

Sergi Gallego

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186
ext. papers

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L-index

#	Paper	IF	Citations
147	Application of a modified He's homotopy perturbation method to obtain higher-order approximations of an $x^{1/3}$ force nonlinear oscillator. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007 , 371, 421-426	2.3	78
146	Application of the harmonic balance method to a nonlinear oscillator typified by a mass attached to a stretched wire. <i>Journal of Sound and Vibration</i> , 2007 , 302, 1018-1029	3.9	75
145	Temporal analysis of grating formation in photopolymer using the nonlocal polymerization-driven diffusion model. <i>Optics Express</i> , 2005 , 13, 6990-7004	3.3	75
144	Holographic photopolymer materials: nonlocal polymerization-driven diffusion under nonideal kinetic conditions. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005 , 22, 407	1.7	69
143	Optimization of a 1 mm thick PVA/acrylamide recording material to obtain holographic memories: method of preparation and holographic properties. <i>Applied Physics B: Lasers and Optics</i> , 2003 , 76, 851-857 ¹⁹	1.9	64
142	Optimization of a thick polyvinyl alcohol-acrylamide photopolymer for data storage using a combination of angular and peristrophic holographic multiplexing. <i>Applied Optics</i> , 2006 , 45, 7661-6	1.7	52
141	Physical and effective optical thickness of holographic diffraction gratings recorded in photopolymers. <i>Optics Express</i> , 2005 , 13, 1939-47	3.3	51
140	Application of a modified He's homotopy perturbation method to obtain higher-order approximations to a nonlinear oscillator with discontinuities. <i>Nonlinear Analysis: Real World Applications</i> , 2009 , 10, 601-610	2.1	48
139	In dark analysis of PVA/AA materials at very low spatial frequencies: phase modulation evolution and diffusion estimation. <i>Optics Express</i> , 2009 , 17, 18279-91	3.3	44
138	New photopolymer holographic recording material with sustainable design. <i>Optics Express</i> , 2007 , 15, 12425-35	3.3	41
137	3 Dimensional analysis of holographic photopolymers based memories. <i>Optics Express</i> , 2005 , 13, 3543-57 ³	3.3	36
136	First-harmonic diffusion-based model applied to a polyvinyl-alcohol-acrylamide-based photopolymer. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003 , 20, 2052	1.7	36
135	Averaged Stokes polarimetry applied to evaluate retardance and flicker in PA-LCoS devices. <i>Optics Express</i> , 2014 , 22, 15064-74	3.3	35
134	Does single umbilical artery (SUA) predict any type of congenital defect? Clinical-epidemiological analysis of a large consecutive series of malformed infants. <i>American Journal of Medical Genetics, Part A</i> , 2008 , 146A, 15-25	2.5	34
133	LCoS SLM Study and Its Application in Wavelength Selective Switch. <i>Photonics</i> , 2017 , 4, 22	2.2	32
132	Overmodulation effects in volume holograms recorded on photopolymers. <i>Optics Communications</i> , 2003 , 215, 263-269	2	31
131	Holographic characteristics of a 1-mm-thick photopolymer to be used in holographic memories. <i>Applied Optics</i> , 2003 , 42, 7008-12	1.7	31

130	Characterization of a PVA/acrylamide photopolymer. Influence of a cross-linking monomer in the final characteristics of the hologram. <i>Optics Communications</i> , 2003 , 224, 27-34	2	29
129	Programmable axial apodizing and hyperresolving amplitude filters with a liquid-crystal spatial light modulator. <i>Optics Letters</i> , 1999 , 24, 628-30	3	29
128	Retardance and flicker modeling and characterization of electro-optic linear retarders by averaged Stokes polarimetry. <i>Optics Letters</i> , 2014 , 39, 1011-4	3	26
127	Comparison of peristrophic multiplexing and a combination of angular and peristrophic holographic multiplexing in a thick PVA/acrylamide photopolymer for data storage. <i>Applied Optics</i> , 2007 , 46, 5368-73 ¹⁻⁷	1.7	26
126	Edge-enhanced imaging with polyvinyl alcohol/acrylamide photopolymer gratings. <i>Optics Letters</i> , 2003 , 28, 1510-2	3	26
125	3-dimensional characterization of thick grating formation in PVA/AA based photopolymer. <i>Optics Express</i> , 2006 , 14, 5121-8	3.3	25
124	Compact LCOSBLM Based Polarization Pattern Beam Generator. <i>Journal of Lightwave Technology</i> , 2015 , 33, 2047-2055	4	24
123	Time-resolved Mueller matrix analysis of a liquid crystal on silicon display. <i>Applied Optics</i> , 2008 , 47, 4267-74	7.4	24
122	Direct analysis of monomer diffusion times in polyvinyl/acrylamide materials. <i>Applied Physics Letters</i> , 2008 , 92, 073306	3.4	24
121	Anamorphic and spatial frequency dependent phase modulation on liquid crystal displays. Optimization of the modulation diffraction efficiency. <i>Optics Express</i> , 2005 , 13, 2111-9	3.3	24
120	Effect of a depth attenuated refractive index profile in the angular responses of the efficiency of higher orders in volume gratings recorded in a PVA/acrylamide photopolymer. <i>Optics Communications</i> , 2004 , 233, 311-322	2	23
119	High environmental compatibility photopolymers compared to PVA/AA based materials at zero spatial frequency limit. <i>Optical Materials</i> , 2011 , 33, 531-537	3.3	22
118	Quantitative Comparison of Five Different Photosensitizers for Use in a Photopolymer. <i>Research Letters in Physics</i> , 2012 , 2012, 1-11		22
117	Improving the performance of PVA/AA photopolymers for holographic recording. <i>Optical Materials</i> , 2013 , 35, 668-673	3.3	21
116	Approximate expressions for the period of a simple pendulum using a Taylor series expansion. <i>European Journal of Physics</i> , 2011 , 32, 1303-1310	0.8	21
115	Temporal response and first order volume changes during grating formation in photopolymers. <i>Journal of Applied Physics</i> , 2006 , 99, 113105	2.5	21
114	Electrical dependencies of optical modulation capabilities in digitally addressed parallel aligned liquid crystal on silicon devices. <i>Optical Engineering</i> , 2014 , 53, 067104	1.1	18
113	Biophotopol: A Sustainable Photopolymer for Holographic Data Storage Applications. <i>Materials</i> , 2012 , 5, 772-783	3.5	17

112	Phase measurements of a twisted nematic liquid crystal spatial light modulator with a common-path interferometer. <i>Optics Communications</i> , 2001 , 190, 129-133	2	17
111	Predictive capability of average Stokes polarimetry for simulation of phase multilevel elements onto LCoS devices. <i>Applied Optics</i> , 2015 , 54, 1379-86	1.7	16
110	Approximate solutions for the nonlinear pendulum equation using a rational harmonic representation. <i>Computers and Mathematics With Applications</i> , 2012 , 64, 1602-1611	2.7	16
109	Real-time interferometric characterization of a polyvinyl alcohol based photopolymer at the zero spatial frequency limit. <i>Applied Optics</i> , 2007 , 46, 7506-12	1.7	16
108	High-efficiency volume holograms recording on acrylamide and N,N'-methylene-bis-acrylamide photopolymer with pulsed laser. <i>Journal of Modern Optics</i> , 2005 , 52, 1575-1584	1.1	16
107	Surface relief model for photopolymers without cover plating. <i>Optics Express</i> , 2011 , 19, 10896-906	3.3	15
106	Hybrid Ternary Modulation Applied to Multiplexing Holograms in Photopolymers for Data Page Storage. <i>Journal of Lightwave Technology</i> , 2010 , 28, 776-783	4	15
105	Multiplexed holographic data page storage on a polyvinyl alcohol/acrylamide photopolymer memory. <i>Applied Optics</i> , 2008 , 47, 4448-56	0.2	15
104	Analysis of monomer diffusion in depth in photopolymer materials. <i>Optics Communications</i> , 2007 , 274, 43-49	2	15
103	Holographic waveguides in photopolymers. <i>Optics Express</i> , 2019 , 27, 827-840	3.3	15
102	Hologram multiplexing in acrylamide hydrophilic photopolymers. <i>Optics Communications</i> , 2008 , 281, 1354-1357	2	14
101	Characterization of polyvinyl alcohol/acrylamide holographic memories with a first-harmonic diffusion model. <i>Applied Optics</i> , 2005 , 44, 6205-10	1.7	14
100	Two diffusion photopolymer for sharp diffractive optical elements recording. <i>Optics Letters</i> , 2015 , 40, 3221-4	3	13
99	Spatial-phase-modulation-based study of polyvinyl-alcohol/acrylamide photopolymers in the low spatial frequency range. <i>Applied Optics</i> , 2009 , 48, 4403-13	0.2	13
98	Analysis of PVA/AA based photopolymers at the zero spatial frequency limit using interferometric methods. <i>Applied Optics</i> , 2008 , 47, 2557-63	1.7	13
97	Comments on Investigation of the properties of the period for the nonlinear oscillator $x''+(1+x^2)x=0$ <i>Journal of Sound and Vibration</i> , 2007 , 303, 925-930	3.9	13
96	Extended linear polarimeter to measure retardance and flicker: application to liquid crystal on silicon devices in two working geometries. <i>Optical Engineering</i> , 2014 , 53, 014105	1.1	12
95	Higher accurate approximate solutions for the simple pendulum in terms of elementary functions. <i>European Journal of Physics</i> , 2010 , 31, L65-L70	0.8	12

94	Relief diffracted elements recorded on absorbent photopolymers. <i>Optics Express</i> , 2012 , 20, 11218-31	3.3	12
93	Stabilization of volume gratings recorded in polyvinyl alcohol-acrylamide photopolymers with diffraction efficiencies higher than 90%. <i>Journal of Modern Optics</i> , 2004 , 51, 491-503	1.1	12
92	Holographic Characteristics of an Acrylamide/Bisacrylamide Photopolymer in 40 μ m Thick Layers. <i>Physica Scripta</i> , 2005 , 66	2.6	12
91	Exploring binary and ternary modulations on a PA-LCoS device for holographic data storage in a PVA/AA photopolymer. <i>Optics Express</i> , 2015 , 23, 20459-79	3.3	11
90	Diffractive lenses recorded in absorbent photopolymers. <i>Optics Express</i> , 2016 , 24, 1559-72	3.3	11
89	Volume Holograms in Photopolymers: Comparison between Analytical and Rigorous Theories. <i>Materials</i> , 2012 , 5, 1373-1388	3.5	11
88	Optimization of Photopolymer Materials for the Fabrication of a Holographic Waveguide. <i>Polymers</i> , 2017 , 9,	4.5	10
87	Linearity in the response of photopolymers as optical recording media. <i>Optics Express</i> , 2013 , 21, 10995-1008	3.9	10
86	Overmodulation Control in the Optimization of a H-PDLC Device with Ethyl Eosin as Dye. <i>International Journal of Polymer Science</i> , 2013 , 2013, 1-8	2.4	10
85	Generation of diffractive optical elements onto a photopolymer using a liquid crystal display 2010 ,		10
84	Accurate control of a liquid-crystal display to produce a homogenized Fourier transform for holographic memories. <i>Optics Letters</i> , 2007 , 32, 2511-3	3	10
83	Dimensional changes in slanted diffraction gratings recorded in photopolymers. <i>Optical Materials Express</i> , 2016 , 6, 3455	2.6	10
82	LCoS display phase self-calibration method based on diffractive lens schemes. <i>Optics and Lasers in Engineering</i> , 2018 , 106, 147-154	4.6	9
81	Peristrophic multiplexed holograms recorded in a low toxicity photopolymer. <i>Optical Materials Express</i> , 2017 , 7, 133	2.6	9
80	Acceleration of split-field finite difference time-domain method for anisotropic media by means of graphics processing unit computing. <i>Optical Engineering</i> , 2013 , 53, 011005	1.1	9
79	Improved maximum uniformity and capacity of multiple holograms recorded in absorbent photopolymers. <i>Optics Express</i> , 2007 , 15, 9308-19	3.3	9
78	Diffusion-based model to predict the conservation of gratings recorded in poly(vinyl alcohol)-acrylamide photopolymer. <i>Applied Optics</i> , 2003 , 42, 5839-45	1.7	9
77	Effective angular and wavelength modeling of parallel aligned liquid crystal devices. <i>Optics and Lasers in Engineering</i> , 2015 , 74, 114-121	4.6	8

76	Characterization and comparison of different photopolymers for low spatial frequency recording. <i>Optical Materials</i> , 2015 , 44, 18-24	3-3	8
75	Monomer diffusion in sustainable photopolymers for diffractive optics applications. <i>Optical Materials</i> , 2011 , 33, 1626-1629	3-3	8
74	Linear response deviations during recording of diffraction gratings in photopolymers. <i>Optics Express</i> , 2009 , 17, 13193-201	3-3	8
73	Analysis of multiplexed holograms stored in a thick PVA/AA photopolymer. <i>Optics Communications</i> , 2008 , 281, 1480-1485	2	8
72	Biophotopolymer energetic sensitivity improved in 300nm layers by tuning the recording wavelength. <i>Optical Materials</i> , 2016 , 52, 111-115	3-3	7
71	Holographic photopolymer materials with nonlocal and nonlinear response 2003 , 5216, 127		7
70	Multi-GPU and multi-CPU accelerated FDTD scheme for vibroacoustic applications. <i>Computer Physics Communications</i> , 2015 , 191, 43-51	4-2	6
69	Tensorial split-field finite-difference time-domain approach for second- and third-order nonlinear materials. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2013 , 30, 1711	1-7	6
68	Comparison of simplified theories in the analysis of the diffraction efficiency in surface-relief gratings 2012 ,		6
67	Pyromethene dye and non-redox initiator system in a hydrophilic binder photopolymer. <i>Optical Materials</i> , 2007 , 30, 227-230	3-3	6
66	Stabilization of volume gratings recorded in polyvinyl alcohol-acrylamide photopolymers with diffraction efficiencies higher than 90%. <i>Journal of Modern Optics</i> , 2004 , 51, 491-503	1-1	6
65	Analysis of Second and Third Diffracted Orders in Volume Diffraction Gratings Recorded on Photopolymers. <i>Physica Scripta</i> , 2005 , 58	2-6	6
64	Split-field finite-difference time-domain method for second-harmonic generation in two-dimensionally periodic structures. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2015 , 32, 664	1-7	5
63	Additives Type Schiff's Base as Modifiers of the Optical Response in Holographic Polymer-Dispersed Liquid Crystals. <i>Polymers</i> , 2017 , 9,	4-5	5
62	Performance analysis of SSE and AVX instructions in multi-core CPUs and GPU computing on FDTD scheme for solid and fluid vibration problems. <i>Journal of Supercomputing</i> , 2014 , 70, 514-526	2-5	5
61	Diffractive and interferometric methods to characterize photopolymers with liquid crystal molecules as holographic recording material. <i>Journal of the European Optical Society-Rapid Publications</i> , 2012 , 7,	2-5	5
60	Development of a unified FDTD-FEM library for electromagnetic analysis with CPU and GPU computing. <i>Journal of Supercomputing</i> , 2013 , 64, 28-37	2-5	5
59	An experiment in heat conduction using hollow cylinders. <i>European Journal of Physics</i> , 2011 , 32, 1065-1075		5

58	Effect of the incorporation of N,N'-methylene-bis-acrylamide on the multiplexing of holograms in a hydrophilic acrylamide photopolymer. <i>Optics Communications</i> , 2006 , 268, 133-137	2	5
57	Combining average molecular tilt and flicker for management of depolarized light in parallel-aligned liquid crystal devices for broadband and wide-angle illumination. <i>Optics Express</i> , 2019 , 27, 5238-5252	3.3	5
56	Analysis of the Imaging Characteristics of Holographic Waveguides Recorded in Photopolymers. <i>Polymers</i> , 2020 , 12,	4.5	5
55	Blazed Gratings Recorded in Absorbent Photopolymers. <i>Materials</i> , 2016 , 9,	3.5	5
54	Influence of index matching on AA/PVA photopolymers for low spatial frequency recording. <i>Applied Optics</i> , 2015 , 54, 3132-40	0.2	4
53	Simplified physical modeling of parallel-aligned liquid crystal devices at highly non-linear tilt angle profiles. <i>Optics Express</i> , 2018 , 26, 12723-12741	3.3	4
52	Experimental Conditions to Obtain Photopolymerization Induced Phase Separation Process in Liquid Crystal-Photopolymer Composite Materials under Laser Exposure. <i>International Journal of Polymer Science</i> , 2014 , 2014, 1-5	2.4	4
51	Model of low spatial frequency diffractive elements recorded in photopolymers during and after recording. <i>Optical Materials</i> , 2014 , 38, 46-52	3.3	4
50	Analysis of the fabrication of diffractive optical elements in photopolymers 2013 ,		4
49	Optimization of a holographic memory setup using an LCD and a PVA-based photopolymer. <i>Optik</i> , 2010 , 121, 151-158	2.5	4
48	Influence of the fringe visibility on the characteristics of holograms recorded in photopolymer material. <i>Optik</i> , 2003 , 114, 401-406	2.5	4
47	Static and dynamic effects of flicker in phase multilevel elements on LCoS devices 2015 ,		3
46	Accuracy analysis of simplified and rigorous numerical methods applied to binary nanopatterning gratings in non-paraxial domain. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013 , 377, 2245-2250	2.3	3
45	Modeling Diffractive Lenses Recording in Environmentally Friendly Photopolymer. <i>Polymers</i> , 2017 , 9,	4.5	3
44	Classical polarimetric method revisited to analyse the modulation capabilities of parallel aligned liquid crystal on silicon displays 2012 ,		3
43	Post-Buckling of a Cantilever Column: A More Accurate Linear Analysis of a Classical Nonlinear Problem. <i>International Journal of Mechanical Engineering Education</i> , 2007 , 35, 293-304	0.6	3
42	Clarifications to the paper "Holographic characteristics of a 1-mm-thick photopolymer to be used in holographic memories". <i>Applied Optics</i> , 2005 , 44, 1448	1.7	3
41	Complex Diffractive Optical Elements Stored in Photopolymers. <i>Polymers</i> , 2019 , 11,	4.5	3

40	Numerical Analysis of H-PDLC Using the Split-Field Finite-Difference Time-Domain Method. <i>Polymers</i> , 2018 , 10,	4.5	3
39	PVA/AA photopolymers and PA-LCoS devices combined for holographic data storage 2016 ,		2
38	Influence of the set-up on the recording of diffractive optical elements into photopolymers 2014 ,		2
37	Binary Intensity Modulation and Hybrid Ternary Modulation Applied to Multiplexing Objects Using Holographic Data Storage on a PVA/AA Photopolymer. <i>International Journal of Polymer Science</i> , 2014 , 2014, 1-8	2.4	2
36	A dynamic beam splitter using polymer dispersed liquid crystal materials 2012 ,		2
35	Advances in Novel Optical Materials and Devices. <i>Research Letters in Physics</i> , 2013 , 2013, 1-2		2
34	Zero Spatial Frequency Limit: Method to Characterize Photopolymers as Optical Recording Material. <i>Research Letters in Physics</i> , 2012 , 2012, 1-9		2
33	Multiplexing holograms for data page storage as a holographic memory in a PVA/AA photopolymer 2008 ,		2
32	Characterization and optimization of liquid crystal displays for data storage applications 2007 ,		2
31	Temporal and non-ideal behavior in photopolymers 2005 ,		2
30	Maximum effective optical thickness of the gratings recorded in photopolymers 2005 ,		2
29	Unitary matrix approach for a precise voltage dependent characterization of reflective liquid crystal devices by average Stokes polarimetry. <i>Optics Letters</i> , 2020 , 45, 5732-5735	3	2
28	Estimation of the speed of sound waves using a modular 3D printed Helmholtz resonator. <i>Physics Education</i> , 2021 , 56, 055039	0.8	2
27	Study of the index matching for different photopolymers 2015 ,		1
26	Anamorphic and Local Characterization of a Holographic Data Storage System with a Liquid-Crystal on Silicon Microdisplay as Data Pager. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 986	2.6	1
25	Influence of Thickness on the Holographic Parameters of H-PDLC Materials. <i>International Journal of Polymer Science</i> , 2014 , 2014, 1-7	2.4	1
24	Beta value coupled wave theory for nonslanted reflection gratings. <i>Scientific World Journal, The</i> , 2014 , 2014, 513734	2.2	1
23	Construction of Intelligent Virtual Worlds Using a Grammatical Framework. <i>International Journal of Intelligent Systems</i> , 2014 , 29, 751-766	8.4	1

22	Analysis of the diffraction efficiency of reflection and transmission holographic gratings by means of a parallel FDTD approach 2011 ,		1
21	Comparison of photopolymers for optical data storage applications and relief diffractive optical elements recorded onto photopolymers 2011 ,		1
20	Performance improvement of high-thickness photopolymers for holographic data storage applications 2011 ,		1
19	Multiplexing holograms for data page storage using a LCD as hybrid ternary modulation 2009 ,		1
18	Analysis of the geometry of a holographic memory setup 2012 ,		1
17	Optimization of a holographic memory setup using a LCD and a PVA based photopolymer 2007 ,		1
16	Multiplexing holograms in an acrylamide photopolymer 2006 ,		1
15	Grating matrix method to describe a volume transmission diffraction grating. <i>Optics Communications</i> , 2006 , 266, 122-128	2	1
14	Optimization of a PVA/acrylamide material for the recording of multiple diffraction gratings 2004 ,		1
13	High-efficiency volume holograms recording on acrylamide and N,N'methylene-bis-acrylamide photopolymer with pulsed laser 2004 ,		1
12	Polarimetric and diffractive evaluation of 3.74 micron pixel-size LCoS in the telecommunications C-band 2017 ,		1
11	Self-addressed diffractive lens schemes for the characterization of LCoS displays 2018 ,		1
10	Accurate, Efficient and Rigorous Numerical Analysis of 3D H-PDLC Gratings. <i>Materials</i> , 2020 , 13,	3,5	1
9	Analysis of amplitude and phase coupling in volume holography 2006 , 6252, 338		
8	Effect of the glass substrate on the efficiency of the different orders that propagate in a transmission sinusoidal diffraction grating. <i>Journal of Modern Optics</i> , 2006 , 53, 1403-1410	1.1	
7	Examination of the temporal and kinetic effects in acrylamide based photopolymer using the nonlocal polymer driven diffusion model (NPDD) 2006 , 6252, 51		
6	3-dimensional analysis of holographic memories based on photopolymers using finite differences method 2006 , 6187, 307		
5	Depth attenuated refractive index profiles in holographic gratings recorded in photopolymer materials 2004 , 5456, 449		

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3 Complementary approaches with and without a Fourier plane for optical image processing education **2005**, 9664, 124

2 Qualitative disorder measurements from backscattering spectra through an optical fiber. *Biomedical Optics Express*, **2020**, 11, 6038-6048 3.5

1 Validation of Fresnel-Kirchhoff Integral Method for the Study of Volume Dielectric Bodies. *Applied Sciences (Switzerland)*, **2021**, 11, 3800 2.6