

Romain Fleury

List of Publications by Year in descending order

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100
papers

6,049
citations

117625

34
h-index

69250

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

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19	Enhanced superradiance in epsilon-near-zero plasmonic channels. Physical Review B, 2013, 87, .	3.2	91
20	Controlling Scattering and Absorption With Metamaterial Covers. IEEE Transactions on Antennas and Propagation, 2014, 62, 4220-4229.	5.1	87
21	Constant-pressure sound waves in non-Hermitian disordered media. Nature Physics, 2018, 14, 942-947.	16.7	85
22	Electroacoustic absorbers: Bridging the gap between shunt loudspeakers and active sound absorption. Journal of the Acoustical Society of America, 2011, 129, 2968-2978.	1.1	71
23	Physical bounds on absorption and scattering for cloaked sensors. Physical Review B, 2014, 89, .	3.2	69
24	Parametric amplification and bidirectional invisibility in $\langle \text{PT} \rangle$ -symmetric time-Floquet systems. Physical Review A, 2018, 97, .	2.5	68
25	CLOAKING AND INVISIBILITY: A REVIEW (Invited Review). Progress in Electromagnetics Research, 2014, 147, 171-202.	4.4	65
26	Quantitative robustness analysis of topological edge modes in C6 and valley-Hall metamaterial waveguides. Nanophotonics, 2019, 8, 1433-1441.	6.0	60
27	Robust Fano resonance in a topological mechanical beam. Physical Review B, 2020, 101, .	3.2	57
28	Quantum cloaking based on scattering cancellation. Physical Review B, 2013, 87, .	3.2	49
29	Performing mathematical operations using high-index acoustic metamaterials. New Journal of Physics, 2018, 20, 073001.	2.9	46
30	Parity-Time Symmetry in Acoustics: Theory, Devices, and Potential Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 121-129.	2.9	45
31	Disorder-Induced Signal Filtering with Topological Metamaterials. Advanced Materials, 2020, 32, e2001034.	21.0	43
32	Electromagnetic Waves in a Time Periodic Medium With Step-Varying Refractive Index. IEEE Transactions on Antennas and Propagation, 2018, 66, 5300-5307.	5.1	40
33	Superior robustness of anomalous non-reciprocal topological edge states. Nature, 2021, 598, 293-297.	27.8	40
34	Topology and broken Hermiticity. Nature Physics, 2021, 17, 9-13.	16.7	38
35	Chiral Waveguides for Robust Waveguiding at the Deep Subwavelength Scale. Physical Review Applied, 2018, 10, .	3.8	30
36	Far-Field Subwavelength Acoustic Imaging by Deep Learning. Physical Review X, 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 $\frac{2}{2} \frac{\partial}{\partial t} - \frac{2}{2}$ 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. Physical Review Applied, 2019, 12, .	3.8	15
56	Non-local oddities. Nature Physics, 2021, 17, 766-767.	16.7	15
57	Drexhage's Experiment for Sound. Physical Review Letters, 2016, 116, 224301.	7.8	14
58	Non-reciprocal optical mirrors based on spatio-temporal acousto-optic modulation. Journal of Optics (United Kingdom), 2018, 20, 034007.	2.2	14
59	Reciprocal Metasurfaces for On-Axis Reflective Optical Computing. IEEE Transactions on Antennas and Propagation, 2021, 69, 7709-7719.	5.1	13
60	Exotic properties and potential applications of quantum metamaterials. Applied Physics A: Materials Science and Processing, 2012, 109, 781-788.	2.3	12
61	Parallel wave-based analog computing using metagratings. Nanophotonics, 2022, 11, 1561-1571.	6.0	12
62	Experimental observation of the acoustic Z2 Weyl semimetallic phase in synthetic dimensions. Physical Review B, 2020, 102, .	3.2	10
63	Topological optomechanically induced transparency. Optics Letters, 2020, 45, 5966.	3.3	10
64	Introduction to the special issue on non-reciprocal and topological wave phenomena in acoustics. Journal of the Acoustical Society of America, 2019, 146, 719-720.	1.1	8
65	Electromagnetic wave-based extreme deep learning with nonlinear time-Floquet entanglement. Nature Communications, 2022, 13, 2651.	12.8	8
66	Acoustic rat-race coupler and its applications in non-reciprocal systems. Journal of the Acoustical Society of America, 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. Physical Review Applied, 2021, 15, .	3.8	7
68	Acoustic birefringence via non-Eulerian metamaterials. Journal of Applied Physics, 2019, 126, .	2.5	6
69	Coupled-mode theory for stationary and nonstationary resonant sound propagation. Wave Motion, 2019, 89, 221-231.	2.0	6
70	Tilted double Dirac cone and anisotropic quantum-spin-Hall topological insulator in mechanical granular graphene. New Journal of Physics, 2020, 22, 103012.	2.9	5
71	Hermitian formulation of multiple scattering induced topological phases in metamaterial crystals. Physical Review B, 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 × 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