Francesco Monticone

List of Publications by Year
in descending order

88 papers	6,171 citations	147801 31 h-index	102487 66 g-index
89 all docs	89 docs citations	89 times ranked	5183 citing authors

#	Article	IF	Citations
1	Drifting Electrons: Nonreciprocal Plasmonics and Thermal Photonics. ACS Photonics, 2022, 9, 806-819.	6.6	12
2	To what extent can space be compressed? Bandwidth limits of spaceplates. Optica, 2022, 9, 738.	9.3	11
3	Capturing Broadband Light in a Compact Bound State in the Continuum. ACS Photonics, 2021, 8, 813-823.	6.6	24
4	Emulating exceptional-point encirclements using imperfect (leaky) photonic components: asymmetric mode-switching and omni-polarizer action. Optica, 2021, 8, 563.	9.3	19
5	Nonreciprocal and Topological Plasmonics. Photonics, 2021, 8, 133.	2.0	17
6	Physical limitations on broadband invisibility based on fast-light media. Nature Communications, 2021, 12, 3041.	12.8	5
7	Dielectric Nonlocal Metasurfaces for Fully Solid-State Ultrathin Optical Systems. ACS Photonics, 2021, 8, 1439-1447.	6.6	30
8	Spectral causality and the scattering of waves. Optica, 2021, 8, 1040.	9.3	23
9	Exceptional Points in Flat Optics: A Non-Hermitian Line-Wave Scenario. Physical Review Applied, 2021, 15, .	3.8	11
10	Fundamental Limits to the Refractive Index of Transparent Optical Materials. Advanced Materials, 2021, 33, e2103946.	21.0	26
11	Existence of a fundamental tradeoff between absorptivity and omnidirectionality in metasurfaces. , 2021, , .		1
12	Active Scattering-Cancellation Cloaking: Broadband Invisibility and Stability Constraints. IEEE Transactions on Antennas and Propagation, 2020, 68, 1655-1664.	5.1	19
13	A truly one-way lane for surface plasmon polaritons. Nature Photonics, 2020, 14, 461-465.	31.4	31
14	Broadband and giant nonreciprocity at the subwavelength scale in magnetoplasmonic materials. Physical Review B, 2020, 102, .	3.2	10
15	Photonic Inverse Design with Neural Networks: The Case of Invisibility in the Visible. Physical Review Applied, 2020, 14, .	3.8	30
16	Exchange splitting and exchange-induced nonreciprocal photonic behavior of graphene in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Cr</mml:mi><mml:msub><mml:mi mathvariant="normal">I</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> -graphene van der Waals heterostructures. Physical Review B, 2020, 102, .	3.2	9
17	Broadband Field Enhancement and Giant Nonlinear Effects in Terminated Unidirectional Plasmonic Waveguides. Physical Review Applied, 2020, 14, .	3.8	16
18	Non-Reciprocal, Robust Surface Plasmon Polaritons on Gyrotropic Interfaces. IEEE Transactions on Antennas and Propagation, 2020, 68, 3718-3729.	5.1	24

#	Article	IF	Citations
19	Physical Violations of the Bulk-Edge Correspondence in Topological Electromagnetics. Physical Review Letters, 2020, 124, 153901.	7.8	30
20	Topological scattering resonances at ultralow frequencies. Physical Review Research, 2020, 2, .	3.6	16
21	Dissipation-induced topological transitions in continuous Weyl materials. Physical Review Research, 2020, 2, .	3.6	16
22	Focusing on bandwidth: achromatic metalens limits. Optica, 2020, 7, 624.	9.3	109
23	Broadband Absorption Limits for Ultrathin Solar Cells. , 2020, , .		0
24	Can a Nonradiating Mode Be Externally Excited? Nonscattering States versus Embedded Eigenstates. ACS Photonics, 2019, 6, 3108-3114.	6.6	56
25	Topologically protected broadband rerouting of propagating waves around complex objects. Nanophotonics, 2019, 8, 1371-1378.	6.0	9
26	Unidirectional and diffractionless surface plasmon polaritons on three-dimensional nonreciprocal plasmonic platforms. Physical Review B, 2019, 99, .	3.2	41
27	Non-Markovian transient Casimir-Polder force and population dynamics on excited- and ground-state atoms: Weak- and strong-coupling regimes in generally nonreciprocal environments. Physical Review A, 2019, 99, .	2.5	2
28	Ultra-compact wave-based solvers for fractional-calculus equations. , 2019, , .		0
29	On Broadband Active Cloaking. , 2019, , .		3
30	Manipulating Surface Waves and Nanoscale Forces/Torques with Nonreciprocal Platforms. , 2019, , .		0
31	Anomalies in light scattering. Advances in Optics and Photonics, 2019, 11, 892.	25.5	161
32	Do truly unidirectional surface plasmon-polaritons exist?. Optica, 2019, 6, 1158.	9.3	53
33	Topologically-protected one-way leaky waves in nonreciprocal plasmonic structures. Journal of Physics Condensed Matter, 2018, 30, 104002.	1.8	27
34	Trapping Light in Plain Sight: Embedded Photonic Eigenstates in Zeroâ€Index Metamaterials. Laser and Photonics Reviews, 2018, 12, 1700220.	8.7	70
35	Topologically-Protected One-Way Leaky Waves. , 2018, , .		0
36	Zeeman gyrotropic scatterers. Nanomaterials and Nanotechnology, 2018, 8, 184798041880808.	3.0	8

#	Article	IF	Citations
37	Optical torque on a two-level system near a strongly nonreciprocal medium. Physical Review B, 2018, 98, .	3.2	18
38	Molding light with metasurfaces: from far-field to near-field interactions. Nanophotonics, 2018, 7, 1025-1040.	6.0	14
39	Coupled Topological Surface Modes in Gyrotropic Structures: Green's Function Analysis. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 1993-1997.	4.0	13
40	Topological Waveguiding near an Exceptional Point: Defect-Immune, Slow-Light, and Loss-Immune Propagation. Physical Review Letters, 2018, 121, 093901.	7.8	59
41	Experimental observation of a polarization vortex at an optical bound state in the continuum. Nature Photonics, 2018, 12, 397-401.	31.4	325
42	Topologically protected embedded eigenstates, leaky modes, and Jordan modes. , 2018, , .		0
43	A Reconfigurable Active Huygens' Metalens. Advanced Materials, 2017, 29, 1606422.	21.0	470
44	Magnified imaging based on non-Hermitian nonlocal cylindrical metasurfaces. Physical Review B, 2017, 95, .	3.2	15
45	Metamaterial, plasmonic and nanophotonic devices. Reports on Progress in Physics, 2017, 80, 036401.	20.1	157
46	Optical Antennas: Controlling Electromagnetic Scattering, Radiation, and Emission at the Nanoscale. IEEE Antennas and Propagation Magazine, 2017, 59, 43-61.	1.4	21
47	Scattering at the Extreme with Metamaterials and Plasmonics. World Scientific Series in Nanoscience and Nanotechnology, 2017, , 295-335.	0.1	3
48	Bound states within the radiation continuum in diffraction gratings and the role of leaky modes. New Journal of Physics, 2017, 19, 093011.	2.9	55
49	Invisible near-field probes at infrared frequencies based on impedance engineering at the nanoscale. , 2017, , .		1
50	Invisibility exposed: physical bounds on passive cloaking. Optica, 2016, 3, 718.	9.3	73
51	Scattering and radiation singularities in epsilon-near-zero structures. , 2016, , .		0
52	Parity-Time Symmetric Nonlocal Metasurfaces: All-Angle Negative Refraction and Volumetric Imaging. Physical Review X, 2016, 6, .	8.9	76
53	Hybrid bilayer plasmonic metasurface efficiently manipulates visible light. Science Advances, 2016, 2, e1501168.	10.3	278
54	Aberration-free planar focusing based on parity-time symmetric nonlocal metamaterials. , 2015, , .		0

#	Article	IF	Citations
55	Invisibility and Cloaking: Origins, Present, and Future Perspectives. Physical Review Applied, 2015, 4, .	3.8	149
56	Leaky-Wave Theory, Techniques, and Applications: From Microwaves to Visible Frequencies. Proceedings of the IEEE, 2015, 103, 793-821.	21.3	188
57	MIMO optical wireless at the nanoscale. , 2015, , .		1
58	Embedded scattering eigenvalues: Light trapping in 2D and 3D systems. , 2015, , .		0
59	Realization and operation of modular 3-D optical nanocircuits. , 2015, , .		0
60	Ultrathin Pancharatnamâ€“Berry Metasurface with Maximal Crossâ€Polarization Efficiency. Advanced Materials, 2015, 27, 1195-1200.	21.0	431
61	Interplay of Magnetic Responses in All-Dielectric Oligomers To Realize Magnetic Fano Resonances. ACS Photonics, 2015, 2, 724-729.	6.6	99
62	Linear and nonlinear optical nano-antennas. , 2015, , .		1
63	Plasmonic Nanostructures with Well-Controlled Geometry Lead to Designed Properties. , 2015, , .		0
64	Tunable Plasmonic and Hyperbolic Metamaterials Based on Enhanced Nonlinear Response. International Journal of Antennas and Propagation, 2014, 2014, 1-11.	1.2	9
65	Metamaterials and plasmonics: From nanoparticles to nanoantenna arrays, metasurfaces, and metamaterials. Chinese Physics B, 2014, 23, 047809.	1.4	91
66	Plasmonic Optical Nanoantennas. Handbook of Surface Science, 2014, 4, 109-136.	0.3	7
67	Embedded Photonic Eigenvalues in 3D Nanostructures. Physical Review Letters, 2014, 112, .	7.8	268
68	Performing Mathematical Operations with Metamaterials. Science, 2014, 343, 160-163.	12.6	757
69	The quest for optical magnetism: from split-ring resonators to plasmonic nanoparticles and nanoclusters. Journal of Materials Chemistry C, 2014, 2, 9059-9072.	5.5	100
70	‘Computing metasurfaces’ to perform mathematical operations. , 2014, , .		1
71	Modular assembly of optical nanocircuits. Nature Communications, 2014, 5, 3896.	12.8	51
72	Physical bounds on electromagnetic invisibility and the potential of superconducting cloaks. Photonics and Nanostructures - Fundamentals and Applications, 2014, 12, 330-339.	2.0	16

#	Article	IF	Citations
73	Do Cloaked Objects Really Scatter Less?. Physical Review X, 2013, 3, .	8.9	55
74	Plasmonic nanoparticles and metasurfaces to realize Fano spectra at ultraviolet wavelengths. Applied Physics Letters, 2013, 103, .	3.3	43
75	Fundamental passivity and causality bounds on metamaterial cloaking. , 2013, , .		2
76	A subwavelength plasmonic metamolecule exhibiting magnetic-based optical Fano resonance. Nature Nanotechnology, 2013, 8, 95-99.	31.5	317
77	Full Control of Nanoscale Optical Transmission with a Composite Metascreen. Physical Review Letters, 2013, 110, 203903.	7.8	682
78	Boosting Optical Magnetism with Symmetry Breaking in a Subwavelength Plasmonic Metamolecule. , 2013, , .		0
79	Negative refraction, gain and nonlinear effects in hyperbolic metamaterials. Optics Express, 2013, 21, 15037.	3.4	152
80	Multilayered Plasmonic Covers for Comblike Scattering Response and Optical Tagging. Physical Review Letters, 2013, 110, 113901.	7.8	64
81	Physical bounds and limitations of cloaking and invisibility using passive metamaterials. , 2013, , .		0
82	Molding the optical transmission with a meta-transmitarray. , 2013, , .		1
83	Metastructures for signal manipulation. , 2013, , .		0
84	Strong optical magnetism and Fano resonances in asymmetric plasmonic metamolecules. , 2013, , .		1
85	Metamaterial-Enhanced Nanophotonics. Optics and Photonics News, 2013, 24, 35.	0.5	4
86	Multi-layered plasmonic cloaks to engineer the scattering signature of resonant nanoparticles. , 2012, , .		0
87	Nonlinear Plasmonic Cloaks to Realize Giant All-Optical Scattering Switching. Physical Review Letters, 2012, 108, 263905.	7.8	139
88	Suppressing the Electromagnetic Scattering With an Helical Mantle Cloak. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 1598-1601.	4.0	39