Juan A Monsoriu

List of Publications by Year
in descending order

127	2,512	218592	243529
papers	citations	26 h-index	44 g-index

128	128	128	1189
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fractal zone plates. Optics Letters, 2003, 28, 971.	1.7	179
2	3D printed diffractive terahertz lenses. Optics Letters, 2016, 41, 1748.	1.7	114
3	Fractal photon sieve. Optics Express, 2006, 14, 11958.	1.7	92
4	Vortex solitons in photonic crystal fibers. Optics Express, 2004, 12, 817.	1.7	83
5	White-light imaging with fractal zone plates. Optics Letters, 2007, 32, 2109.	1.7	83
6	Using a mobile phone acceleration sensor in physics experiments on free and damped harmonic oscillations. American Journal of Physics, 2013, 81, 472-475.	0.3	74
7	Bifocal Fibonacci Diffractive Lenses. IEEE Photonics Journal, 2013, 5, 3400106-3400106.	1.0	72
8	Spatial soliton formation in photonic crystal fibers. Optics Express, 2003, 11, 452.	1.7	71
9	Devilâ€™s vortex-lenses. Optics Express, 2009, 17, 21891.	1.7	69
10	Fractal zone plates with variable lacunarity. Optics Express, 2004, 12, 4227.	1.7	64
11	Vortex Transmutation. Physical Review Letters, 2005, 95, 123901.	2.9	64
12	Oscillations studied with the smartphone ambient light sensor. European Journal of Physics, 2013, 34, 1349-1354.	0.3	62
13	Bifractal focusing and imaging properties of Thueâ€“Morse Zone Plates. Optics Express, 2015, 23, 19846.	1.7	58
14	Designing a photonic crystal fibre with flattened chromatic dispersion. Electronics Letters, 1999, 35, 325.	0.5	54
15	Devilâ€™s lenses. Optics Express, 2007, 15, 13858.	1.7	53
16	Cantor-like fractal photonic crystal waveguides. Optics Communications, 2005, 252, 46-51.	1.0	52
17	A quantitative analysis of coupled oscillations using mobile accelerometer sensors. European Journal of Physics, 2013, 34, 737-744.	0.3	47
18	Designing a new test for contrast sensitivity function measurement with iPad. Journal of Optometry, 2015, 8, 101-108.	0.7	47

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19	Zero permeability and zero permittivity band gaps in 1D metamaterial photonic crystals. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 364, 352-355.	0.9	44
20	Interaction between non-Bragg band gaps in 1D metamaterial photonic crystals. Optics Express, 2006, 14, 12958.	1.7	42
21	Twin axial vortices generated by Fibonacci lenses. Optics Express, 2013, 21, 10234.	1.7	41
22	Diffractive m-bonacci lenses. Optics Express, 2017, 25, 8267.	1.7	34
23	High-index-core Bragg fibers: dispersion properties. Optics Express, 2003, 11, 1400.	1.7	33
24	The acoustic Doppler effect applied to the study of linear motions. European Journal of Physics, 2014, 35, 025006.	0.3	33
25	Multifractal zone plates. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 1851.	0.8	31
26	Imaging Properties of Kinoform Fibonacci Lenses. IEEE Photonics Journal, 2014, 6, 1-6.	1.0	29
27	Analysis of dielectric-loaded cavities using an orthonormal-basis method. IEEE Transactions on Microwave Theory and Techniques, 2002, 50, 2545-2552.	2.9	26
28	Measuring coupled oscillations using an automated video analysis technique based on image recognition. European Journal of Physics, 2005, 26, 1149-1155.	0.3	26
29	Lacunar fractal photon sieves. Optics Communications, 2007, 277, 1-4.	1.0	26
30	Experimental generation and characterization of Devilâ€™s vortex-lenses. Applied Physics B: Lasers and Optics, 2012, 106, 915-919.	1.1	26
31	Nodal solitons and the nonlinear breaking of discrete symmetry. Optics Express, 2005, 13, 1072.	1.7	23
32	Multiplexing of encrypted data using fractal masks. Optics Letters, 2012, 37, 2895.	1.7	23
33	Fractal conical lenses. Optics Express, 2006, 14, 9077.	1.7	22
34	Fractal axicons. Optics Communications, 2006, 263, 1-5.	1.0	21
35	Influence of different types of astigmatism on visual acuity. Journal of Optometry, 2017, 10, 141-148.	0.7	21
36	Fractal square zone plates. Optics Communications, 2013, 286, 42-45.	1.0	20

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37	The study of two-dimensional oscillations using a smartphone acceleration sensor: example of Lissajous curves. Physics Education, 2015, 50, 580-586.	0.3	20
38	Multiple-plane image formation by Walsh zone plates. Optics Express, 2018, 26, 21210.	1.7	20
39	Contribution of digital simulation in visualizing physics processes. Computer Applications in Engineering Education, 2002, 10, 45-49.	2.2	19
40	Generation of programmable 3D optical vortex structures through devilâ€™s vortex-lens arrays. Applied Optics, 2013, 52, 5822.	0.9	19
41	A transfer matrix method for the analysis of fractal quantum potentials. European Journal of Physics, 2005, 26, 603-610.	0.3	18
42	Non-Bragg band gaps in 1D metamaterial aperiodic multilayers. Journal of the European Optical Society-Rapid Publications, 2007, 2, .	0.9	17
43	Diffraction by electronic components of everyday use. American Journal of Physics, 2014, 82, 257-261.	0.3	17
44	Fractal generalized zone plates. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 1161.	0.8	16
45	Role of dispersion on zero-average-index bandgaps. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 581.	0.9	16
46	A label-free diffraction-based sensing displacement immunosensor to quantify low molecular weight organic compounds. Analytica Chimica Acta, 2018, 1033, 173-179.	2.6	16
47	Quantum fractal superlattices. American Journal of Physics, 2006, 74, 831-836.	0.3	15
48	Optical filters with fractal transmission spectra based on diffractive optics. Optics Letters, 2009, 34, 560.	1.7	15
49	Volumetric multiple optical traps produced by Devil's lenses. Journal of the European Optical Society-Rapid Publications, 0, 5, .	0.9	15
50	Cantor dust zone plates. Optics Express, 2013, 21, 2701.	1.7	15
51	Imaging quality of multifocal intraocular lenses: automated assessment setup. Ophthalmic and Physiological Optics, 2013, 33, 420-426.	1.0	15
52	Multiplexing THz Vortex Beams With a Single Diffractive 3-D Printed Lens. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 63-66.	2.0	15
53	Using image recognition to automate video analysis of physical processes. American Journal of Physics, 2003, 71, 1075-1079.	0.3	14
54	Fractal-structured multifocal intraocular lens. PLoS ONE, 2018, 13, e0200197.	1.1	14

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55	Polyadic devil's lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 2532.	0.8	13
56	Diffractive corneal inlay for presbyopia. Journal of Biophotonics, 2017, 10, 1110-1114.	1.1	13
57	Analysis of Inhomogeneously Dielectric Filled Cavities Coupled to Dielectric-Loaded Waveguides: Application to the Study of NRD-Guide Components. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 1693-1701.	2.9	12
58	Testing theoretical models of magnetic damping using an air track. European Journal of Physics, 2008, 29, 335-343.	0.3	12
59	Visual acuity and contrast sensitivity screening with a new iPad application. Displays, 2016, 44, 15-20.	2.0	12
60	m-bonacci metamaterial multilayers: location of the zero-average index bandgap edges. Optics Letters, 2009, 34, 3172.	1.7	11
61	Synthesis of fractal light pulses by quasi-direct space-to-time pulse shaping. Optics Letters, 2012, 37, 1145.	1.7	11
62	Determining the efficiency of optical sources using a smartphoneâ€™s ambient light sensor. European Journal of Physics, 2017, 38, 025301.	0.3	11
63	Stereopsis assessment at multiple distances with an iPad application. Displays, 2017, 50, 35-40.	2.0	11
64	Spectral anomalies in focused waves of different Fresnel numbers. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2004, 21, 2418.	0.8	10
65	Tunneling in quantum superlattices with variable lacunarity. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 3801-3807.	0.9	10
66	Undergraduate experiment with fractal diffraction gratings. European Journal of Physics, 2011, 32, 687-694.	0.3	10
67	Smart physics with smartphone sensors. , 2014, , .		10
68	Direct Visualization of Mechanical Beats by Means of an Oscillating Smartphone. Physics Teacher, 2017, 55, 424-425.	0.2	10
69	In Vitro Chromatic Performance of Three Presbyopia-Correcting Intraocular Lenses with Different Optical Designs. Journal of Clinical Medicine, 2022, 11, 1212.	1.0	10
70	Analyzing the Dynamics of a Yo-Yo Using a Smartphone Gyroscope Sensor. Physics Teacher, 2020, 58, 569-571.	0.2	9
71	A new trifocal corneal inlay for presbyopia. Scientific Reports, 2021, 11, 6620.	1.6	9
72	Direct measurement of the speed of sound using a microphone and a speaker. Physics Education, 2014, 49, 310-313.	0.3	8

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73	Guiding Properties of a Photonic Quasi-Crystal Fiber Based on the Thueâ€“Morse Sequence. IEEE Photonics Technology Letters, 2015, 27, 1903-1906.	1.3	8
74	Inter-Display Reproducibility of Contrast Sensitivity Measurement with iPad. Optometry and Vision Science, 2016, 93, 1532-1536.	0.6	8
75	Terahertz Sieves. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 140-143.	2.0	8
76	Demonstration of the parallel axis theorem through a smartphone. Physics Teacher, 2019, 57, 340-341.	0.2	8
77	Digital simulation of wave motion. Computer Applications in Engineering Education, 2002, 10, 161-166.	2.2	7
78	Broadband focused waves with compensated spatial dispersion: transverse versus axial balance. Optics Letters, 2007, 32, 853.	1.7	7
79	Introductory quantum physics courses using a LabVIEW multimedia module. Computer Applications in Engineering Education, 2007, 15, 124-133.	2.2	7
80	Diffraction by m- bonacci gratings. European Journal of Physics, 2015, 36, 065005.	0.3	7
81	Characterization of linear light sources with the smartphoneâ€™s ambient light sensor. Physics Teacher, 2018, 56, 562-563.	0.2	7
82	The Effect of Fractal Contact Lenses on Peripheral Refraction in Myopic Model Eyes. Current Eye Research, 2014, 39, 1151-1160.	0.7	6
83	Frequency analyser: A new Android application for high precision frequency measurement. Computer Applications in Engineering Education, 2015, 23, 471-476.	2.2	6
84	Fractal Light Vortices. , 0, , .		6
85	Relative Peripheral Myopia Induced by Fractal Contact Lenses. Current Eye Research, 2018, 43, 1514-1521.	0.7	6
86	Optical Evaluation of New Designs of Multifocal Diffractive Corneal Inlays. Journal of Ophthalmology, 2019, 2019, 1-6.	0.6	6
87	A robust and efficient method for obtaining the complex modes in inhomogeneously filled waveguides. Microwave and Optical Technology Letters, 2003, 37, 218-222.	0.9	5
88	Through-focus response of multifocal intraocular lenses evaluated with a spatial light modulator. Applied Optics, 2012, 51, 8594.	0.9	5
89	Assessment of a New Trifocal Diffractive Corneal Inlay for Presbyopia Correction Using an Adaptive Optics Visual Simulator. Photonics, 2022, 9, 135.	0.9	5
90	Using a smartphone acceleration sensor to study uniform and uniformly accelerated circular motions. Revista Brasileira De Ensino De Fisica, 2014, 36, .	0.2	4

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91	Study on band gap structure of Fibonacci quantum superlattices by using the transfer matrix method. Modern Physics Letters B, 2014, 28, 1450053.	1.0	4
92	Comparison of two different devices to assess intraocular lenses. Optik, 2016, 127, 10108-10114.	1.4	4
93	Proposal of a new diffractive corneal inlay to improve near vision in a presbyopic eye. Applied Optics, 2020, 59, D54.	0.9	4
94	Photonic Structures: Fractal Zone Plates Produce Axial Irradiance With Fractal Profile. Optics and Photonics News, 2003, 14, 31.	0.4	3
95	Sloped-wall thin-film photonic crystal waveguides. IEEE Photonics Technology Letters, 2005, 17, 354-356.	1.3	3
96	Diffraction by fractal metallic supergratings. Optics Express, 2007, 15, 15628.	1.7	3
97	Self-similar focusing with generalized devilâ€™s lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 210.	0.8	3
98	SELF-SIMILAR BEHAVIOR IN SEMICONDUCTOR SUPERLATTICES. Fractals, 2012, 20, 89-95.	1.8	3
99	Characterizing the movement of a falling rigid rod. European Journal of Physics, 2015, 36, 055036.	0.3	3
100	On the power profiles of contact lenses measured with NIMO TR1504. Journal of Optometry, 2017, 10, 265-266.	0.7	3
101	Multifocal intraocular lenses with fractal geometry. Optica Pura Y Aplicada, 2015, 48, 1-8.	0.0	3
102	Axial behaviour of Cantor ring diffractals. Journal of Optics, 2003, 5, S361-S364.	1.5	2
103	Focusing properties of diffractive lenses constructed with the aperiodicm-bonacci sequence. , 2015, , .		2
104	Wavefront sensing using a graphical user interface. Computer Applications in Engineering Education, 2016, 24, 255-262.	2.2	2
105	Imaging Performance of a Diffractive Corneal Inlay for Presbyopia in a Model Eye. IEEE Access, 2019, 7, 163933-163938.	2.6	2
106	Assessment of a Wigner-distribution-function-based method to compute the polychromatic axial response given by an aberrated optical system. Optical Engineering, 2003, 42, 753.	0.5	1
107	Undergraduate experiments with aperiodic gratings based on the Fibonacci sequence. , 2015, , .		1
108	Design and evaluation of a threeâ€dimensional virtual laboratory on vector operations. Computer Applications in Engineering Education, 2019, 27, 690-697.	2.2	1

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109	Ophthalmic: Laboratorio virtual para el diseÃ±o de nuevas lentes oftÃ¡lmicas. Modelling in Science Education and Learning, 0, 6, 173.	0.1	1
110	El smartphone como barÃ³metro en experimentos de FÃsica. Modelling in Science Education and Learning, 2018, 11, 15.	0.1	1
111	<title>Axial irradiance computation using the Wigner distribution function: assessment of the method</title>. , 2001, , .		0
112	<title>Analysis of three-dimensional dielectric structures using an orthonormal-basis method: thin film photonic crystal waveguides</title>. , 2001, , .		0
113	Dispersion-flattened properties of high-index-core Bragg fibers. , 0, , .		0
114	Dispersion-compensated high-index core Bragg fibers. , 2003, , .		0
115	Axial behavior of Cantor rings diffractals. , 2003, , .		0
116	<title>Using 3D virtual environments to visualize wave interference phenomena</title>. , 2004, , .		0
117	Spatial effects in nonlinear photonic crystal fibers. , 2005, 5950, 176.		0
118	Focusing properties of aperiodic zone plates. , 2006, , .		0
119	Self-similar non-Bragg band gaps in fractal metamaterial multilayers. , 2007, 6581, 263.		0
120	Zero-average index band-gap edges in m -bonacci metamaterial multilayers. , 2009, , .		0
121	Promoting mathematical skills using the instructive program Kriging. , 2011, , .		0
122	A computer-assisted experiment to study the influence of the point spread function in the image formation process. European Journal of Physics, 2018, 39, 065301.	0.3	0
123	SimulaciÃ³n de esfuerzos en pÃ³rticos. Modelling in Science Education and Learning, 0, 4, 207.	0.1	0
124	GeneraciÃ³n de fractales a partir del mÃ©todo de Newton. Modelling in Science Education and Learning, 0, 6, 137.	0.1	0
125	VÃ³rtices no estacionarios en un vaso de agua. Revista Brasileira De Ensino De Fisica, 2013, 35, .	0.2	0
126	Aperiodic Diffract: Study of diffraction gratings. Modelling in Science Education and Learning, 0, 7, 131.	0.1	0

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127	Unconventional imaging with radial Walsh filters. , 2018, , .		0