

# Eli Yablonovitch

## 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.

52  
papers

6,261  
citations

25  
h-index

76  
g-index

76  
ext. papers

7,342  
ext. citations

9.7  
avg. IF

5.9  
L-index

#	Paper	IF	Citations
52	Sub-50 cm/s surface recombination velocity in InGaAsP/InP ridges. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 191102	3.4	0
51	Spin-orbit torque rectifier for weak RF energy harvesting. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 052408	3.4	3
50	Thermodynamics of Light Management in Near-Field Thermophotovoltaics. <i>Physical Review Applied</i> , <b>2021</b> , 16,	4.3	3
49	Accurate calibration of thermophotovoltaic efficiency. <i>Photonix</i> , <b>2020</b> , 1,	19	2
48	Physics successfully implements Lagrange multiplier optimization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 26639-26650	11.5	11
47	Tunnel-FET Switching Is Governed by Non-Lorentzian Spectral Line Shape. <i>Proceedings of the IEEE</i> , <b>2020</b> , 108, 1235-1244	14.3	4
46	Hierarchical Design and Optimization of Silicon Photonics. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2020</b> , 26, 1-12	3.8	11
45	Electrical suppression of all nonradiative recombination pathways in monolayer semiconductors. <i>Science</i> , <b>2019</b> , 364, 468-471	33.3	139
44	Ultraefficient thermophotovoltaic power conversion by band-edge spectral filtering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 15356-15361	11.5	83
43	Practical efficiency limits of electroluminescent cooling <b>2019</b> ,		1
42	Practical challenges towards 50% efficient thermophotovoltaic energy conversion <b>2019</b> ,		2
41	Light, the universe and everything – 12 Herculean tasks for quantum cowboys and black diamond skiers. <i>Journal of Modern Optics</i> , <b>2018</b> , 65, 1261-1308	1.1	5
40	Response to Comment on High-performance near-field electroluminescent refrigeration device consisting of a GaAs light emitting diode and a Si photovoltaic cell [J. Appl. Phys. 122, 143104 (2017)]. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 116102	2.5	
39	Electroluminescent refrigeration by ultra-efficient GaAs light-emitting diodes. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 173104	2.5	29
38	Fundamental Efficiency Limit of Lead Iodide Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 1703-1711	6.4	141
37	Inverse design of near unity efficiency perfectly vertical grating couplers. <i>Optics Express</i> , <b>2018</b> , 26, 4766-4779	3.5	69
36	Ultrafast Spontaneous Emission from a Slot-Antenna Coupled WSe2 Monolayer. <i>ACS Photonics</i> , <b>2018</b> , 5, 2701-2705	6.3	12

35	Leveraging continuous material averaging for inverse electromagnetic design. <i>Optics Express</i> , <b>2018</b> , 26, 31717-31737	3.3	18
34	High-performance near-field electroluminescent refrigeration device consisting of a GaAs light emitting diode and a Si photovoltaic cell. <i>Journal of Applied Physics</i> , <b>2017</b> , 122, 143104	2.5	43
33	Short-channel field-effect transistors with 9-atom and 13-atom wide graphene nanoribbons. <i>Nature Communications</i> , <b>2017</b> , 8, 633	17.4	215
32	Efficient and broadband single-mode waveguide coupling of electrically injected optical antenna based nanoLED <b>2017</b> ,		1
31	Efficient single-mode waveguide coupling of electrically injected optical antenna based nanoLED <b>2017</b> ,		1
30	Roadmap on optical energy conversion. <i>Journal of Optics (United Kingdom)</i> , <b>2016</b> , 18, 073004	1.7	69
29	High Luminescence Efficiency in MoS <sub>2</sub> Grown by Chemical Vapor Deposition. <i>ACS Nano</i> , <b>2016</b> , 10, 6535-416.7	16.7	115
28	SOLAR CELLS. Lead halides join the top optoelectronic league. <i>Science</i> , <b>2016</b> , 351, 1401	33.3	48
27	High Photoluminescence Quantum Yield in Band Gap Tunable Bromide Containing Mixed Halide Perovskites. <i>Nano Letters</i> , <b>2016</b> , 16, 800-6	11.5	218
26	Auger generation as an intrinsic limit to tunneling field-effect transistor performance. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 084507	2.5	14
25	. <i>IEEE Journal of Photovoltaics</i> , <b>2016</b> , 6, 801-809	3.7	27
24	Tunneling Nanoelectromechanical Switches Based on Compressible Molecular Thin Films. <i>ACS Nano</i> , <b>2015</b> , 9, 7886-94	16.7	12
23	Near-unity photoluminescence quantum yield in MoS <sub>2</sub> <i>Science</i> , <b>2015</b> , 350, 1065-8	33.3	792
22	Device Architectures for Enhanced Photon Recycling in Thin-Film Multijunction Solar Cells. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1400919	21.8	33
21	Lowering HAMR Near-Field Transducer Temperature via Inverse Electromagnetic Design. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-7	2	25
20	Nanomechanical Switch Designs to Overcome the Surface Adhesion Energy Limit. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 963-965	4.4	14
19	Impact of interface defects on tunneling FET turn-on steepness <b>2015</b> ,		2
18	Large spontaneous emission rate enhancement from an electrically-injected nanoLED coupled to an optical antenna <b>2015</b> ,		2

17	Optical antenna enhanced spontaneous emission. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 1704-9	11.5	106
16	Strong interlayer coupling in van der Waals heterostructures built from single-layer chalcogenides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 6198-202	11.5	803
15	Engineering the Electron Hole Bilayer Tunneling Field-Effect Transistor. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 1599-1606	2.9	43
14	Electrically injected nanoLED with enhanced spontaneous emission from a cavity backed optical slot antenna <b>2014</b> ,		3
13	Impact of Quantization Energy and Gate Leakage in Bilayer Tunneling Transistors. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 298-300	4.4	29
12	Adjoint shape optimization applied to electromagnetic design. <i>Optics Express</i> , <b>2013</b> , 21, 21693-701	3.3	242
11	Strong Internal and External Luminescence as Solar Cells Approach the Shockley-Queisser Limit. <i>IEEE Journal of Photovoltaics</i> , <b>2012</b> , 2, 303-311	3.7	658
10	Enhancement of photon emission rate in antenna-coupled nanoLEDs <b>2012</b> ,		2
9	Spontaneous emission rate enhancement using gold nanorods <b>2012</b> ,		2
8	Optical antenna based nanoLED <b>2011</b> ,		1
7	Metal optics, optical antennas, and spontaneous hyper-emission <b>2010</b> ,		2
6	Demonstration of Uncoordinated Multiple Access in Optical Communications. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2008</b> , 55, 3259-3269	3.9	1
5	Controlling the Spontaneous Precipitation of Silver Nanoparticles in Sol-Gel Materials. <i>Journal of Sol-Gel Science and Technology</i> , <b>2000</b> , 19, 249-252	2.3	38
4	Electron-spin-resonance transistors for quantum computing in silicon-germanium heterostructures. <i>Physical Review A</i> , <b>2000</b> , 62,	2.6	660
3	Measurement of the temporal delay of a light pulse through a one-dimensional photonic crystal. <i>Microwave and Optical Technology Letters</i> , <b>1999</b> , 20, 17-21	1.2	6
2	Extreme selectivity in the lift-off of epitaxial GaAs films. <i>Applied Physics Letters</i> , <b>1987</b> , 51, 2222-2224	3.4	619
1	Statistical ray optics. <i>Journal of the Optical Society of America</i> , <b>1982</b> , 72, 899		815