

Romain Fleury

List of Publications by Year in descending order

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100
papers

6,049
citations

117619

34
h-index

69246

77
g-index

105
all docs

105
docs citations

105
times ranked

3766
citing authors

#	ARTICLE	IF	CITATIONS
1	Sound Isolation and Giant Linear Nonreciprocity in a Compact Acoustic Circulator. <i>Science</i> , 2014, 343, 516-519.	12.6	820
2	An invisible acoustic sensor based on parity-time symmetry. <i>Nature Communications</i> , 2015, 6, 5905.	12.8	549
3	Topologically robust sound propagation in an angular-momentum-biased graphene-like resonator lattice. <i>Nature Communications</i> , 2015, 6, 8260.	12.8	466
4	Floquet topological insulators for sound. <i>Nature Communications</i> , 2016, 7, 11744.	12.8	459
5	Nonreciprocity in acoustic and elastic materials. <i>Nature Reviews Materials</i> , 2020, 5, 667-685.	48.7	243
6	Negative Refraction and Planar Focusing Based on Parity-Time Symmetric Metasurfaces. <i>Physical Review Letters</i> , 2014, 113, 023903.	7.8	212
7	Extraordinary Sound Transmission through Density-Near-Zero Ultranarrow Channels. <i>Physical Review Letters</i> , 2013, 111, 055501.	7.8	193
8	Analogue computing with metamaterials. <i>Nature Reviews Materials</i> , 2021, 6, 207-225.	48.7	193
9	Crystalline metamaterials for topological properties at subwavelength scales. <i>Nature Communications</i> , 2017, 8, 16023.	12.8	181
10	Unidirectional Cloaking Based on Metasurfaces with Balanced Loss and Gain. <i>Physical Review Applied</i> , 2015, 4, .	3.8	178
11	Invisibility and Cloaking: Origins, Present, and Future Perspectives. <i>Physical Review Applied</i> , 2015, 4, .	3.8	149
12	Topological acoustic polaritons: robust sound manipulation at the subwavelength scale. <i>New Journal of Physics</i> , 2017, 19, 075003.	2.9	137
13	Topological Fano Resonances. <i>Physical Review Letters</i> , 2019, 122, 014301.	7.8	129
14	Nonlinear Second-Order Topological Insulators. <i>Physical Review Letters</i> , 2019, 123, 053902.	7.8	121
15	Active times for acoustic metamaterials. <i>Reviews in Physics</i> , 2019, 4, 100031.	8.9	119
16	Subwavelength ultrasonic circulator based on spatiotemporal modulation. <i>Physical Review B</i> , 2015, 91, .	3.2	110
17	Topological analog signal processing. <i>Nature Communications</i> , 2019, 10, 2058.	12.8	109
18	Nonreciprocal Gain in Non-Hermitian Time-Floquet Systems. <i>Physical Review Letters</i> , 2018, 120, 087401.	7.8	107

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19	Enhanced superradiance in epsilon-near-zero plasmonic channels. <i>Physical Review B</i> , 2013, 87, .	3.2	91
20	Controlling Scattering and Absorption With Metamaterial Covers. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 4220-4229.	5.1	87
21	Constant-pressure sound waves in non-Hermitian disordered media. <i>Nature Physics</i> , 2018, 14, 942-947.	16.7	85
22	Electroacoustic absorbers: Bridging the gap between shunt loudspeakers and active sound absorption. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 2968-2978.	1.1	71
23	Physical bounds on absorption and scattering for cloaked sensors. <i>Physical Review B</i> , 2014, 89, .	3.2	69
24	Parametric amplification and bidirectional invisibility in PT -symmetric time-Floquet systems. <i>Physical Review A</i> , 2018, 97, .	2.5	68
25	CLOAKING AND INVISIBILITY: A REVIEW (Invited Review). <i>Progress in Electromagnetics Research</i> , 2014, 147, 171-202.	4.4	65
26	Quantitative robustness analysis of topological edge modes in C6 and valley-Hall metamaterial waveguides. <i>Nanophotonics</i> , 2019, 8, 1433-1441.	6.0	60
27	Robust Fano resonance in a topological mechanical beam. <i>Physical Review B</i> , 2020, 101, .	3.2	57
28	Quantum cloaking based on scattering cancellation. <i>Physical Review B</i> , 2013, 87, .	3.2	49
29	Performing mathematical operations using high-index acoustic metamaterials. <i>New Journal of Physics</i> , 2018, 20, 073001.	2.9	46
30	Parity-Time Symmetry in Acoustics: Theory, Devices, and Potential Applications. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 121-129.	2.9	45
31	Disorder-Induced Signal Filtering with Topological Metamaterials. <i>Advanced Materials</i> , 2020, 32, e2001034.	21.0	43
32	Electromagnetic Waves in a Time Periodic Medium With Step-Varying Refractive Index. <i>IEEE Transactions on Antennas and Propagation</i> , 2018, 66, 5300-5307.	5.1	40
33	Superior robustness of anomalous non-reciprocal topological edge states. <i>Nature</i> , 2021, 598, 293-297.	27.8	40
34	Topology and broken Hermiticity. <i>Nature Physics</i> , 2021, 17, 9-13.	16.7	38
35	Chiral Waveguides for Robust Waveguiding at the Deep Subwavelength Scale. <i>Physical Review Applied</i> , 2018, 10, .	3.8	30
36	Far-Field Subwavelength Acoustic Imaging by Deep Learning. <i>Physical Review X</i> , 2020, 10, .	8.9	30

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37	Doppler-Based Acoustic Gyrotator. Applied Sciences (Switzerland), 2018, 8, 1083.	2.5	29
38	Manipulation of electron flow using near-zero index semiconductor metamaterials. Physical Review B, 2014, 90, .	3.2	25
39	Electromagnetic Fields in a Time-Varying Medium: Exceptional Points and Operator Symmetries. IEEE Transactions on Antennas and Propagation, 2020, 68, 6717-6724.	5.1	24
40	Acoustic Analogues of High-Index Optical Waveguide Devices. Scientific Reports, 2018, 8, 10401.	3.3	23
41	Slow light engineering in resonant photonic crystal line-defect waveguides. Optics Express, 2019, 27, 26229.	3.4	23
42	Zero refractive index in time-Floquet acoustic metamaterials. Journal of Applied Physics, 2018, 123, .	2.5	22
43	Zero-Index Weyl Metamaterials. Physical Review Letters, 2020, 125, 054301.	7.8	20
44	Switchable and simultaneous spatiotemporal analog computing with computational graphene-based multilayers. Carbon, 2022, 186, 599-611.	10.3	20
45	Parallel Analog Computing Based on a $\frac{1}{\sqrt{1-\beta^2}}$ Multiple-Input Multiple-Output Metasurface Processor With Asymmetric Response. Physical Review Applied, 2021, 15, .	3.8	19
46	Furtive quantum sensing using matter-wave cloaks. Physical Review B, 2013, 87, .	3.2	18
47	Observation of topological gravity-capillary waves in a water wave crystal. New Journal of Physics, 2019, 21, 083031.	2.9	18
48	Time-Varying Components for Enhancing Wireless Transfer of Power and Information. Physical Review Applied, 2021, 16, .	3.8	18
49	Topological wave insulators: a review. Comptes Rendus Physique, 2020, 21, 467-499.	0.9	18
50	Metamaterial buffer for broadband non-resonant impedance matching of obliquely incident acoustic waves. Journal of the Acoustical Society of America, 2014, 136, 2935-2940.	1.1	17
51	Instantaneous radiation from time-varying electric and magnetic dipoles. Physical Review A, 2020, 102, .	2.5	17
52	Improving Sound Absorption Through Nonlinear Active Electroacoustic Resonators. Physical Review Applied, 2020, 13, .	3.8	16
53	Dipole polarizability of time-varying particles. New Journal of Physics, 2022, 24, 063004.	2.9	16
54	Toward wideband steerable acoustic metasurfaces with arrays of active electroacoustic resonators. Journal of Applied Physics, 2018, 123, .	2.5	15

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55	Active Acoustic Resonators with Reconfigurable Resonance Frequency, Absorption, and Bandwidth. <i>Physical Review Applied</i> , 2019, 12, .	3.8	15
56	Non-local oddities. <i>Nature Physics</i> , 2021, 17, 766-767.	16.7	15
57	Drexhage's Experiment for Sound. <i>Physical Review Letters</i> , 2016, 116, 224301.	7.8	14
58	Non-reciprocal optical mirrors based on spatio-temporal acousto-optic modulation. <i>Journal of Optics (United Kingdom)</i> , 2018, 20, 034007.	2.2	14
59	Reciprocal Metasurfaces for On-Axis Reflective Optical Computing. <i>IEEE Transactions on Antennas and Propagation</i> , 2021, 69, 7709-7719.	5.1	13
60	Exotic properties and potential applications of quantum metamaterials. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 109, 781-788.	2.3	12
61	Parallel wave-based analog computing using metagratings. <i>Nanophotonics</i> , 2022, 11, 1561-1571.	6.0	12
62	Experimental observation of the acoustic Z2 Weyl semimetallic phase in synthetic dimensions. <i>Physical Review B</i> , 2020, 102, .	3.2	10
63	Topological optomechanically induced transparency. <i>Optics Letters</i> , 2020, 45, 5966.	3.3	10
64	Introduction to the special issue on non-reciprocal and topological wave phenomena in acoustics. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 719-720.	1.1	8
65	Electromagnetic wave-based extreme deep learning with nonlinear time-Floquet entanglement. <i>Nature Communications</i> , 2022, 13, 2651.	12.8	8
66	Acoustic rat-race coupler and its applications in non-reciprocal systems. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 843-849.	1.1	7
67	Asymmetric Metal-Dielectric Metacylinders and Their Potential Applications From Engineering Scattering Patterns to Spatial Optical Signal Processing. <i>Physical Review Applied</i> , 2021, 15, .	3.8	7
68	Acoustic birefringence via non-Eulerian metamaterials. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	6
69	Coupled-mode theory for stationary and nonstationary resonant sound propagation. <i>Wave Motion</i> , 2019, 89, 221-231.	2.0	6
70	Tilted double Dirac cone and anisotropic quantum-spin-Hall topological insulator in mechanical granular graphene. <i>New Journal of Physics</i> , 2020, 22, 103012.	2.9	5
71	Hermitian formulation of multiple scattering induced topological phases in metamaterial crystals. <i>Physical Review B</i> , 2020, 102, .	3.2	4
72	Miniaturized Metamaterial Filters Compatible with Standard Waveguide Technology. , 2021, .		4

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73	A Subwavelength Microwave Bandpass Filter Based on a Chiral Waveguide. , 2020, , .		3
74	Nonreciprocal Manipulation of Subwavelength Fields in Locally Resonant Metamaterial Crystals. IEEE Transactions on Antennas and Propagation, 2020, 68, 1726-1732.	5.1	2
75	Multifunctional Hyperelastic Structured Surface for Tunable and Switchable Transparency. Applied Sciences (Switzerland), 2021, 11, 2255.	2.5	2
76	Subwavelength Metawaveguide Filters and Metaports. Physical Review Applied, 2021, 16, .	3.8	2
77	Non-Hermitian time evolution: From static to parametric instability. Physical Review A, 2021, 104, .	2.5	2
78	Acoustic supercoupling and enhancement of nonlinearities in density-near-zero (DNZ) metamaterial channels. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
79	Acoustic supercoupling through a density-near-zero metamaterial channel. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
80	Parity-time acoustic metamaterials and unidirectional invisible sensors. , 2014, , .		1
81	Breaking temporal symmetries in acoustic metamaterials. , 2015, , .		1
82	PT-symmetric metamaterial systems for aberration-free imaging and wave manipulation. , 2015, , .		1
83	Magnetless circulators for electromagnetic and acoustic waves. , 2016, , .		1
84	Topological spoof plasmon polaritons based on C6-symmetric crystalline metasurfaces. , 2017, , .		1
85	The sound of Weyl hinges. Nature Materials, 2021, 20, 716-718.	27.5	1
86	Parallel Optical Spatial Signal Processing Based on 2 \times 2 MIMO Computational Metasurface. , 2020, , .		1
87	Effect of mechanical nonlinearity on the electromagnetic response of a microwave tunable metamaterial. Journal Physics D: Applied Physics, 0, , .	2.8	1
88	Ultra-Compact Ka-band Metamaterial Waveguide Filters, Fabricated by Lost-Wax Casting. , 2022, , .		1
89	Passivity limitations on absorption properties of low-scattering objects. , 2013, , .		0
90	Superabsorbers and invisible sensors. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
91	Physical bounds and limitations of cloaking and invisibility using passive metamaterials. , 2013, , .		0
92	Nonreciprocity, nonlinearity and parity-time symmetry in optical metasurfaces and metamaterials. , 2014, , .		0
93	Parity-time symmetry for cloaking and negative refraction. , 2016, , .		0
94	Robust wave transport at subwavelength scale with chiral metamaterials. , 2019, , .		0
95	Subwavelength robust waveguiding with chiral metamaterial waveguides. , 2019, , .		0
96	Robustness in Subwavelength Locally-Resonant Metamaterial Waveguides. , 2020, , .		0
97	Constant pressure sound waves in non-Hermitian disordered media. , 2018, , .		0
98	From Polarizability to Effective Permittivity of Time-Varying Materials. , 2020, , .		0
99	Effects of resonator geometry and substrate stiffness on the tunability of a deformable microwave metasurface. AEU - International Journal of Electronics and Communications, 2022, 146, 154123.	2.9	0
100	Ultra-Small Bent Meta-Waveguide Filters. , 2022, , .		0