139	Efficient Image Classification through a Multimode Fiber using Deep Neural Networks in presence of Wavelength Drifting **2019**,		1
138	Raman imaging through multimode sapphire fiber. *Optics Express*, **2019**, 27, 1090-1098	3.3	10
137	Photoinitiator-free multi-photon fabrication of compact optical waveguides in polydimethylsiloxane. *Optical Materials Express*, **2019**, 9, 128	2.6	15
136	Inertial manipulation of bubbles in rectangular microfluidic channels. *Lab on A Chip*, **2018**, 18, 1035-1046	7.2	22
135	Learning Tomography Assessed Using Mie Theory. *Physical Review Applied*, **2018**, 9,	4.3	11

134	Integrated Platform for Multi-resolution Additive Manufacturing **2018**, 145-151		
133	Single-photon three-dimensional microfabrication through a multimode optical fiber. *Optics Express* , **2018**, 26, 1766-1778	3.3	21
132	Versatile reconstruction framework for diffraction tomography with intensity measurements and multiple scattering. *Optics Express*, **2018**, 26, 2749-2763	3.3	29
131	Polymer derived silicon oxycarbide ceramic monoliths: Microstructure development and associated materials properties. *Ceramics International*, **2018**, 44, 20961-20967	5.1	14
130	Learning to see through multimode fibers. *Optica*, **2018**, 5, 960	8.6	147
129	Multimode optical fiber transmission with a deep learning network. *Light: Science and Applications*, **2018**, 7, 69	16.7	113
128	Multiple speckle illumination for optical-resolution photoacoustic imaging **2017**,		2
127	A 25.1% Efficient Stand-Alone Solar Chloralkali Generator Employing a Microtracking Solar Concentrator. *Global Challenges*, **2017**, 1, 1700095	4.3	3
126	Optical Tomography based on a nonlinear model that handles multiple scattering **2017**,		1
125	Three-dimensional microfabrication through a multimode optical fiber. *Optics Express*, **2017**, 25, 7031-7045	3.3	19
124	High power, ultrashort pulse control through a multi-core fiber for ablation. *Optics Express*, **2017**, 25, 11491-11502	3.3	10
123	Bend translation in multimode fiber imaging. *Optics Express*, **2017**, 25, 6263-6273	3.3	26
122	Solar-to-Hydrogen Production at 14.2% Efficiency with Silicon Photovoltaics and Earth-Abundant Electrocatalysts. *Journal of the Electrochemical Society*, **2016**, 163, F1177-F1181	3.9	62
121	Lensless two-photon imaging through a multicore fiber with coherence-gated digital phase conjugation. *Journal of Biomedical Optics*, **2016**, 21, 45002	3.5	19
120	Surgical Anatomy of the Human Round Window Region: Implication for Cochlear Endoscopy Through the External Auditory Canal. *Otology and Neurotology*, **2016**, 37, 1189-94	2.6	11
119	Optical Computing: Past and Future. *Optics and Photonics News*, **2016**, 27, 32	1.9	37
118	Complex light in 3D printing **2016**,		1
117	Optical Tomographic Image Reconstruction Based on Beam Propagation and Sparse Regularization. *IEEE Transactions on Computational Imaging*, **2016**, 2, 59-70	4.5	93

116	Hollow Mesoporous Plasmonic Nanoshells for Enhanced Solar Vapor Generation. *Nano Letters*, **2016**, 16, 2159-67	11.5	174
115	Calibration-free imaging through a multicore fiber using speckle scanning microscopy. *Optics Letters*, **2016**, 41, 3078-81	3	30
114	Optofluidics of plants. *APL Photonics*, **2016**, 1, 020901	5.2	2
113	Laser-assisted inkjet printing of highly viscous fluids with sub-nozzle resolution **2016**,		1
112	Imaging with Multimode Fibers. *Optics and Photonics News*, **2016**, 27, 24	1.9	19
111	Human audiometric thresholds do not predict specific cellular damage in the inner ear. *Hearing Research*, **2016**, 335, 83-93	3.9	31
110	STED imaging of green fluorescent nanodiamonds containing nitrogen-vacancy-nitrogen centers. *Biomedical Optics Express*, **2016**, 7, 34-44	3.5	28
109	Inkjet Printing of Viscous Monodisperse Microdroplets by Laser-Induced Flow Focusing. *Physical Review Applied*, **2016**, 6,	4.3	40
108	Complex pattern projection through a multimode fiber **2015**,		3
107	A membrane-less electrolyzer for hydrogen production across the pH scale. *Energy and Environmental Science*, **2015**, 8, 2003-2009	35.4	69
106	Vapor-fed microfluidic hydrogen generator. *Lab on A Chip*, **2015**, 15, 2287-96	7.2	31
105	Isotropic inverse-problem approach for two-dimensional phase unwrapping. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2015**, 32, 1092-100	1.8	7
104	Subsurface ablation of atherosclerotic plaque using ultrafast laser pulses. *Biomedical Optics Express* , **2015**, 6, 2552-61	3.5	4
103	Improving the quality of filament-impaired images in Kerr media by statistical averaging. *Optics Express*, **2015**, 23, 431-44	3.3	1
102	Delivery of focused short pulses through a multimode fiber. *Optics Express*, **2015**, 23, 9109-20	3.3	65
101	Learning approach to optical tomography. *Optica*, **2015**, 2, 517	8.6	219
100	Digital confocal microscopy through a multimode fiber. *Optics Express*, **2015**, 23, 23845-58	3.3	83
99	Ultrafast laser ablation for targeted atherosclerotic plaque removal **2015**,		1

98	Two-photon imaging through a multimode fiber. *Optics Express*, **2015**, 23, 32158-70	3.3	59
97	Enhanced resolution in a multimode fiber imaging system. *Optics Express*, **2015**, 23, 27484-93	3.3	12
96	Light control in a multicore fiber using the memory effect. *Optics Express*, **2015**, 23, 30532-44	3.3	22
95	Towards new applications using capillary waveguides. *Biomedical Optics Express*, **2015**, 6, 4619-31	3.5	12
94	Optical-resolution photoacoustic imaging through thick tissue with a thin capillary as a dual optical-in acoustic-out waveguide. *Applied Physics Letters*, **2015**, 106, 094102	3.4	17
93	Confocal microscopy through a multimode fiber using optical correlation. *Optics Letters*, **2015**, 40, 5754-7	3	18
92	Design and cost considerations for practical solar-hydrogen generators. *Energy and Environmental Science*, **2014**, 7, 3828-3835	35.4	113
91	Solar thermal harvesting for enhanced photocatalytic reactions. *Physical Chemistry Chemical Physics* , **2014**, 16, 5137-41	3.6	14
90	Superhydrophobic bullʼs-eye for surface-enhanced Raman scattering. *Lab on A Chip*, **2014**, 14, 3907-11	7.2	26
89	Resolution enhancement in nonlinear scanning microscopy through post-detection digital computation. *Optica*, **2014**, 1, 455	8.6	23
88	Imaging blood cells through scattering biological tissue using speckle scanning microscopy. *Optics Express*, **2014**, 22, 3405-13	3.3	76
87	A micropillar array for sample concentration via in-plane evaporation. *Biomicrofluidics*, **2014**, 8, 044108	3.2	10
86	Optical-resolution photoacoustic microscopy by use of a multimode fiber. *Applied Physics Letters*, **2013**, 102, 211106	3.4	26
85	Electrically tunable optofluidic light switch for reconfigurable solar lighting. *Lab on A Chip*, **2013**, 13, 2708-13	7.2	25
84	Digital holographic confocal microscope **2013**,		3
83	Increasing the imaging capabilities of multimode fibers by exploiting the properties of highly scattering media. *Optics Letters*, **2013**, 38, 2776-8	3	18
82	Seeing through turbidity with harmonic holography [Invited]. *Applied Optics*, **2013**, 52, 567-78	1.7	12
81	High-resolution, lensless endoscope based on digital scanning through a multimode optical fiber. *Biomedical Optics Express*, **2013**, 4, 260-70	3.5	174

80	Multiple contrast metrics from the measurements of a digital confocal microscope. *Biomedical Optics Express*, **2013**, 4, 1091-103	3.5	11
79	Dynamic bending compensation while focusing through a multimode fiber. *Optics Express*, **2013**, 21, 22504-14	3.5	62
78	Imaging in focusing Kerr media using reverse propagation [Invited]. *Photonics Research*, **2013**, 1, 96	6	10
77	Focused light delivery and all optical scanning from a multimode optical fiber using digital phase conjugation **2013**,		1
76	Two-photon microscopy of the mouse cochlea in situ for cellular diagnosis. *Journal of Biomedical Optics*, **2013**, 18, 31104	3.5	17
75	Imaging using multimode fibers **2013**,		2
74	COHERENT ANTI-STOKES RAMAN SCATTERING HOLOGRAPHY: THEORY AND EXPERIMENT. *Journal of Nonlinear Optical Physics and Materials*, **2012**, 21, 1250028	0.8	7
73	Precision intracellular delivery based on optofluidic polymersome rupture. *ACS Nano*, **2012**, 6, 7850-7	16.7	75
72	Elastomer based tunable optofluidic devices. *Lab on A Chip*, **2012**, 12, 3590-7	7.2	29
71	Focusing and scanning light through a multimode optical fiber using digital phase conjugation. *Optics Express*, **2012**, 20, 10583-90	3.3	224
70	Holographic coherent anti-Stokes Raman scattering bio-imaging. *Biomedical Optics Express*, **2012**, 3, 1744-9	3.5	11
69	Three-dimensional scanning microscopy through thin turbid media. *Optics Express*, **2012**, 20, 2500-6	3.3	34
68	Digital confocal microscope. *Optics Express*, **2012**, 20, 22720-7	3.3	21
67	Pneumatically tunable optofluidic 2 □2 switch for reconfigurable optical circuit. *Lab on A Chip*, **2011**, 11, 2397-402	7.2	144
66	Imaging with second-harmonic radiation probes in living tissue. *Biomedical Optics Express*, **2011**, 2, 2532-9	3.5	45
65	Silicon oxide deposition for enhanced optical switching in polydimethylsiloxane-liquid crystal hybrids. *Optics Express*, **2011**, 19, 23532-7	3.3	16
64	Superoscillatory diffraction-free beams. *Optics Letters*, **2011**, 36, 4335-7	3	45
63	Optofluidics for energy applications. *Nature Photonics*, **2011**, 5, 583-590	33.9	223

62	Huygens–Fresnel diffraction and evanescent waves. *Optics Communications*, **2011**, 284, 1686-1689	2	10
61	Optofluidic membrane interferometer: An imaging method for measuring microfluidic pressure and flow rate simultaneously on a chip. *Biomicrofluidics*, **2011**, 5, 44110-4411011	3.2	25
60	Digital reverse propagation in focusing Kerr media. *Physical Review A*, **2011**, 83,	2.6	15
59	Second harmonic nanoparticles in imaging applications **2011**,		2
58	Coherent anti-Stokes Raman holography for chemically selective single-shot nonscanning 3D imaging. *Physical Review Letters*, **2010**, 104, 093902	7.4	31
57	All-optical switching in an optofluidic polydimethylsiloxane: Liquid crystal grating defined by cast-molding. *Applied Physics Letters*, **2010**, 96, 131112	3.4	25
56	Pneumatically tunable optofluidic dye laser. *Applied Physics Letters*, **2010**, 96, 081101	3.4	37
55	Nonlinear optical properties of core-shell nanocavities for enhanced second-harmonic generation. *Physical Review Letters*, **2010**, 104, 207402	7.4	194
54	Inline holographic coherent anti-Stokes Raman microscopy. *Optics Express*, **2010**, 18, 8213-9	3.3	13
53	Second harmonic generation from nanocrystals under linearly and circularly polarized excitations. *Optics Express*, **2010**, 18, 11917-32	3.3	41
52	Digital phase conjugation of second harmonic radiation emitted by nanoparticles in turbid media. *Optics Express*, **2010**, 18, 12283-90	3.3	116
51	Imaging based optofluidic air flow meter with polymer interferometers defined by soft lithography. *Optics Express*, **2010**, 18, 16561-6	3.3	13
50	Imaging through turbid layers by scanning the phase conjugated second harmonic radiation from a nanoparticle. *Optics Express*, **2010**, 18, 20723-31	3.3	142
49	Optofluidic pressure sensor based on interferometric imaging. *Optics Letters*, **2010**, 35, 3604-6	3	29
48	Characterization of the cytotoxicity and imaging properties of second-harmonic nanoparticles **2010** ,		4
47	Harmonic Holography. *Advances in Imaging and Electron Physics*, **2010**, 75-112	0.2	1
46	Bioconjugation of barium titanate nanocrystals with immunoglobulin G antibody for second harmonic radiation imaging probes. *Biomaterials*, **2010**, 31, 2272-7	15.6	77
45	Lithium niobate nanowires synthesis, optical properties, and manipulation. *Applied Physics Letters*, **2009**, 95, 143105	3.4	67

44	Three-dimensional harmonic holographic microcopy using nanoparticles as probes for cell imaging. *Optics Express*, **2009**, 17, 2880-91	3.3	131
43	A multi-color fast-switching microfluidic droplet dye laser. *Lab on A Chip*, **2009**, 9, 2767-71	7.2	154
42	Low-order distributed feedback optofluidic dye laser with reduced threshold. *Applied Physics Letters*, **2009**, 94, 051117	3.4	49
41	Optofluidic evanescent dye laser based on a distributed feedback circular grating. *Applied Physics Letters*, **2009**, 94, 161110	3.4	51
40	Heterogenous catalysis mediated by plasmon heating. *Nano Letters*, **2009**, 9, 4417-23	11.5	380
39	OPTICAL PHASE CONJUGATION FOR TURBIDITY SUPPRESSION IN BIOLOGICAL SAMPLES. *Nature Photonics*, **2008**, 2, 110-115	33.9	422
38	Harmonic holography: a new holographic principle. *Applied Optics*, **2008**, 47, A103-10	1.7	53
37	Magnifying perfect lens and superlens design by coordinate transformation. *Physical Review B*, **2008**, 77,	3.3	113
36	Lensless high-resolution on-chip optofluidic microscopes for Caenorhabditis elegans and cell imaging. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 10670-5	11.5	226
35	Optofluidic dye lasers. *Microfluidics and Nanofluidics*, **2008**, 4, 145-158	2.8	119
34	Modulational instability in nonlinearity-managed optical media. *Physical Review A*, **2007**, 75,	2.6	23
33	Nonlinearity management in optics. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 2030029-2030030		
32	Nanoimprinted circular grating distributed feedback dye laser. *Applied Physics Letters*, **2007**, 91, 051109	3.4	37
31	Optical parametric generation in periodically poled KTiOPO4 via extended phase matching. *Applied Physics Letters*, **2007**, 91, 131120	3.4	3
30	Optofluidic Microring Dye Laser. *LEOS Summer Topical Meeting*, **2007**,		3
29	Holographic capture of femtosecond pulse propagation. *Journal of Applied Physics*, **2006**, 100, 063104	2.5	27
28	Optofluidic microscopy--a method for implementing a high resolution optical microscope on a chip. *Lab on A Chip*, **2006**, 6, 1274-6	7.2	190
27	Nanofluidic tuning of photonic crystal circuits. *Optics Letters*, **2006**, 31, 59-61	3	177

26	Holographic grating formation in a colloidal suspension of silver nanoparticles. *Optics Letters*, **2006**, 31, 447-9	3	11
25	Single mode optofluidic distributed feedback dye laser. *Optics Express*, **2006**, 14, 696-701	3.3	228
24	Optical detection of asymmetric bacteria utilizing electro orientation. *Optics Express*, **2006**, 14, 9780-5	3.3	20
23	Mechanically tunable optofluidic distributed feedback dye laser. *Optics Express*, **2006**, 14, 10494-9	3.3	92
22	Developing optofluidic technology through the fusion of microfluidics and optics. *Nature*, **2006**, 442, 381-6	50.4	1385
21	Dynamics of filament formation in a Kerr medium. *Physical Review A*, **2005**, 71,	2.6	30
20	A microfluidic 2□ optical switch. *Applied Physics Letters*, **2004**, 85, 6119-6121	3.4	58
19	Reverse propagation of femtosecond pulses in optical fibers. *Optics Letters*, **2003**, 28, 1873-5	3	42
18	Holographic recording of fast phenomena. *Applied Physics Letters*, **2002**, 80, 731-733	3.4	42
17	Coherent optical information systems. *Science*, **2002**, 298, 1359-63	33.3	72
16	Ionic and electronic dark decay of holograms in LiNbO3:Fe crystals. *Applied Physics Letters*, **2001**, 78, 4076-4078	3.4	49
15	Liquid-crystal blazed-grating beam deflector. *Applied Optics*, **2000**, 39, 6545-55	1.7	85
14	Effect of annealing in two-center holographic recording. *Applied Physics Letters*, **1999**, 74, 3767-3769	3.4	43
13	Network Synthesis through Data-Driven Growth and Decay. *Neural Networks*, **1997**, 10, 1133-1141	9.1	4
12	Holography in artificial neural networks **1995**, 541-546		2
11	Bias-free time-integrating optical correlator using a photorefractive crystal **1995**, 587-592		
10	Double grating formation in anisotropic photorefractive crystals. *Journal of Applied Physics*, **1992**, 71, 1394-1400	2.5	7
9	Phase-locked sustainment of photorefractive holograms using phase conjugation. *Journal of Applied Physics*, **1991**, 70, 4646-4648	2.5	25

8	Mass storage for digital optical computers **1990**, 10257, 158		
7	Holography in artificial neural networks. *Nature*, **1990**, 343, 325-30	50.4	158
6	Generalizing Smoothness Constraints from Discrete Samples. *Neural Computation*, **1990**, 2, 188-197	2.9	37
5	Volume holographic interconnections with maximal capacity and minimal cross talk. *Journal of Applied Physics*, **1989**, 65, 2191-2194	2.5	99
4	INFORMATION STORAGE IN FULLY CONNECTED NETWORKS **1989**, 51-89		
3	Adaptive optical networks using photorefractive crystals. *Applied Optics*, **1988**, 27, 1752-9	1.7	297
2	Real-time computer-generated hologram by means of liquid-crystal television spatial light modulator. *Optics Letters*, **1986**, 11, 748-50	3	114
1	Image normalization by complex moments. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **1985**, 7, 46-55	13.3	163