

# Cristian Neipp

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7816534/publications.pdf>

Version: 2024-02-01

158  
papers

2,557  
citations

201674

27  
h-index

233421

45  
g-index

162  
all docs

162  
docs citations

162  
times ranked

971  
citing authors

#	ARTICLE	IF	CITATIONS
1	Large and small deflections of a cantilever beam. <i>European Journal of Physics</i> , 2002, 23, 371-379.	0.6	197
2	Temporal analysis of grating formation in photopolymer using the nonlocal polymerization-driven diffusion model. <i>Optics Express</i> , 2005, 13, 6990.	3.4	103
3	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.	2.1	96
4	Analytical approximations for the period of a nonlinear pendulum. <i>European Journal of Physics</i> , 2006, 27, 539-551.	0.6	90
5	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	88
6	Application of He's homotopy perturbation method to conservative truly nonlinear oscillators. <i>Chaos, Solitons and Fractals</i> , 2008, 37, 770-780.	5.1	85
7	Application of a modified He's homotopy perturbation method to obtain higher-order approximations of an force nonlinear oscillator. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 371, 421-426.	2.1	81
8	Optimization of a 1mm 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.	2.2	80
9	Exact solution for the nonlinear pendulum. <i>Revista Brasileira De Ensino De Fisica</i> , 2007, 29, 645-648.	0.2	74
10	Application of the homotopy perturbation method to the nonlinear pendulum. <i>European Journal of Physics</i> , 2007, 28, 93-104.	0.6	71
11	Physical and effective optical thickness of holographic diffraction gratings recorded in photopolymers. <i>Optics Express</i> , 2005, 13, 1939.	3.4	66
12	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.	2.1	50
13	3 Dimensional analysis of holographic photopolymers based memories. <i>Optics Express</i> , 2005, 13, 3543.	3.4	50
14	Holographic characteristics of a 1-mm-thick photopolymer to be used in holographic memories. <i>Applied Optics</i> , 2003, 42, 7008.	2.1	48
15	Angular responses of the first and second diffracted orders in transmission diffraction grating recorded on photopolymer material. <i>Optics Express</i> , 2003, 11, 1835.	3.4	47
16	Overmodulation effects in volume holograms recorded on photopolymers. <i>Optics Communications</i> , 2003, 215, 263-269.	2.1	38
17	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.	2.1	38
18	Holographic waveguides in photopolymers. <i>Optics Express</i> , 2019, 27, 827.	3.4	36

#	ARTICLE	IF	CITATIONS
19	Edge-enhanced imaging with polyvinyl alcohol /acrylamide photopolymer gratings. Optics Letters, 2003, 28, 1510.	3.3	34
20	Biophotopol: A Sustainable Photopolymer for Holographic Data Storage Applications. Materials, 2012, 5, 772-783.	2.9	31
21	Temporal evolution of the angular response of a holographic diffraction grating in PVA/acrylamide photopolymer. Optics Express, 2003, 11, 181.	3.4	30
22	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.	2.1	30
23	Direct analysis of monomer diffusion times in polyvinyl/acrylamide materials. Applied Physics Letters, 2008, 92, .	3.3	30
24	Numerical and Experimental Analysis of Large Deflections of Cantilever Beams Under a Combined Load. Physica Scripta, 2005, , 61.	2.5	29
25	3-dimensional characterization of thick grating formation in PVA/AA based photopolymer. Optics Express, 2006, 14, 5121.	3.4	29
26	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.	2.1	28
27	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.	5.1	28
28	Characterization of polyvinyl alcohol/acrylamide holographic memories with a first-harmonic diffusion model. Applied Optics, 2005, 44, 6205.	2.1	27
29	Temporal response and first order volume changes during grating formation in photopolymers. Journal of Applied Physics, 2006, 99, 113105.	2.5	25
30	Real-time interferometric characterization of a polyvinyl alcohol based photopolymer at the zero spatial frequency limit. Applied Optics, 2007, 46, 7506.	2.1	23
31	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.	2.4	23
32	High-efficiency silver-halide sensitized gelatin holograms with low absorption and scatter. Journal of Modern Optics, 1998, 45, 1985-1992.	1.3	22
33	Two diffusion photopolymer for sharp diffractive optical elements recording. Optics Letters, 2015, 40, 3221.	3.3	22
34	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
35	Holographic Characteristics of an Acrylamide/Bisacrylamide Photopolymer in 40µm Thick Layers. Physica Scripta, 2005, , 66.	2.5	21
36	Higher-order approximate solutions to the relativistic and Duffing-harmonic oscillators by modified He's homotopy methods. Physica Scripta, 2008, 77, 025004.	2.5	21

#	ARTICLE	IF	CITATIONS
37	Rigorous interference and diffraction analysis of diffractive optic elements using the finite-difference time-domain method. <i>Computer Physics Communications</i> , 2010, 181, 1963-1973.	7.5	21
38	Experimental evidence of mixed gratings with a phase difference between the phase and amplitude grating in volume holograms. <i>Optics Express</i> , 2002, 10, 1374.	3.4	20
39	High-efficiency volume holograms recording on acrylamide and N,N-dimethyl-methylene-bis-acrylamide photopolymer with pulsed laser. <i>Journal of Modern Optics</i> , 2005, 52, 1575-1584.	1.3	20
40	Birefringence of cello tape: Jones representation and experimental analysis. <i>European Journal of Physics</i> , 2010, 31, 551-561.	0.6	20
41	An analysis of the classical Doppler effect. <i>European Journal of Physics</i> , 2003, 24, 497-505.	0.6	19
42	Analysis of PVA/AA based photopolymers at the zero spatial frequency limit using interferometric methods. <i>Applied Optics</i> , 2008, 47, 2557.	2.1	19
43	Dimensional changes in slanted diffraction gratings recorded in photopolymers. <i>Optical Materials Express</i> , 2016, 6, 3455.	3.0	19
44	Silver halide sensitized gelatin derived from BB-640 holographic emulsion. <i>Applied Optics</i> , 1999, 38, 1348.	2.1	18
45	Analysis of monomer diffusion in depth in photopolymer materials. <i>Optics Communications</i> , 2007, 274, 43-49.	2.1	18
46	Optimization of Photopolymer Materials for the Fabrication of a Holographic Waveguide. <i>Polymers</i> , 2017, 9, 395.	4.5	18
47	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.	1.3	17
48	Asymptotic representations of the period for the nonlinear oscillator. <i>Journal of Sound and Vibration</i> , 2007, 299, 403-408.	3.9	17
49	Solution of the relativistic (an)harmonic oscillator using the harmonic balance method. <i>Journal of Sound and Vibration</i> , 2008, 311, 1447-1456.	3.9	17
50	Holographic Lenses in an Environment-Friendly Photopolymer. <i>Polymers</i> , 2018, 10, 302.	4.5	17
51	Non-local polymerization driven diffusion based model: general dependence of the polymerization rate to the exposure intensity. <i>Optics Express</i> , 2003, 11, 1876.	3.4	16
52	Volume Holograms in Photopolymers: Comparison between Analytical and Rigorous Theories. <i>Materials</i> , 2012, 5, 1373-1388.	2.9	16
53	Analysis of the Imaging Characteristics of Holographic Waveguides Recorded in Photopolymers. <i>Polymers</i> , 2020, 12, 1485.	4.5	15
54	Mixed phase-amplitude holographic gratings recorded in bleached silver halide materials. <i>Journal Physics D: Applied Physics</i> , 2002, 35, 957-967.	2.8	14

#	ARTICLE	IF	CITATIONS
55	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	14
56	Comments on "Investigation of the properties of the period for the nonlinear oscillator", <i>Journal of Sound and Vibration</i> , 2007, 303, 925-930.	3.9	14
57	Diffusion-based model to predict the conservation of gratings recorded in poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Oyerlock 10 Tf 50 662	2.1	13
58	Silver halide sensitized gelatin holograms in Slavich PFG-01 red-sensitive emulsion. <i>Journal of Modern Optics</i> , 1999, 46, 1913-1925.	1.3	12
59	Analysis of multiplexed holograms stored in a thick PVA/AA photopolymer. <i>Optics Communications</i> , 2008, 281, 1480-1485.	2.1	12
60	Comparison of simplified theories in the analysis of the diffraction efficiency in surface-relief gratings. , 2012, , .		12
61	Optimization of a fixation-free rehalogenating bleach for BB-640 holographic emulsion. <i>Journal of Modern Optics</i> , 2000, 47, 1671-1679.	1.3	11
62	Linear response deviations during recording of diffraction gratings in photopolymers. <i>Optics Express</i> , 2009, 17, 13193.	3.4	11
63	Performance analysis of the FDTD method applied to holographic volume gratings: Multi-core CPU versus GPU computing. <i>Computer Physics Communications</i> , 2013, 184, 469-479.	7.5	11
64	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.	1.0	11
65	The influence of the development in silver halide sensitized gelatin holograms derived from PFG-01 plates. <i>Optics Communications</i> , 2000, 173, 161-167.	2.1	10
66	Determination of the refractive index and thickness of holographic silver halide materials by use of polarized reflectances. <i>Applied Optics</i> , 2002, 41, 6802.	2.1	10
67	Holographic photopolymer materials with nonlocal and nonlinear response. , 2003, 5216, 127.		10
68	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.	1.3	10
69	Pyromethene dye and non-redox initiator system in a hydrophilic binder photopolymer. <i>Optical Materials</i> , 2007, 30, 227-230.	3.6	10
70	Fixation-free bleached silver halide transmission holograms recorded on Slavich PFG-01 red sensitive plates. <i>Journal of Modern Optics</i> , 2001, 48, 1643-1655.	1.3	9
71	Improved maximum uniformity and capacity of multiple holograms recorded in absorbent photopolymers. <i>Optics Express</i> , 2007, 15, 9308.	3.4	9
72	ANALYSIS OF REFLECTION GRATINGS BY MEANS OF A MATRIX METHOD APPROACH. <i>Progress in Electromagnetics Research</i> , 2011, 118, 167-183.	4.4	9

#	ARTICLE	IF	CITATIONS
73	SPLIT-FIELD FINITE-DIFFERENCE TIME-DOMAIN SCHEME FOR KERR-TYPE NONLINEAR PERIODIC MEDIA. Progress in Electromagnetics Research, 2013, 134, 559-579.	4.4	9
74	Complex Diffractive Optical Elements Stored in Photopolymers. Polymers, 2019, 11, 1920.	4.5	8
75	Effects of overmodulation in fixation-free rehalogenating bleached holograms. Applied Optics, 2001, 40, 3402.	2.1	7
76	Analytical modeling of blazed gratings on two-dimensional pixelated liquid crystal on silicon devices. Optical Engineering, 2020, 59, 1.	1.0	7
77	Fixation-free rehalogenating bleached reflection holograms recorded on BB-640 plates. Optics Communications, 2000, 182, 107-114.	2.1	6
78	Analysis of Second and Third Diffracted Orders in Volume Diffraction Gratings Recorded on Photopolymers. Physica Scripta, 2005, , 58.	2.5	6
79	Effect of the incorporation of N,N- $\epsilon$ -methylene-bis-acrylamide on the multiplexing of holograms in a hydrophilic acrylamide photopolymer. Optics Communications, 2006, 268, 133-137.	2.1	6
80	An experiment in heat conduction using hollow cylinders. European Journal of Physics, 2011, 32, 1065-1075.	0.6	6
81	Development of a unified FDTD-FEM library for electromagnetic analysis with CPU and GPU computing. Journal of Supercomputing, 2013, 64, 28-37.	3.6	6
82	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.	3.6	6
83	Multi-GPU and multi-CPU accelerated FDTD scheme for vibroacoustic applications. Computer Physics Communications, 2015, 191, 43-51.	7.5	6
84	Tunable Waveguides Couplers Based on HPDLC for See-Through Applications. Polymers, 2021, 13, 1858.	4.5	6
85	Analysis and elimination of boundary reflections in transmission holograms. Optics and Laser Technology, 1998, 30, 555-560.	4.6	5
86	Improved spatial frequency response in silver halide sensitized gelatin holograms. Optics Communications, 1998, 155, 241-244.	2.1	5
87	Thick phase holographic gratings recorded on BB-640 and PFG-01 silver halide materials. Journal of Optics, 2003, 5, S183-S188.	1.5	5
88	Analysis of periodic anisotropic media by means of split-field FDTD method and GPU computing. , 2012, , .		5
89	Analysis of holographic reflection gratings recorded in polyvinyl alcohol/acrylamide photopolymer. Applied Optics, 2013, 52, 1581.	1.8	5
90	Model of low spatial frequency diffractive elements recorded in photopolymers during and after recording. Optical Materials, 2014, 38, 46-52.	3.6	5

#	ARTICLE	IF	CITATIONS
91	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.	2.1	5
92	Simplified physical modeling of parallel-aligned liquid crystal devices at highly non-linear tilt angle profiles. <i>Optics Express</i> , 2018, 26, 12723.	3.4	5
93	Influence of the fringe visibility on the characteristics of holograms recorded in photopolymer material. <i>Optik</i> , 2003, 114, 401-406.	2.9	4
94	Low spatial frequency characterization of holographic recording materials applied to correlation. , 2003, , .		4
95	An Integrated Project for Teaching the Post-Buckling of a Slender Cantilever Bar. <i>International Journal of Mechanical Engineering Education</i> , 2004, 32, 78-92.	1.0	4
96	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.	2.1	4
97	Numerical Analysis of H-PDLC Using the Split-Field Finite-Difference Time-Domain Method. <i>Polymers</i> , 2018, 10, 465.	4.5	4
98	Accurate, Efficient and Rigorous Numerical Analysis of 3D H-PDLC Gratings. <i>Materials</i> , 2020, 13, 3725.	2.9	4
99	Polarimetric analysis of cross-talk phenomena induced by the pixelation in PA-LCoS devices. <i>Optics and Laser Technology</i> , 2022, 152, 108125.	4.6	4
100	Temporal and non-ideal behavior in photopolymers. , 2005, , .		3
101	Clarifications to the paper "Holographic characteristics of a 1-mm-thick photopolymer to be used in holographic memories" Applied Optics, 2005, 44, 1448.	2.1	3
102	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.	1.0	3
103	Zero Spatial Frequency Limit: Method to Characterize Photopolymers as Optical Recording Material. <i>Research Letters in Physics</i> , 2012, 2012, 1-9.	0.2	3
104	Bleached silver halide volume holograms recorded on Slavich PFG-01 emulsion: The influence of the developer. <i>Journal of Modern Optics</i> , 2001, 48, 1479-1494.	1.3	2
105	Mechanism of hologram formation in fixation-free rehalogenating bleaching processes. <i>Applied Optics</i> , 2002, 41, 4092.	2.1	2
106	Comparison between a thin matrix decomposition method and the rigorous coupled wave theory applied to volume diffraction gratings. <i>Optik</i> , 2003, 114, 529-534.	2.9	2
107	Optimization of a PVA/acrylamide material for the recording of multiple diffraction gratings. , 2004, , .		2
108	Analysis of Bragg Diffraction Filters Applied to Image Processing. <i>Physica Scripta</i> , 2005, , 54.	2.5	2

#	ARTICLE	IF	CITATIONS
109	Maximum effective optical thickness of the gratings recorded in photopolymers. , 2005, , .		2
110	Influence of the set-up on the recording of diffractive optical elements into photopolymers. , 2014, , .		2
111	Efficient split field FDTD analysis of third-order nonlinear materials in two-dimensionally periodic media. Proceedings of SPIE, 2016, , .	0.8	2
112	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.	0.7	1
113	High-efficiency volume holograms recording on acrylamide and N,N'methylene-bis-acrylamide photopolymer with pulsed laser. , 2004, , .		1
114	Holographic optical elements for Bragg image processing. , 2005, , .		1
115	Finite difference time domain method (FDTD) to predict the efficiencies of the different orders inside a volume grating. , 2005, , .		1
116	<title>3D behaviour of photopolymers as holographic recording material</title>. , 2006, , .		1
117	<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
118	Grating matrix method to describe a volume transmission diffraction grating. Optics Communications, 2006, 266, 122-128.	2.1	1
119	Transference matrix method for non slanted holographic reflection gratings. Proceedings of SPIE, 2010, , .	0.8	1
120	Analysis of the diffraction efficiency of reflection and transmission holographic gratings by means of a parallel FDTD approach. , 2011, , .		1
121	Comparison of photopolymers for optical data storage applications and relief diffractive optical elements recorded onto photopolymers. Proceedings of SPIE, 2011, , .	0.8	1
122	Performance improvement of high-thickness photopolymers for holographic data storage applications. Proceedings of SPIE, 2011, , .	0.8	1
123	Corrected coupled-wave theory for non-slanted reflection gratings. , 2011, , .		1
124	Analysis of PEA photopolymers at zero spatial frequency limit. Proceedings of SPIE, 2012, , .	0.8	1
125	Beta Value Coupled Wave Theory for Nonslanted Reflection Gratings. Scientific World Journal, The, 2014, 2014, 1-7.	2.1	1
126	Influence of the photopolymer properties in the fabrication of diffractive optical elements. , 2014, , .		1

#	ARTICLE	IF	CITATIONS
127	Comment on "Application of Fresnel diffraction to nondestructive measurement of the refractive index of optical fibers". Optical Engineering, 2020, 59, 1.	1.0	1
128	Determinación de las constantes ópticas y el espesor de materiales holográficos. Boletín De La Sociedad Española De Cerámica Y Vidrio, 2004, 43, 457-460.	1.9	1
129	3-dimensional modelling of the DOEs formation in PVA/AA photopolymers. , 2020, , .		1
130	Precise-Integration Time-Domain Formulation for Optical Periodic Media. Materials, 2021, 14, 7896.	2.9	1
131	<title>Silver-halide sensitized gelatin holograms from BB-640 plates</title>. , 1999, 3638, 106.		0
132	<title>Optimization of fixation-free rehalogenating bleach for BB-640 holographic plates</title>. , 2000, 4149, 91.		0
133	Silver halide volume holograms on BB-640 plates: The influence of the developer in rehalogenating bleach techniques. Optik, 2001, 112, 349-357.	2.9	0
134	Thick phase holographic gratings recorded on Agfa 8E75 HD, BB-640 and PFG-01 red sensitive silver halide materials. , 2003, , .		0
135	Comparative study of bleaches applied to BB-640 plates. Journal of Optics, 2004, 6, 71-76.	1.5	0
136	Thin and thick diffraction gratings: Thin matrix decomposition method. Optik, 2004, 115, 385-392.	2.9	0
137	Depth attenuated refractive index profiles in holographic gratings recorded in photopolymer materials. , 2004, 5456, 449.		0
138	Space-variant image processing with volume holography. , 2004, 5456, 315.		0
139	Comparison of electromagnetic theories to predict the efficiencies of the different orders inside a volume grating. , 2004, , .		0
140	Nonlocal temporal behavior in photopolymers and its effect on grating formation. , 2004, , .		0
141	Effects in reconstruction of diffraction gratings multiplexed in acrylamide photopolymers. , 2005, , .		0
142	Diffusion parameters estimation of holographic memories based in PVA/acrylamide photopolymer. , 2005, , .		0
143	Analysis of the temporal effects on grating evolution in photopolymer. , 2006, , .		0
144	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.	1.3	0

#	ARTICLE	IF	CITATIONS
145	3-dimensional analysis of holographic memories based on photopolymers using finite differences method. , 2006, 6187, 307.		0
146	<title>High thickness acrylamide photopolymer for peristrophic multiplexing</title>. , 2006, , .		0
147	<title>Analysis of amplitude and phase coupling in volume holography</title>. , 2006, 6252, 338.		0
148	New trends on photopolymers. Proceedings of SPIE, 2008, , .	0.8	0
149	Real-time interferometric characterization of a PVA based photopolymer. , 2008, , .		0
150	Linear response deviations in photopolymers. Proceedings of SPIE, 2009, , .	0.8	0
151	Effective modeling of PA-LCoS devices and application in data storage in photopolymers. , 2016, , .		0
152	Validation of Fresnelâ€“Kirchhoff Integral Method for the Study of Volume Dielectric Bodies. Applied Sciences (Switzerland), 2021, 11, 3800.	2.5	0
153	Estudio y caracterizaci3n de nuevas emulsiones de haluro de plata como materiales de registro hologr3fico. Boletín De La Sociedad Espanola De Ceramica Y Vidrio, 2000, 39, 525-529.	1.9	0
154	The influence of the procedure on the dynamic range of bleached silver halide emulsions. Journal of Modern Optics, 2003, 50, 1773-1789.	1.3	0
155	Diffraction lenses in biocompatible photopolymers using LCoS. , 2017, , .		0
156	Anamorphic characterization of a PA-LCoS based holographic data storage system. , 2018, , .		0
157	Study of the imaging characteristics of holographic waveguides. , 2019, , .		0
158	Angular responses of the first diffracted order in over-modulated volume diffraction gratings. Journal of Modern Optics, 2004, 51, 1149-1162.	1.3	0