

Romain Fleury

List of Publications by Year in descending order

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100
papers

6,049
citations

134610

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h-index

78623

77
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105
all docs

105
docs citations

105
times ranked

4369
citing authors

#	ARTICLE	IF	CITATIONS
1	Switchable and simultaneous spatiotemporal analog computing with computational graphene-based multilayers. Carbon, 2022, 186, 599-611.	5.4	20
2	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.	1.7	0
3	Parallel wave-based analog computing using metagratings. Nanophotonics, 2022, 11, 1561-1571.	2.9	12
4	Electromagnetic wave-based extreme deep learning with nonlinear time-Floquet entanglement. Nature Communications, 2022, 13, 2651.	5.8	8
5	Dipole polarizability of time-varying particles. New Journal of Physics, 2022, 24, 063004.	1.2	16
6	Ultra-Small Bent Meta-Waveguide Filters. , 2022, , .		0
7	Ultra-Compact Ka-band Metamaterial Waveguide Filters, Fabricated by Lost-Wax Casting. , 2022, , .		1
8	Analogue computing with metamaterials. Nature Reviews Materials, 2021, 6, 207-225.	23.3	193
9	Topology and broken Hermiticity. Nature Physics, 2021, 17, 9-13.	6.5	38
10	Multifunctional Hyperelastic Structured Surface for Tunable and Switchable Transparency. Applied Sciences (Switzerland), 2021, 11, 2255.	1.3	2
11	Asymmetric Metal-Dielectric Metacylinders and Their Potential Applications From Engineering Scattering Patterns to Spatial Optical Signal Processing. Physical Review Applied, 2021, 15, .	1.5	7
12	Parallel Analog Computing Based on a \tilde{A}^{-2} Multiple-Input Multiple-Output Metasurface Processor With Asymmetric Response. Physical Review Applied, 2021, 15, .	1.5	19
13	The sound of Weyl hinges. Nature Materials, 2021, 20, 716-718.	13.3	1
14	Non-local oddities. Nature Physics, 2021, 17, 766-767.	6.5	15
15	Time-Varying Components for Enhancing Wireless Transfer of Power and Information. Physical Review Applied, 2021, 16, .	1.5	18
16	Reciprocal Metasurfaces for On-Axis Reflective Optical Computing. IEEE Transactions on Antennas and Propagation, 2021, 69, 7709-7719.	3.1	13
17	Miniaturized Metamaterial Filters Compatible with Standard Waveguide Technology. , 2021, , .		4
18	Subwavelength Metawaveguide Filters and Metaports. Physical Review Applied, 2021, 16, .	1.5	2

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19	Superior robustness of anomalous non-reciprocal topological edge states. <i>Nature</i> , 2021, 598, 293-297.	13.7	40
20	Non-Hermitian time evolution: From static to parametric instability. <i>Physical Review A</i> , 2021, 104, .	1.0	2
21	Nonreciprocal Manipulation of Subwavelength Fields in Locally Resonant Metamaterial Crystals. <i>IEEE Transactions on Antennas and Propagation</i> , 2020, 68, 1726-1732.	3.1	2
22	Robust Fano resonance in a topological mechanical beam. <i>Physical Review B</i> , 2020, 101, .	1.1	57
23	Hermitian formulation of multiple scattering induced topological phases in metamaterial crystals. <i>Physical Review B</i> , 2020, 102, .	1.1	4
24	Robustness in Subwavelength Locally-Resonant Metamaterial Waveguides. , 2020, , .		0
25	Far-Field Subwavelength Acoustic Imaging by Deep Learning. <i>Physical Review X</i> , 2020, 10, .	2.8	30
26	A Subwavelength Microwave Bandpass Filter Based on a Chiral Waveguide. , 2020, , .		3
27	Zero-Index Weyl Metamaterials. <i>Physical Review Letters</i> , 2020, 125, 054301.	2.9	20
28	Experimental observation of the acoustic Z2 Weyl semimetallic phase in synthetic dimensions. <i>Physical Review B</i> , 2020, 102, .	1.1	10
29	Disorder-Induced Signal Filtering with Topological Metamaterials. <i>Advanced Materials</i> , 2020, 32, e2001034.	11.1	43
30	Electromagnetic Fields in a Time-Varying Medium: Exceptional Points and Operator Symmetries. <i>IEEE Transactions on Antennas and Propagation</i> , 2020, 68, 6717-6724.	3.1	24
31	Nonreciprocity in acoustic and elastic materials. <i>Nature Reviews Materials</i> , 2020, 5, 667-685.	23.3	243
32	Instantaneous radiation from time-varying electric and magnetic dipoles. <i>Physical Review A</i> , 2020, 102, .	1.0	17
33	Improving Sound Absorption Through Nonlinear Active Electroacoustic Resonators. <i>Physical Review Applied</i> , 2020, 13, .	1.5	16
34	Tilted double Dirac cone and anisotropic quantum-spin-Hall topological insulator in mechanical granular graphene. <i>New Journal of Physics</i> , 2020, 22, 103012.	1.2	5
35	Parallel Optical Spatial Signal Processing Based on 2 × 2 MIMO Computational Metasurface. , 2020, , .		1
36	Topological wave insulators: a review. <i>Comptes Rendus Physique</i> , 2020, 21, 467-499.	0.3	18

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37	Topological optomechanically induced transparency. <i>Optics Letters</i> , 2020, 45, 5966.	1.7	10
38	From Polarizability to Effective Permittivity of Time-Varying Materials. , 2020, , .		0
39	Acoustic rat-race coupler and its applications in non-reciprocal systems. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 843-849.	0.5	7
40	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.	0.5	8
41	Nonlinear Second-Order Topological Insulators. <i>Physical Review Letters</i> , 2019, 123, 053902.	2.9	121
42	Observation of topological gravity-capillary waves in a water wave crystal. <i>New Journal of Physics</i> , 2019, 21, 083031.	1.2	18
43	Acoustic birefringence via non-Eulerian metamaterials. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	6
44	Quantitative robustness analysis of topological edge modes in C6 and valley-Hall metamaterial waveguides. <i>Nanophotonics</i> , 2019, 8, 1433-1441.	2.9	60
45	Topological analog signal processing. <i>Nature Communications</i> , 2019, 10, 2058.	5.8	109
46	Active times for acoustic metamaterials. <i>Reviews in Physics</i> , 2019, 4, 100031.	4.4	119
47	Coupled-mode theory for stationary and nonstationary resonant sound propagation. <i>Wave Motion</i> , 2019, 89, 221-231.	1.0	6
48	Robust wave transport at subwavelength scale with chiral metamaterials. , 2019, , .		0
49	Subwavelength robust waveguiding with chiral metamaterial waveguides. , 2019, , .		0
50	Active Acoustic Resonators with Reconfigurable Resonance Frequency, Absorption, and Bandwidth. <i>Physical Review Applied</i> , 2019, 12, .	1.5	15
51	Topological Fano Resonances. <i>Physical Review Letters</i> , 2019, 122, 014301.	2.9	129
52	Slow light engineering in resonant photonic crystal line-defect waveguides. <i>Optics Express</i> , 2019, 27, 26229.	1.7	23
53	Nonreciprocal Gain in Non-Hermitian Time-Floquet Systems. <i>Physical Review Letters</i> , 2018, 120, 087401.	2.9	107
54	Toward wideband steerable acoustic metasurfaces with arrays of active electroacoustic resonators. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	15

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55	Non-reciprocal optical mirrors based on spatio-temporal acousto-optic modulation. Journal of Optics (United Kingdom), 2018, 20, 034007.	1.0	14
56	Parametric amplification and bidirectional invisibility in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi mathvariant="script"} \rangle \text{PT} \langle / \text{mml:mi} \rangle \langle / \text{mml:math} \rangle$ -symmetric time-Floquet systems. Physical Review A, 2018, 97, .	1.0	68
57	Zero refractive index in time-Floquet acoustic metamaterials. Journal of Applied Physics, 2018, 123, .	1.1	22
58	Chiral Waveguides for Robust Waveguiding at the Deep Subwavelength Scale. Physical Review Applied, 2018, 10, .	1.5	30
59	Doppler-Based Acoustic Gyrotator. Applied Sciences (Switzerland), 2018, 8, 1083.	1.3	29
60	Constant-pressure sound waves in non-Hermitian disordered media. Nature Physics, 2018, 14, 942-947.	6.5	85
61	Performing mathematical operations using high-index acoustic metamaterials. New Journal of Physics, 2018, 20, 073001.	1.2	46
62	Acoustic Analogues of High-Index Optical Waveguide Devices. Scientific Reports, 2018, 8, 10401.	1.6	23
63	Electromagnetic Waves in a Time Periodic Medium With Step-Varying Refractive Index. IEEE Transactions on Antennas and Propagation, 2018, 66, 5300-5307.	3.1	40
64	Constant pressure sound waves in non-Hermitian disordered media. , 2018, , .		0
65	Crystalline metamaterials for topological properties at subwavelength scales. Nature Communications, 2017, 8, 16023.	5.8	181
66	Topological acoustic polaritons: robust sound manipulation at the subwavelength scale. New Journal of Physics, 2017, 19, 075003.	1.2	137
67	Topological spoof plasmon polaritons based on C6-symmetric crystalline metasurfaces. , 2017, , .		1
68	Magnetless circulators for electromagnetic and acoustic waves. , 2016, , .		1
69	Parity-Time Symmetry in Acoustics: Theory, Devices, and Potential Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 121-129.	1.9	45
70	Drexhage's Experiment for Sound. Physical Review Letters, 2016, 116, 224301.	2.9	14
71	Floquet topological insulators for sound. Nature Communications, 2016, 7, 11744.	5.8	459
72	Parity-time symmetry for cloaking and negative refraction. , 2016, , .		0

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73	Unidirectional Cloaking Based on Metasurfaces with Balanced Loss and Gain. <i>Physical Review Applied</i> , 2015, 4, .	1.5	178
74	Invisibility and Cloaking: Origins, Present, and Future Perspectives. <i>Physical Review Applied</i> , 2015, 4, .	1.5	149
75	Subwavelength ultrasonic circulator based on spatiotemporal modulation. <i>Physical Review B</i> , 2015, 91, .	1.1	110
76	Topologically robust sound propagation in an angular-momentum-biased graphene-like resonator lattice. <i>Nature Communications</i> , 2015, 6, 8260.	5.8	466
77	Breaking temporal symmetries in acoustic metamaterials. , 2015, , .		1
78	PT-symmetric metamaterial systems for aberration-free imaging and wave manipulation. , 2015, , .		1
79	An invisible acoustic sensor based on parity-time symmetry. <i>Nature Communications</i> , 2015, 6, 5905.	5.8	549
80	CLOAKING AND INVISIBILITY: A REVIEW (Invited Review). <i>Progress in Electromagnetics Research</i> , 2014, 147, 171-202.	1.6	65
81	Parity-time acoustic metamaterials and unidirectional invisible sensors. , 2014, , .		1
82	Metamaterial buffer for broadband non-resonant impedance matching of obliquely incident acoustic waves. <i>Journal of the Acoustical Society of America</i> , 2014, 136, 2935-2940.	0.5	17
83	Physical bounds on absorption and scattering for cloaked sensors. <i>Physical Review B</i> , 2014, 89, .	1.1	69
84	Nonreciprocity, nonlinearity and parity-time symmetry in optical metasurfaces and metamaterials. , 2014, , .		0
85	Sound Isolation and Giant Linear Nonreciprocity in a Compact Acoustic Circulator. <i>Science</i> , 2014, 343, 516-519.	6.0	820
86	Controlling Scattering and Absorption With Metamaterial Covers. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 4220-4229.	3.1	87
87	Manipulation of electron flow using near-zero index semiconductor metamaterials. <i>Physical Review B</i> , 2014, 90, .	1.1	25
88	Negative Refraction and Planar Focusing Based on Parity-Time Symmetric Metasurfaces. <i>Physical Review Letters</i> , 2014, 113, 023903.	2.9	212
89	Extraordinary Sound Transmission through Density-Near-Zero Ultranarrow Channels. <i>Physical Review Letters</i> , 2013, 111, 055501.	2.9	193
90	Quantum cloaking based on scattering cancellation. <i>Physical Review B</i> , 2013, 87, .	1.1	49

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91	Enhanced superradiance in epsilon-near-zero plasmonic channels. Physical Review B, 2013, 87, .	1.1	91
92	Passivity limitations on absorption properties of low-scattering objects. , 2013, , .		0
93	Superabsorbers and invisible sensors. , 2013, , .		0
94	Physical bounds and limitations of cloaking and invisibility using passive metamaterials. , 2013, , .		0
95	Furtive quantum sensing using matter-wave cloaks. Physical Review B, 2013, 87, .	1.1	18
96	Acoustic supercoupling and enhancement of nonlinearities in density-near-zero (DNZ) metamaterial channels. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
97	Acoustic supercoupling through a density-near-zero metamaterial channel. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
98	Exotic properties and potential applications of quantum metamaterials. Applied Physics A: Materials Science and Processing, 2012, 109, 781-788.	1.1	12
99	Electroacoustic absorbers: Bridging the gap between shunt loudspeakers and active sound absorption. Journal of the Acoustical Society of America, 2011, 129, 2968-2978.	0.5	71
100	Effect of mechanical nonlinearity on the electromagnetic response of a microwave tunable metamaterial. Journal Physics D: Applied Physics, 0, , .	1.3	1