

# John D Joannopoulos

## List of Publications by Citations

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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.

85  
papers

10,440  
citations

41  
h-index

102  
g-index

103  
ext. papers

13,108  
ext. citations

16.6  
avg, IF

6.53  
L-index

#	Paper	IF	Citations
85	Topological photonics. <i>Nature Photonics</i> , <b>2014</b> , 8, 821-829	33.9	1659
84	A dielectric omnidirectional reflector. <i>Science</i> , <b>1998</b> , 282, 1679-82	33.3	952
83	Bound states in the continuum. <i>Nature Reviews Materials</i> , <b>2016</b> , 1,	73.3	900
82	TOPOLOGICAL MATTER. Experimental observation of Weyl points. <i>Science</i> , <b>2015</b> , 349, 622-4	33.3	609
81	Photonic Crystals <b>2011</b> ,		536
80	Weyl points and line nodes in gyroid photonic crystals. <i>Nature Photonics</i> , <b>2013</b> , 7, 294-299	33.9	418
79	Spawning rings of exceptional points out of Dirac cones. <i>Nature</i> , <b>2015</b> , 525, 354-8	50.4	392
78	Nanophotonic particle simulation and inverse design using artificial neural networks. <i>Science Advances</i> , <b>2018</b> , 4, eaar4206	14.3	335
77	Observation of bulk Fermi arc and polarization half charge from paired exceptional points. <i>Science</i> , <b>2018</b> , 359, 1009-1012	33.3	276
76	Enhanced coupling to vertical radiation using a two-dimensional photonic crystal in a semiconductor light-emitting diode. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 563-565	3.4	228
75	Symmetry-protected topological photonic crystal in three dimensions. <i>Nature Physics</i> , <b>2016</b> , 12, 337-340	16.2	182
74	Metallic Photonic Crystal Absorber-Emitter for Efficient Spectral Control in High-Temperature Solar Thermophotovoltaics. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1400334	21.8	171
73	Near-field thermal radiation transfer controlled by plasmons in graphene. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	159
72	Probing topological protection using a designer surface plasmon structure. <i>Nature Communications</i> , <b>2016</b> , 7, 11619	17.4	150
71	Transparent displays enabled by resonant nanoparticle scattering. <i>Nature Communications</i> , <b>2014</b> , 5, 3152	7.4	143
70	Shrinking light to allow forbidden transitions on the atomic scale. <i>Science</i> , <b>2016</b> , 353, 263-9	33.3	134
69	Tailoring high-temperature radiation and the resurrection of the incandescent source. <i>Nature Nanotechnology</i> , <b>2016</b> , 11, 320-4	28.7	122

68	Bloch surface eigenstates within the radiation continuum. <i>Light: Science and Applications</i> , <b>2013</b> , 2, e84-e86	11.7	117
67	All-angle negative refraction of highly squeezed plasmon and phonon polaritons in graphene-boron nitride heterostructures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 6717-6721	11.5	107
66	Recent developments in high-temperature photonic crystals for energy conversion. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 8815	35.4	106
65	Negative effective permeability in polaritonic photonic crystals. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 543-545	5.4	94
64	Structural Colors from Fano Resonances. <i>ACS Photonics</i> , <b>2015</b> , 2, 27-32	6.3	88
63	Low-Loss Plasmonic Dielectric Nanoresonators. <i>Nano Letters</i> , <b>2017</b> , 17, 3238-3245	11.5	84
62	Towards graphene plasmon-based free-electron infrared to X-ray sources. <i>Nature Photonics</i> , <b>2016</b> , 10, 46-52	33.9	76
61	Microfluidic directional emission control of an azimuthally polarized radial fibre laser. <i>Nature Photonics</i> , <b>2012</b> , 6, 229-233	33.9	69
60	Topological magnetoplasmon. <i>Nature Communications</i> , <b>2016</b> , 7, 13486	17.4	68
59	Formation mechanism of guided resonances and bound states in the continuum in photonic crystal slabs. <i>Scientific Reports</i> , <b>2016</b> , 6, 31908	4.9	64
58	Integrated fibres for self-monitored optical transport. <i>Nature Materials</i> , <b>2005</b> , 4, 820-825	27	58
57	Guiding 1.5 $\mu\text{m}$ light in photonic crystals based on dielectric rods. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 6110-6112	6.12	55
56	A general theoretical and experimental framework for nanoscale electromagnetism. <i>Nature</i> , <b>2019</b> , 576, 248-252	50.4	54
55	Controlling Cherenkov angles with resonance transition radiation. <i>Nature Physics</i> , <b>2018</b> , 14, 816-821	16.2	54
54	Crystalline silicon core fibres from aluminium core preforms. <i>Nature Communications</i> , <b>2015</b> , 6, 6248	17.4	53
53	Splashing transients of 2D plasmons launched by swift electrons. <i>Science Advances</i> , <b>2017</b> , 3, e1601192	14.3	52
52	Maximal spontaneous photon emission and energy loss from free electrons. <i>Nature Physics</i> , <b>2018</b> , 14, 894-899	16.2	52
51	Casimir forces in the time domain: Theory. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	52

50	Efficient plasmonic emission by the quantum Brekrov effect from hot carriers in graphene. <i>Nature Communications</i> , <b>2016</b> , 7, ncomms11880	17.4	51
49	Broadband surface-wave transformation cloak. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 7635-8	11.5	47
48	An animal-to-human scaling law for blast-induced traumatic brain injury risk assessment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 15310-5	11.5	44
47	Broadband angular selectivity of light at the nanoscale: Progress, applications, and outlook. <i>Applied Physics Reviews</i> , <b>2016</b> , 3, 011103	17.3	41
46	Casimir forces in the time domain: Applications. <i>Physical Review A</i> , <b>2010</b> , 81,	2.6	39
45	Optoelectronic Fibers via Selective Amplification of In-Fiber Capillary Instabilities. <i>Advanced Materials</i> , <b>2017</b> , 29, 1603033	24	38
44	Superlight inverse Doppler effect. <i>Nature Physics</i> , <b>2018</b> , 14, 1001-1005	16.2	34
43	Heuristic recurrent algorithms for photonic Ising machines. <i>Nature Communications</i> , <b>2020</b> , 11, 249	17.4	31
42	Making two-photon processes dominate one-photon processes using mid-IR phonon polaritons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 13607-13612	11.5	31
41	Towards integrated tunable all-silicon free-electron light sources. <i>Nature Communications</i> , <b>2019</b> , 10, 3176	17.4	30
40	Kilometer-Long Ordered Nanophotonic Devices by Preform-to-Fiber Fabrication. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2006</b> , 12, 1202-1213	3.8	30
39	Confined in-fiber solidification and structural control of silicon and silicon-germanium microparticles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 7240-7245	11.5	29
38	Metamaterial broadband angular selectivity. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	29
37	Laser-Induced Linear-Field Particle Acceleration in Free Space. <i>Scientific Reports</i> , <b>2017</b> , 7, 11159	4.9	28
36	Limits to the Optical Response of Graphene and Two-Dimensional Materials. <i>Nano Letters</i> , <b>2017</b> , 17, 5408-5415	15.7	27
35	Thermally-drawn fibers with spatially-selective porous domains. <i>Nature Communications</i> , <b>2017</b> , 8, 364	17.4	26
34	Microstructure effects for Casimir forces in chiral metamaterials. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	25
33	Fabrication and characterization of fibers with built-in liquid crystal channels and electrodes for transverse incident-light modulation. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 011108	3.4	25

32	Synthesis and observation of non-Abelian gauge fields in real space. <i>Science</i> , <b>2019</b> , 365, 1021-1025	33.3	24
31	Controlling Directionality and Dimensionality of Radiation by Perturbing Separable Bound States in the Continuum. <i>Scientific Reports</i> , <b>2016</b> , 6, 33394	4.9	24
30	Control of semiconductor emitter frequency by increasing polariton momenta. <i>Nature Photonics</i> , <b>2018</b> , 12, 423-429	33.9	24
29	Ovonic Memory Switching in Multimaterial Fibers. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 1095-1101	15.6	24
28	Predictive and generative machine learning models for photonic crystals. <i>Nanophotonics</i> , <b>2020</b> , 9, 4183-4192	41.92	20
27	Direct imaging of isofrequency contours in photonic structures. <i>Science Advances</i> , <b>2016</b> , 2, e1601591	14.3	18
26	Sputtered Tantalum Photonic Crystal Coatings for High-Temperature Energy Conversion Applications. <i>IEEE Nanotechnology Magazine</i> , <b>2016</b> , 15, 303-309	2.6	17
25	Light emission based on nanophotonic vacuum forces. <i>Nature Physics</i> , <b>2019</b> , 15, 1284-1289	16.2	17
24	Fabrication and characterization of thermally drawn fiber capacitors. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 152908	3.4	17
23	Invisible metallic mesh. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 2568-72	11.5	16
22	Digital design of multimaterial photonic particles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 6839-44	11.5	14
21	Optically Thin Metallic Films for High-Radiative-Efficiency Plasmonics. <i>Nano Letters</i> , <b>2016</b> , 16, 4110-7	11.5	13
20	Narrowband Metamaterial Absorber for Terahertz Secure Labeling. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2017</b> , 38, 1120-1129	2.2	13
19	A high-efficiency regime for gas-phase terahertz lasers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 6614-6619	11.5	11
18	A framework for scintillation in nanophotonics.. <i>Science</i> , <b>2022</b> , 375, eabm9293	33.3	11
17	Constructing Designer Atoms via Resonant Graphene-Induced Lamb Shifts. <i>ACS Photonics</i> , <b>2017</b> , 4, 3098-3105	6.3	9
16	Structural anisotropy and orientation-induced Casimir repulsion in fluids. <i>Physical Review A</i> , <b>2011</b> , 83,	2.6	9
15	Controlling spins with surface magnon polaritons. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	8

14	Substrate-Independent Light Confinement in Bioinspired All-Dielectric Surface Resonators. <i>ACS Photonics</i> , <b>2016</b> , 3, 532-536	6.3	7
13	Plasmonics in argentene. <i>Physical Review Materials</i> , <b>2020</b> , 4,	3.2	7
12	Control of quantum electrodynamic processes by shaping electron wavepackets. <i>Nature Communications</i> , <b>2021</b> , 12, 1700	17.4	7
11	Casimir Light in Dispersive Nanophotonics. <i>Physical Review Letters</i> , <b>2021</b> , 127, 053603	7.4	5
10	Nonperturbative Quantum Electrodynamics in the Cherenkov Effect. <i>Physical Review X</i> , <b>2018</b> , 8,	9.1	4
9	Toward 3D-Printed Inverse-Designed Metaoptics. <i>ACS Photonics</i> , <b>2022</b> , 9, 43-51	6.3	3
8	Non-Abelian generalizations of the Hofstadter model: spin-orbit-coupled butterfly pairs. <i>Light: Science and Applications</i> , <b>2020</b> , 9, 177	16.7	2
7	Quasi-normal mode theory of the scattering matrix, enforcing fundamental constraints for truncated expansions. <i>Physical Review Research</i> , <b>2021</b> , 3,	3.9	2
6	Controlling two-photon emission from superluminal and accelerating index perturbations. <i>Nature Physics</i> , <b>2022</b> , 18, 67-74	16.2	1
5	Acoustics: Piezoelectric Fibers for Conformal Acoustics (Adv. Mater. 39/2012). <i>Advanced Materials</i> , <b>2012</b> , 24, 5400-5400	24	
4	Negative Refraction and Subwavelength Imaging in Photonic Crystals <b>2005</b> , 269-312		
3	First-principles Calculation of Electron Mobilities in Ultrathin SOI MOSFETs. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 829, 326		
2	Structural and Mechanical Properties of Boron Nanotubes. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 791, 346		
1	Enhanced Emission from a Light-Emitting Diode Modified by a Photonic Crystal. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 637, E2.8.1		