Eric Mazur

List of Publications by Year
in descending order

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90 papers	9,803 citations	109321 35 h-index	71685 76 g-index
93 all docs	93 docs citations	93 times ranked	8499 citing authors

#	Article	IF	Citations
1	Extended many-body superradiance in diamond epsilon near-zero metamaterials. Applied Physics Letters, 2022, 120, .	3.3	12
2	Momentum considerations inside near-zero index materials. Light: Science and Applications, 2022, 11, 110.	16.6	11
3	Laser-Irradiated Nanostructures forIntracellular Delivery. NATO Science for Peace and Security Series B: Physics and Biophysics, 2022, , 283-285.	0.3	1
4	Relaxed Phase-Matching Constraints in Zero-Index Waveguides. Physical Review Letters, 2022, 128, .	7.8	11
5	Low-Loss Zero-Index Materials. Nano Letters, 2021, 21, 914-920.	9.1	36
6	A Laserâ€Processed Silicon Solar Cell with Photovoltaic Efficiency in the Infrared. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000550.	1.8	15
7	Nearâ€Zero Index Photonic Crystals with Directive Bound States in the Continuum. Laser and Photonics Reviews, 2021, 15, 2000559.	8.7	18
8	Carrier Dynamics and Absorption Properties of Gold-Hyperdoped Germanium: Insight Into Tailoring Defect Energetics. Physical Review Applied, 2021, 15, .	3.8	3
9	Modeling the optical properties of twisted bilayer photonic crystals. Light: Science and Applications, 2021, 10, 157.	16.6	42
10	Dirac-like cone-based electromagnetic zero-index metamaterials. Light: Science and Applications, 2021, 10, 203.	16.6	50
11	Ultra-low-loss on-chip zero-index materials. Light: Science and Applications, 2021, 10, 10.	16.6	37
12	Intracellular Cargo Delivery Induced by Irradiating Polymer Substrates with Nanosecond-Pulsed Lasers. ACS Biomaterials Science and Engineering, 2021, 7, 5129-5134.	5.2	2
13	Fundamental Radiative Processes in Near-Zero-Index Media of Various Dimensionalities. ACS Photonics, 2020, 7, 1965-1970.	6.6	32
14	Chalcogen-hyperdoped germanium for short-wavelength infrared photodetection. AIP Advances, 2020, 10, .	1.3	7
15	Optically Induced Molecular Logic Operations. ACS Nano, 2020, 14, 15248-15255.	14.6	6
16	Detecting Laser-Volatilized Salts with a Miniature 100-GHz Spectrometer. Journal of Physical Chemistry A, 2020, 124, 1429-1436.	2.5	2
17	Omni-directional phase matching in integrated zero-index media. , 2020, , .		0
18	Low Index Asymmetric Bound States in the Continuum for Low Loss Integrated Photonics. , 2020, , .		3

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19	Carrier Lifetime of Au-Hyperdoped Ge using Terahertz Spectroscopy. , 2020, , .		0
20	Manipulating the flow of light using Dirac-cone zero-index metamaterials. Reports on Progress in Physics, 2019, 82, 012001.	20.1	41
21	Reducing the gender gap in studentsâ€™ physics self-efficacy in a team- and project-based introductory physics class. Physical Review Physics Education Research, 2019, 15, .	2.9	36
22	Homework as a metacognitive tool in an undergraduate physics course. Physical Review Physics Education Research, 2019, 15, .	2.9	7
23	Topology-optimized dual-polarization Dirac cones. Physical Review B, 2018, 97, .	3.2	23
24	A Model of Titan-like Chemistry to Connect Experiments and Cassini Observations. Astrophysical Journal, 2018, 853, 107.	4.5	7
25	Light Spread Manipulation in Scintillators Using Laser Induced Optical Barriers. IEEE Transactions on Nuclear Science, 2018, 65, 2208-2215.	2.0	18
26	Ultrafast laser processing of silicon for photovoltaics. International Materials Reviews, 2018, 63, 227-240.	19.3	42
27	Miniature cavity for in situ millimeter wave gas sensing: N2O and CH3OH detection. Sensors and Actuators B: Chemical, 2018, 254, 763-770.	7.8	6
28	Laser-Activated Self-Assembled Thermoplasmonic Nanocavity Substrates for Intracellular Delivery. ACS Applied Bio Materials, 2018, 1, 1793-1799.	4.6	13
29	A comparison of inverted and upright laser-activated titanium nitride micropyramids for intracellular delivery. Scientific Reports, 2018, 8, 15595.	3.3	10
30	Laser-Induced Periodic Surface Structures in GaP. , 2018, , .		0
31	Integrated Zero-Index Metamaterials and Waveguides. , 2018, , .		0
32	Dynamics of transient microbubbles generated by fs-laser irradiation of plasmonic micropyramids. Applied Physics Letters, 2017, 110, .	3.3	8
33	Intracellular Delivery Using Nanosecond-Laser Excitation of Large-Area Plasmonic Substrates. ACS Nano, 2017, 11, 3671-3680.	14.6	63
34	Direct Observation of Phase-Free Propagation in a Silicon Waveguide. ACS Photonics, 2017, 4, 2385-2389.	6.6	42
35	Analysis of poration-induced changes in cells from laser-activated plasmonic substrates. Biomedical Optics Express, 2017, 8, 4756.	2.9	16
36	On-chip all-dielectric fabrication-tolerant zero-index metamaterials. Optics Express, 2017, 25, 8326.	3.4	33

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37	Monolithic CMOS-compatible zero-index metamaterials. Optics Express, 2017, 25, 12381.	3.4	30
38	Strongly Extended Superradiance in Diamond Metamaterials. , 2017, , .		1
39	Peer Instruction in introductory physics: A method to bring about positive changes in studentsâ€™ attitudes and beliefs. Physical Review Physics Education Research, 2017, 13, .	2.9	37
40	Imaging Nanosecond Ablation of Copper at Low Ambient Pressure. , 2017, , .		1
41	Lossless Integrated Dirac-Cone Metamaterials. , 2016, , .		5
42	Scintillator-based Photon Counting Detector: Is it feasible?. , 2016, , .		5
43	Industrial applications of ultrafast laser processing. MRS Bulletin, 2016, 41, 984-992.	3.5	45
44	Novel DLK-independent neuronal regeneration in Caenorhabditis elegans shares links with activity-dependent ectopic outgrowth. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2852-60.	7.1	37
45	Exclusively visual analysis of classroom group interactions. Physical Review Physics Education Research, 2016, 12, .	2.9	2
46	Analysis of student engagement in an online annotation system in the context of a flipped introductory physics class. Physical Review Physics Education Research, 2016, 12, .	2.9	30
47	Response switching and self-efficacy in Peer Instruction classrooms. Physical Review Physics Education Research, 2015, 11, .	1.7	61
48	Making sense of confusion: Relating performance, confidence, and self-efficacy to expressions of confusion in an introductory physics class. Physical Review Physics Education Research, 2015, 11, .	1.7	19
49	Plasmonic Tipless Pyramid Arrays for Cell Poration. Nano Letters, 2015, 15, 4461-4466.	9.1	23
50	Creating femtosecond-laser-hyperdoped silicon with a homogeneous doping profile. Applied Physics Letters, 2015, 106, .	3.3	19
51	On-chip zero-index metamaterials. Nature Photonics, 2015, 9, 738-742.	31.4	327
52	Conceptual question response times in Peer Instruction classrooms. Physical Review Physics Education Research, 2014, 10, .	1.7	19
53	Improving dopant incorporation during femtosecond-laser doping of Si with a Se thin-film dopant precursor. Applied Physics A: Materials Science and Processing, 2014, 114, 1009-1016.	2.3	27
54	An Analytic Model for the Dielectric Function of Au, Ag, and their Alloys. Advanced Optical Materials, 2014, 2, 176-182.	7.3	218

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55	Two steps forward, one step back. Nature Physics, 2014, 10, 402-403.	16.7	9
56	Bioinspired micrograting arrays mimicking the reverse color diffraction elements evolved by the butterfly Pierella luna. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15630-15634.	7.1	89
57	Role of physics lecture demonstrations in conceptual learning. Physical Review Physics Education Research, 2013, 9, .	1.7	44
58	Light trapping for thin silicon solar cells by femtosecond laser texturing. , 2012, , .		5
59	Fabrication of disconnected threeâ€dimensional silver nanostructures in a polymer matrix. Applied Physics Letters, 2012, 100, 063120.	3.3	51
60	Formation of nanostructured TiO2 by femtosecond laser irradiation of titanium in O2. Journal of Applied Physics, 2012, 112, .	2.5	40
61	The origins of pressure-induced phase transformations during the surface texturing of silicon using femtosecond laser irradiation. Journal of Applied Physics, 2012, 112, .	2.5	59
62	Studying femtosecond-laser hyperdoping by controlling surface morphology. Journal of Applied Physics, 2012, 111, 093511.	2.5	35
63	Greetings from General Co-Chairs. , 2011, , .		0
64	Pulsed-laser hyperdoping and surface texturing for photovoltaics. MRS Bulletin, 2011, 36, 439-445.	3.5	150
65	Pressure-induced phase transformations during femtosecond-laser doping of silicon. Journal of Applied Physics, 2011, 110, .	2.5	79
66	Reactivation of sub-bandgap absorption in chalcogen-hyperdoped silicon. Applied Physics Letters, 2011, 98, .	3.3	49
67	The effects of a thin film dopant precursor on the structure and properties of femtosecond-laser irradiated silicon. Applied Physics A: Materials Science and Processing, 2011, 105, 795-800.	2.3	36
68	Controlled architectural and chemotactic studies of 3D cell migration. Biomaterials, 2011, 32, 2634-2641.	11.4	49
69	Applications of femtosecond lasers in materials processing. , 2009, , .		0
70	The role of diffusion in broadband infrared absorption inÂchalcogen-doped silicon. Applied Physics A: Materials Science and Processing, 2009, 96, 327-334.	2.3	85
71	Femtosecond laser ablation of neurons in C. elegans for behavioral studies. Applied Physics A: Materials Science and Processing, 2009, 96, 335-341.	2.3	36
72	Farewell, Lecture?. Science, 2009, 323, 50-51.	12.6	392

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73	3D Cellâ€Migration Studies using Twoâ€Photon Engineered Polymer Scaffolds. Advanced Materials, 2008, 20, 4494-4498.	21.0	222
74	Femtosecond laser micromachining in transparent materials. Nature Photonics, 2008, 2, 219-225.	31.4	2,601
75	High-Density Regular Arrays of Nanometer-Scale Rods Formed on Silicon Surfaces via Femtosecond Laser Irradiation in Water. Nano Letters, 2008, 8, 2087-2091.	9.1	157
76	Electronic characterization of silicon doped beyond the solubility limit via femtosecond laser irradiation. , 2008, , .		0
77	TAPER-DRAWING FABRICATION OF GLASS NANOWIRES. , 2008, , 213-234.		0
78	Reducing the gender gap in the physics classroom. American Journal of Physics, 2006, 74, 118-122.	0.7	293
79	Supercontinuum generation in submicrometer diameter silica fibers. Optics Express, 2006, 14, 9408.	3.4	101
80	Microstructured silicon photodetector. Applied Physics Letters, 2006, 89, 033506.	3.3	251
81	Classroom demonstrations: Learning tools or entertainment?. American Journal of Physics, 2004, 72, 835-838.	0.7	182
82	Morphology of femtosecond laser-induced structural changes in bulk transparent materials. Applied Physics Letters, 2004, 84, 1441-1443.	3.3	163
83	Morphology of femtosecond-laser-ablated borosilicate glass surfaces. Applied Physics Letters, 2003, 83, 3030-3032.	3.3	115
84	Peer Instruction: Results from a Range of Classrooms. Physics Teacher, 2002, 40, 206-209.	0.3	267
85	Peer Instruction: Ten years of experience and results. American Journal of Physics, 2001, 69, 970-977.	0.7	1,666
86	The great thermometer challenge. Physics Teacher, 2000, 38, 235-235.	0.3	0
87	Microstructuring of silicon with femtosecond laser pulses. Applied Physics Letters, 1998, 73, 1673-1675.	3.3	742
88	Coherent antiâ€Stokes Raman spectroscopy of infrared multiphoton excited molecules. Journal of Chemical Physics, 1994, 101, 8517-8528.	3.0	0
89	Rejection of stochastic background noise in lowâ€level pulsed light scattering experiments. Review of Scientific Instruments, 1993, 64, 2550-2551.	1.3	1
90	Computerâ€controlled Raman spectrometer for timeâ€resolved measurements in lowâ€pressure gaseous samples. Review of Scientific Instruments, 1986, 57, 2507-2511.	1.3	7