Cristian Neipp

List of Publications by Year
in descending order

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157 papers	2,557 citations	201575 27 h-index	233338 45 g-index
162 all docs	162 docs citations	162 times ranked	971 citing authors

#	Article	IF	Citations
1	Polarimetric analysis of cross-talk phenomena induced by the pixelation in PA-LCoS devices. Optics and Laser Technology, 2022, 152, 108125.	2.2	4
2	Validation of Fresnelâ€"Kirchhoff Integral Method for the Study of Volume Dielectric Bodies. Applied Sciences (Switzerland), 2021, 11, 3800.	1.3	0
3	Tunable Waveguides Couplers Based on HPDLC for See-Through Applications. Polymers, 2021, 13, 1858.	2.0	6
4	Precise-Integration Time-Domain Formulation for Optical Periodic Media. Materials, 2021, 14, 7896.	1.3	1
5	Analysis of the Imaging Characteristics of Holographic Waveguides Recorded in Photopolymers. Polymers, 2020, 12, 1485.	2.0	15
6	Accurate, Efficient and Rigorous Numerical Analysis of 3D H-PDLC Gratings. Materials, 2020, 13, 3725.	1.3	4
7	Analytical modeling of blazed gratings on two-dimensional pixelated liquid crystal on silicon devices. Optical Engineering, 2020, 59, 1.	0.5	7
8	Comment on â€œApplication of Fresnel diffraction to nondestructive measurement of the refractive index of optical fibersâ€• Optical Engineering, 2020, 59, 1.	0.5	1
9	3-dimensional modelling of the DOEs formation in PVA/AA photopolymers. , 2020, , .		1
10	Complex Diffractive Optical Elements Stored in Photopolymers. Polymers, 2019, 11, 1920.	2.0	8
11	Holographic waveguides in photopolymers. Optics Express, 2019, 27, 827.	1.7	36
12	Study of the imaging characteristics of holographic waveguides. , 2019, , .		0
13	Numerical Analysis of H-PDLC Using the Split-Field Finite-Difference Time-Domain Method. Polymers, 2018, 10, 465.	2.0	4
14	Simplified physical modeling of parallel-aligned liquid crystal devices at highly non-linear tilt angle profiles. Optics Express, 2018, 26, 12723.	1.7	5
15	Holographic Lenses in an Environment-Friendly Photopolymer. Polymers, 2018, 10, 302.	2.0	17
16	Anamorphic characterization of a PA-LCoS based holographic data storage system. , 2018, , .		0
17	Optimization of Photopolymer Materials for the Fabrication of a Holographic Waveguide. Polymers, 2017, 9, 395.	2.0	18
18	Diffractive lenses in biocompatible photopolymers using LCoS. , 2017, , .		0

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19	Dimensional changes in slanted diffraction gratings recorded in photopolymers. Optical Materials Express, 2016, 6, 3455.	1.6	19
20	Effective modeling of PA-LCoS devices and application in data storage in photopolymers. , 2016, , .		0
21	Efficient split field FDTD analysis of third-order nonlinear materials in two-dimensionally periodic media. Proceedings of SPIE, 2016, , .	0.8	2
22	Multi-GPU and multi-CPU accelerated FDTD scheme for vibroacoustic applications. Computer Physics Communications, 2015, 191, 43-51.	3.0	6
23	Split-field finite-difference time-domain method for second-harmonic generation in two-dimensionally periodic structures. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 664.	0.9	5
24	Two diffusion photopolymer for sharp diffractive optical elements recording. Optics Letters, 2015, 40, 3221.	1.7	22
25	Beta Value Coupled Wave Theory for Nonslanted Reflection Gratings. Scientific World Journal, The, 2014, 2014, 1-7.	0.8	1
26	Influence of the photopolymer properties in the fabrication of diffractive optical elements. , 2014, , .		1
27	Model of low spatial frequency diffractive elements recorded in photopolymers during and after recording. Optical Materials, 2014, 38, 46-52.	1.7	5
28	Performance analysis of SSE and AVX instructions in multi-core CPUs and GPU computing on FDTD scheme for solid and fluid vibration problems. Journal of Supercomputing, 2014, 70, 514-526.	2.4	6
29	Influence of the set-up on the recording of diffractive optical elements into photopolymers. , 2014, , .		2
30	Accuracy analysis of simplified and rigorous numerical methods applied to binary nanopatterning gratings in non-paraxial domain. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 2245-2250.	0.9	4
31	Development of a unified FDTD-FEM library for electromagnetic analysis with CPU and GPU computing. Journal of Supercomputing, 2013, 64, 28-37.	2.4	6
32	Performance analysis of the FDTD method applied to holographic volume gratings: Multi-core CPU versus GPU computing. Computer Physics Communications, 2013, 184, 469-479.	3.0	11
33	Analysis of holographic reflection gratings recorded in polyvinyl alcohol/acrylamide photopolymer. Applied Optics, 2013, 52, 1581.	0.9	5
34	Acceleration of split-field finite difference time-domain method for anisotropic media by means of graphics processing unit computing. Optical Engineering, 2013, 53, 011005.	0.5	11
35	SPLIT-FIELD FINITE-DIFFERENCE TIME-DOMAIN SCHEME FOR KERR-TYPE NONLINEAR PERIODIC MEDIA. Progress in Electromagnetics Research, 2013, 134, 559-579.	1.6	9
36	Biophotopol: A Sustainable Photopolymer for Holographic Data Storage Applications. Materials, 2012, 5, 772-783.	1.3	31

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37	Volume Holograms in Photopolymers: Comparison between Analytical and Rigorous Theories. Materials, 2012, 5, 1373-1388.	1.3	16
38	Analysis of periodic anisotropic media by means of split-field FDTD method and GPU computing. , 2012, , .		5
39	Zero Spatial Frequency Limit: Method to Characterize Photopolymers as Optical Recording Material. Research Letters in Physics, 2012, 2012, 1-9.	0.2	3
40	Comparison of simplified theories in the analysis of the diffraction efficiency in surface-relief gratings. , 2012, , .		12
41	Analysis of PEA photopolymers at zero spatial frequency limit. Proceedings of SPIE, 2012, , .	0.8	1
42	Educational Software for Interference and Optical Diffraction Analysis in Fresnel and Fraunhofer Regions Based on MATLAB GUIs and the FDTD Method. IEEE Transactions on Education, 2012, 55, 118-125.	2.0	23
43	Analysis of the diffraction efficiency of reflection and transmission holographic gratings by means of a parallel FDTD approach. , 2011, , .		1
44	Comparison of photopolymers for optical data storage applications and relief diffractive optical elements recorded onto photopolymers. Proceedings of SPIE, 2011, , .	0.8	1
45	ANALYSIS OF REFLECTION GRATINGS BY MEANS OF A MATRIX METHOD APPROACH. Progress in Electromagnetics Research, 2011, 118, 167-183.	1.6	9
46	Performance improvement of high-thickness photopolymers for holographic data storage applications. Proceedings of SPIE, 2011, , .	0.8	1
47	Corrected coupled-wave theory for non-slanted reflection gratings. , 2011, , .		1
48	An experiment in heat conduction using hollow cylinders. European Journal of Physics, 2011, 32, 1065-1075.	0.3	6
49	Rigorous interference and diffraction analysis of diffractive optic elements using the finite-difference time-domain method. Computer Physics Communications, 2010, 181, 1963-1973.	3.0	21
50	Birefringence of cellotape: Jones representation and experimental analysis. European Journal of Physics, 2010, 31, 551-561.	0.3	20
51	Transference matrix method for non slanted holographic reflection gratings. Proceedings of SPIE, 2010, , .	0.8	1
52	Linear response deviations in photopolymers. Proceedings of SPIE, 2009, , .	0.8	0
53	Approximate solutions of a nonlinear oscillator typified as a mass attached to a stretched elastic wire by the homotopy perturbation method. Chaos, Solitons and Fractals, 2009, 39, 746-764.	2.5	28
54	Linear response deviations during recording of diffraction gratings in photopolymers. Optics Express, 2009, 17, 13193.	1.7	11

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55	Higher accuracy analytical approximations to a nonlinear oscillator with discontinuity by He's homotopy perturbation method. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 2010-2016.	0.9	30
56	Solution of the relativistic (an)harmonic oscillator using the harmonic balance method. Journal of Sound and Vibration, 2008, 311, 1447-1456.	2.1	17
57	Application of Heâ€™s homotopy perturbation method to conservative truly nonlinear oscillators. Chaos, Solitons and Fractals, 2008, 37, 770-780.	2.5	85
58	Analysis of multiplexed holograms stored in a thick PVA/AA photopolymer. Optics Communications, 2008, 281, 1480-1485.	1.0	12
59	New trends on photopolymers. Proceedings of SPIE, 2008, , .	0.8	0
60	Analysis of PVA/AA based photopolymers at the zero spatial frequency limit using interferometric methods. Applied Optics, 2008, 47, 2557.	2.1	19
61	Higher-order approximate solutions to the relativistic and Duffing-harmonic oscillators by modified He's homotopy methods. Physica Scripta, 2008, 77, 025004.	1.2	21
62	Real-time interferometric characterization of a PVA based photopolymer. , 2008, , .		0
63	Direct analysis of monomer diffusion times in polyvinyl/acrylamide materials. Applied Physics Letters, 2008, 92, .	1.5	30
64	Post-Buckling of a Cantilever Column: A More Accurate Linear Analysis of a Classical Nonlinear Problem. International Journal of Mechanical Engineering Education, 2007, 35, 293-304.	0.6	3
65	Accurate control of a liquid-crystal display to produce a homogenized Fourier transform for holographic memories. Optics Letters, 2007, 32, 2511.	1.7	14
66	Improved maximum uniformity and capacity of multiple holograms recorded in absorbent photopolymers. Optics Express, 2007, 15, 9308.	1.7	9
67	Real-time interferometric characterization of a polyvinyl alcohol based photopolymer at the zero spatial frequency limit. Applied Optics, 2007, 46, 7506.	2.1	23
68	Exact solution for the nonlinear pendulum. Revista Brasileira De Ensino De Fisica, 2007, 29, 645-648.	0.2	74
69	Analysis of monomer diffusion in depth in photopolymer materials. Optics Communications, 2007, 274, 43-49.	1.0	18
70	Pyrromethene dye and non-redox initiator system in a hydrophilic binder photopolymer. Optical Materials, 2007, 30, 227-230.	1.7	10
71	Asymptotic representations of the period for the nonlinear oscillator. Journal of Sound and Vibration, 2007, 299, 403-408.	2.1	17
72	Application of the harmonic balance method to a nonlinear oscillator typified by a mass attached to a stretched wire. Journal of Sound and Vibration, 2007, 302, 1018-1029.	2.1	88

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73	Comments on â€œinvestigation of the properties of the period for the nonlinear oscillator â€• Journal of Sound and Vibration, 2007, 303, 925-930.	2.1	14
74	Application of a modified He's homotopy perturbation method to obtain higher-order approximations of an force nonlinear oscillator. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 371, 421-426.	0.9	81
75	Application of the homotopy perturbation method to the nonlinear pendulum. European Journal of Physics, 2007, 28, 93-104.	0.3	71
76	Temporal response and first order volume changes during grating formation in photopolymers. Journal of Applied Physics, 2006, 99, 113105.	1.1	25
77	Analysis of the temporal effects on grating evolution in photopolymer. , 2006, , .		0
78	Analytical approximations for the period of a nonlinear pendulum. European Journal of Physics, 2006, 27, 539-551.	0.3	90
79	Effect of the glass substrate on the efficiency of the different orders that propagate in a transmission sinusoidal diffraction grating. Journal of Modern Optics, 2006, 53, 1403-1410.	0.6	0
80	3-dimensional characterization of thick grating formation in PVA/AA based photopolymer. Optics Express, 2006, 14, 5121.	1.7	29
81	<title>3D behaviour of photopolymers as holographic recording material</title>. , 2006, , .		1
82	<title>Examination of the temporal and kinetic effects in acrylamide based photopolymer using the nonlocal polymer driven diffusion model (NPDD)</title>. , 2006, 6252, 51.		1
83	3-dimensional analysis of holographic memories based on photopolymers using finite differences method. , 2006, 6187, 307.		0
84	<title>High thickness acrylamide photopolymer for peristrophic multiplexing</title>. , 2006, , .		0
85	Grating matrix method to describe a volume transmission diffraction grating. Optics Communications, 2006, 266, 122-128.	1.0	1
86	Effect of the incorporation of N,Nâ€²-methylene-bis-acrylamide on the multiplexing of holograms in a hydrophilic acrylamide photopolymer. Optics Communications, 2006, 268, 133-137.	1.0	6
87	<title>Analysis of amplitude and phase coupling in volume holography</title>. , 2006, 6252, 338.		0
88	Effects in reconstruction of diffraction gratings multiplexed in acrylamide photopolymers. , 2005, , .		0
89	Temporal and non-ideal behavior in photopolymers. , 2005, , .		3
90	Holographic optical elements for Bragg image processing. , 2005, , .		1

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91	Finite difference time domain method (FDTD) to predict the efficiencies of the different orders inside a volume grating. , 2005, , .		1
92	Holographic Characteristics of an Acrylamide/Bisacrylamide Photopolymer in 40â€“1000 ?m Thick Layers. Physica Scripta, 2005, , 66.	1.2	21
93	Analysis of Second and Third Diffracted Orders in Volume Diffraction Gratings Recorded on Photopolymers. Physica Scripta, 2005, , 58.	1.2	6
94	Analysis of Bragg Diffraction Filters Applied to Image Processing. Physica Scripta, 2005, , 54.	1.2	2
95	Maximum effective optical thickness of the gratings recorded in photopolymers. , 2005, , .		2
96	Diffusion parameters estimation of holographic memories based in PVA/acrylamide photopolymer. , 2005, , .		0
97	Numerical and Experimental Analysis of Large Deflections of Cantilever Beams Under a Combined Load. Physica Scripta, 2005, , 61.	1.2	29
98	High-efficiency volume holograms recording on acrylamide and N,Nâ€²methylene-bis-acrylamide photopolymer with pulsed laser. Journal of Modern Optics, 2005, 52, 1575-1584.	0.6	20
99	Clarifications to the paper â€œHolographic characteristics of a 1-mm-thick photopolymer to be used in holographic memoriesâ€• Applied Optics, 2005, 44, 1448.	2.1	3
100	Characterization of polyvinyl alcohol/acrylamide holographic memories with a first-harmonic diffusion model. Applied Optics, 2005, 44, 6205.	2.1	27
101	Holographic photopolymer materials: nonlocal polymerization-driven diffusion under nonideal kinetic conditions. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 407.	0.9	96
102	Physical and effective optical thickness of holographic diffraction gratings recorded in photopolymers. Optics Express, 2005, 13, 1939.	1.7	66
103	3 Dimensional analysis of holographic photopolymers based memories. Optics Express, 2005, 13, 3543.	1.7	50
104	Temporal analysis of grating formation in photopolymer using the nonlocal polymerization-driven diffusion model. Optics Express, 2005, 13, 6990.	1.7	103
105	Comparative study of bleaches applied to BB-640 plates. Journal of Optics, 2004, 6, 71-76.	1.5	0
106	Stabilization of volume gratings recorded in polyvinyl alcohol-acrylamide photopolymers with diffraction efficiencies higher than 90%. Journal of Modern Optics, 2004, 51, 491-503.	0.6	17
107	An Integrated Project for Teaching the Post-Buckling of a Slender Cantilever Bar. International Journal of Mechanical Engineering Education, 2004, 32, 78-92.	0.6	4
108	Stabilization of volume gratings recorded in polyvinyl alcohol-acrylamide photopolymers with diffraction efficiencies higher than 90%. Journal of Modern Optics, 2004, 51, 491-503.	0.6	10

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109	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. Optics Communications, 2004, 233, 311-322.	1.0	28
110	Thin and thick diffraction gratings: Thin matrix decomposition method. Optik, 2004, 115, 385-392.	1.4	0
111	Depth attenuated refractive index profiles in holographic gratings recorded in photopolymer materials. , 2004, 5456, 449.		0
112	Optimization of a PVA/acrylamide material for the recording of multiple diffraction gratings. , 2004, , .		2
113	Space-variant image processing with volume holography. , 2004, 5456, 315.		0
114	High-efficiency volume holograms recording on acrylamide and N,N'methylene-bis-acrylamide photopolymer with pulsed laser. , 2004, , .		1
115	Comparison of electromagnetic theories to predict the efficiencies of the different orders inside a volume grating. , 2004, , .		0
116	Nonlocal temporal behavior in photopolymers and its effect on grating formation. , 2004, , .		0
117	DeterminaciÃ³n de las constantes Ã³pticas y el espesor de materiales hologrÃ¡ficos. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 457-460.	0.9	1
118	Comparison between a thin matrix decomposition method and the rigorous coupled wave theory applied to volume diffraction gratings. Optik, 2003, 114, 529-534.	1.4	2
119	Optimization of a 1Âmm thick PVA/acrylamide recording material to obtain holographic memories: method of preparation and holographic properties. Applied Physics B: Lasers and Optics, 2003, 76, 851-857.	1.1	80
120	Overmodulation effects in volume holograms recorded on photopolymers. Optics Communications, 2003, 215, 263-269.	1.0	38
121	Characterization of a PVA/acrylamide photopolymer. Influence of a cross-linking monomer in the final characteristics of the hologram. Optics Communications, 2003, 224, 27-34.	1.0	38
122	Influence of the fringe visibility on the characteristics of holograms recorded in photopolymer material. Optik, 2003, 114, 401-406.	1.4	4
123	Diffusion-based model to predict the conservation of gratings recorded in poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 182	2.1	13
124	Holographic characteristics of a 1-mm-thick photopolymer to be used in holographic memories. Applied Optics, 2003, 42, 7008.	2.1	48
125	Edge-enhanced imaging with polyvinyl alcohol /acrylamide photopolymer gratings. Optics Letters, 2003, 28, 1510.	1.7	34
126	First-harmonic diffusion-based model applied to a polyvinyl-alcoholâ€“acrylamide-based photopolymer. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 2052.	0.9	50

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127	Temporal evolution of the angular response of a holographic diffraction grating in PVA/acrylamide photopolymer. Optics Express, 2003, 11, 181.	1.7	30
128	Angular responses of the first and second diffracted orders in transmission diffraction grating recorded on photopolymer material. Optics Express, 2003, 11, 1835.	1.7	47
129	Non-local polymerization driven diffusion based model: general dependence of the polymerization rate to the exposure intensity. Optics Express, 2003, 11, 1876.	1.7	16
130	An analysis of the classical Doppler effect. European Journal of Physics, 2003, 24, 497-505.	0.3	19
131	Three approaches to calculating the velocity profile of a laminar incompressible fluid flow in a hollow tube. American Journal of Physics, 2003, 71, 46-48.	0.3	1
132	Thick phase holographic gratings recorded on BB-640 and PFG-01 silver halide materials. Journal of Optics, 2003, 5, S183-S188.	1.5	5
133	Low spatial frequency characterization of holographic recording materials applied to correlation. , 2003, , .		4
134	Thick phase holographic gratings recorded on Agfa 8E75 HD, BB-640 and PFG-01 red sensitive silver halide materials. , 2003, , .		0
135	Holographic photopolymer materials with nonlocal and nonlinear response. , 2003, 5216, 127.		10
136	The influence of the procedure on the dynamic range of bleached silver halide emulsions. Journal of Modern Optics, 2003, 50, 1773-1789.	0.6	0
137	Experimental evidence of mixed gratings with a phase difference between the phase and amplitude grating in volume holograms. Optics Express, 2002, 10, 1374.	1.7	20
138	Mechanism of hologram formation in fixation-free rehalogenating bleaching processes. Applied Optics, 2002, 41, 4092.	2.1	2
139	Determination of the refractive index and thickness of holographic silver halide materials by use of polarized reflectances. Applied Optics, 2002, 41, 6802.	2.1	10
140	Large and small deflections of a cantilever beam. European Journal of Physics, 2002, 23, 371-379.	0.3	197
141	Mixed phase-amplitude holographic gratings recorded in bleached silver halide materials. Journal Physics D: Applied Physics, 2002, 35, 957-967.	1.3	14
142	Silver halide volume holograms on BB-640 plates: The influence of the developer in rehalogenating bleach techniques. Optik, 2001, 112, 349-357.	1.4	0
143	Effects of overmodulation in fixation-free rehalogenating bleached holograms. Applied Optics, 2001, 40, 3402.	2.1	7
144	Bleached silver halide volume holograms recorded on Slavich PFG-01 emulsion: The influence of the developer. Journal of Modern Optics, 2001, 48, 1479-1494.	0.6	2

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145	Theoretical and experimental analysis of overmodulation effects in volume holograms recorded on BB-640 emulsions. Journal of Optics, 2001, 3, 504-513.	1.5	21
146	Fixation-free bleached silver halide transmission holograms recorded on Slavich PFG-01 red sensitive plates. Journal of Modern Optics, 2001, 48, 1643-1655.	0.6	9
147	<title>Optimization of fixation-free rehalogenating bleach for BB-640 holographic plates</title>. , 2000, 4149, 91.		0
148	Fixation-free rehalogenating bleached reflection holograms recorded on BB-640 plates. Optics Communications, 2000, 182, 107-114.	1.0	6
149	The influence of the development in silver halide sensitized gelatin holograms derived from PFG-01 plates. Optics Communications, 2000, 173, 161-167.	1.0	10
150	Optimization of a fixation-free rehalogenating bleach for BB-640 holographic emulsion. Journal of Modern Optics, 2000, 47, 1671-1679.	0.6	11
151	Estudio y caracterizaciÃ³n de nuevas emulsiones de haluro de plata como materiales de registro hologrÃ¡fico. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2000, 39, 525-529.	0.9	0
152	<title>Silver-halide sensitized gelatin holograms from BB-640 plates</title>. , 1999, 3638, 106.		0
153	Silver halide sensitized gelatin holograms in Slavich PFG-01 red-sensitive emulsion. Journal of Modern Optics, 1999, 46, 1913-1925.	0.6	12
154	Silver halide sensitized gelatin derived from BB-640 holographic emulsion. Applied Optics, 1999, 38, 1348.	2.1	18
155	Analysis and elimination of boundary reflections in transmission holograms. Optics and Laser Technology, 1998, 30, 555-560.	2.2	5
156	Improved spatial frequency response in silver halide sensitized gelatin holograms. Optics Communications, 1998, 155, 241-244.	1.0	5
157	High-efficiency silver-halide sensitized gelatin holograms with low absorption and scatter. Journal of Modern Optics, 1998, 45, 1985-1992.	0.6	22