

# Izabela G Naydenova

## List of Publications by Citations

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85  
papers

1,633  
citations

23  
h-index

37  
g-index

101  
ext. papers

1,908  
ext. citations

4.3  
avg, IF

4.65  
L-index

#	Paper	IF	Citations
85	Holographic sensors: three-dimensional analyte-sensitive nanostructures and their applications. <i>Chemical Reviews</i> , <b>2014</b> , 114, 10654-96	68.1	133
84	Photonic hydrogel sensors. <i>Biotechnology Advances</i> , <b>2016</b> , 34, 250-71	17.8	120
83	Progress in zeolite synthesis promotes advanced applications. <i>Microporous and Mesoporous Materials</i> , <b>2014</b> , 189, 11-21	5.3	115
82	A visual indication of environmental humidity using a color changing hologram recorded in a self-developing photopolymer. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 031109	3.4	80
81	Photopolymerizable nanocomposites for holographic recording and sensor application. <i>Applied Optics</i> , <b>2010</b> , 49, 3652-60	0.2	63
80	Investigation of the diffusion processes in a self-processing acrylamide-based photopolymer system. <i>Applied Optics</i> , <b>2004</b> , 43, 2900-5	1.7	59
79	Characterisation of the humidity and temperature responses of a reflection hologram recorded in acrylamide-based photopolymer. <i>Sensors and Actuators B: Chemical</i> , <b>2009</b> , 139, 35-38	8.5	55
78	Distance-dependent activation energies for hole injection from protonated 9-amino-6-chloro-2-methoxyacridine into duplex DNA. <i>Journal of the American Chemical Society</i> , <b>2002</b> , 124, 2422-3	16.4	54
77	Using acrylamide-based photopolymers for fabrication of holographic optical elements in solar energy applications. <i>Applied Optics</i> , <b>2014</b> , 53, 1343-53	1.7	53
76	Dynamics of Hole Trapping by G, GG, and GGG in DNA We thank Joshua Jortner, Notker Rösch, and Alexander Voityuk for stimulating discussions and critical reading of the manuscript. W.B.D. greatly appreciates a postdoc fellowship from the Alexander von Humboldt Foundation. Financial support from the Volkswagenstiftung is gratefully acknowledged. <i>Angewandte Chemie - International</i>	16.4	53
75	Two-way diffusion model for short-exposure holographic grating formation in acrylamide-based photopolymer. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2010</b> , 27, 197	1.7	51
74	Reactive oxygen species mediated DNA damage in human lung alveolar epithelial (A549) cells from exposure to non-cytotoxic MFI-type zeolite nanoparticles. <i>Toxicology Letters</i> , <b>2012</b> , 215, 151-60	4.4	39
73	Color-Selective 2.5D Holograms on Large-Area Flexible Substrates for Sensing and Multilevel Security. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 1589-1600	8.1	38
72	Holographic patterning of acrylamide-based photopolymer surface. <i>Optics Express</i> , <b>2005</b> , 13, 4878-89	3.3	37
71	Acrylamide-based photopolymer for microholographic data storage. <i>Optical Materials</i> , <b>2006</b> , 28, 1329-1333	3.3	35
70	Characterization of an acrylamide-based photopolymer for data storage utilizing holographic angular multiplexing. <i>Journal of Optics</i> , <b>2005</b> , 7, 255-260		34
69	Light-induced optical activity in optically ordered amorphous side-chain azobenzene containing polymer. <i>Journal of Modern Optics</i> , <b>2000</b> , 47, 861-867	1.1	32

68	Optical Properties of Photopolymer Layers Doped with Aluminophosphate Nanocrystals. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 16767-16775	3.8	31
67	Hybrid Sensors Fabricated by Inkjet Printing and Holographic Patterning. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 6097-6101	9.6	28
66	Humidity and temperature effect on properties of transmission gratings recorded in PVA/AA-based photopolymer layers. <i>Journal of Optics (United Kingdom)</i> , <b>2013</b> , 15, 105301	1.7	27
65	Study of the shrinkage caused by holographic grating formation in acrylamide based photopolymer film. <i>Optics Express</i> , <b>2011</b> , 19, 13395-404	3.3	26
64	Raman spectroscopy for the characterization of the polymerization rate in an acrylamide-based photopolymer. <i>Applied Optics</i> , <b>2008</b> , 47, 206-12	1.7	23
63	Method for characterization of diffusion properties of photopolymerisable systems. <i>Optics Express</i> , <b>2008</b> , 16, 8487-97	3.3	23
62	Mechanism of multiple grating formation in high-energy recording of holographic sensors. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 261106	3.4	19
61	Nanozeolites doped photopolymer layers with reduced shrinkage. <i>Optics Express</i> , <b>2011</b> , 19, 25786-91	3.3	19
60	Self-processing photopolymer materials for versatile design and fabrication of holographic sensors and interactive holograms. <i>Applied Optics</i> , <b>2018</b> , 57, E173-E183	1.7	17
59	Electronic speckle pattern shearing interferometer with a photopolymer holographic grating. <i>Applied Optics</i> , <b>2004</b> , 43, 2439-42	1.7	17
58	Investigation of the sensitivity to humidity of an acrylamide-based photopolymer containing N-phenylglycine as a photoinitiator. <i>Optical Materials</i> , <b>2014</b> , 37, 810-815	3.3	16
57	Humidity and temperature induced changes in the diffraction efficiency and the Bragg angle of slanted photopolymer-based holographic gratings. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 239, 776-785	8.5	16
56	Development of a panchromatic acrylamide-based photopolymer for multicolor reflection holography. <i>Applied Optics</i> , <b>2010</b> , 49, 1400-5	0.2	16
55	Effect of glycerol on a diacetone acrylamide-based holographic photopolymer material. <i>Applied Optics</i> , <b>2013</b> , 52, 489-94	1.7	15
54	Electro-optical switching of liquid crystal diffraction gratings by using surface relief effect in the photopolymer. <i>Optics Communications</i> , <b>2007</b> , 273, 367-369	2	14
53	Development and testing of low spatial frequency holographic concentrator elements for collection of solar energy. <i>Solar Energy</i> , <b>2017</b> , 155, 103-109	6.8	13
52	N-isopropylacrylamide-based photopolymer for holographic recording of thermosensitive transmission and reflection gratings. <i>Applied Optics</i> , <b>2017</b> , 56, 6348-6356	1.7	13
51	Shrinkage during holographic recording in photopolymer films determined by holographic interferometry. <i>Applied Optics</i> , <b>2013</b> , 52, 8519-27	1.7	13

50	Serialized holography for brand protection and authentication. <i>Applied Optics</i> , <b>2018</b> , 57, E131-E137	1.7	13
49	Properties of methylene blue in the presence of zeolite nanoparticles. <i>New Journal of Chemistry</i> , <b>2016</b> , 40, 4277-4284	3.6	12
48	Light-induced redistribution of Si-MFI zeolite nanoparticles in acrylamide-based photopolymer holographic gratings. <i>Journal of Optics</i> , <b>2009</b> , 11, 034004		12
47	Monolithically integrated all-optical gate switch using intersubband transition in InGaAs/AlAsSb coupled double quantum wells. <i>Optics Express</i> , <b>2011</b> , 19, 13386-94	3.3	11
46	Studies of shrinkage as a result of holographic recording in acrylamide-based photopolymer film. <i>Applied Physics A: Materials Science and Processing</i> , <b>2011</b> , 104, 899-902	2.6	11
45	Technique for characterization of dimensional changes in slanted holographic gratings by monitoring the angular selectivity profile. <i>Optics Letters</i> , <b>2008</b> , 33, 1981-3	3	11
44	A Comparative Cytotoxic Evaluation of Acrylamide and Diacetone Acrylamide to Investigate Their Suitability for Holographic Photopolymer Formulations. <i>International Journal of Polymer Science</i> , <b>2013</b> , 2013, 1-6	2.4	10
43	Implementation of phase-only modulation utilizing a twisted nematic liquid crystal spatial light modulator. <i>Journal of Optics</i> , <b>2008</b> , 10, 085007		10
42	LTL type nanozeolites utilized in surface photonics structures for environmental sensors. <i>Microporous and Mesoporous Materials</i> , <b>2018</b> , 261, 268-274	5.3	10
41	Theoretical modeling and design of photonic structures in zeolite nanocomposites for gas sensing. Part I: surface relief gratings. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2017</b> , 34, 2110-2119	1.8	9
40	Diffractive Optical Elements with a Large Angle of Operation Recorded in Acrylamide Based Photopolymer on Flexible Substrates. <i>International Journal of Polymer Science</i> , <b>2014</b> , 2014, 1-7	2.4	9
39	Photopolymer diffractive optical elements in electronic speckle pattern shearing interferometry. <i>Optics and Lasers in Engineering</i> , <b>2006</b> , 44, 965-974	4.6	9
38	Theoretical modeling of the effect of polymer chain immobilization rates on holographic recording in photopolymers. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2016</b> , 33, 920-9	1.8	8
37	Theoretical modeling and design of photonic structures in zeolite nanocomposites for gas sensing. Part II: volume gratings. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2018</b> , 35, 12-19	1.8	8
36	Photonic Materials for Holographic Sensing. <i>Springer Series in Materials Science</i> , <b>2016</b> , 315-359	0.9	7
35	Development of a photopolymer holographic lens for collimation of light from a green light-emitting diode. <i>Applied Optics</i> , <b>2018</b> , 57, E163-E172	1.7	7
34	Application of phase shifting electronic speckle pattern interferometry in studies of photoinduced shrinkage of photopolymer layers. <i>Optics Express</i> , <b>2017</b> , 25, 9647-9653	3.3	6
33	Holographic recording in acrylamide photopolymers: thickness limitations. <i>Applied Optics</i> , <b>2009</b> , 48, 2642-2648		6

32	Investigation of the assessment of low degree (. <i>Physica Medica</i> , <b>2019</b> , 65, 209-218	2.7	5
31	Holographic beam-shaping diffractive diffusers fabricated by using controlled laser speckle. <i>Optics Express</i> , <b>2018</b> , 26, 8916-8922	3.3	5
30	Nanoparticle Doped Photopolymers for Holographic Applications <b>2009</b> , 559-589		5
29	Development and characterisation of a bath-based vertical blackbody cavity calibration source for the range 0°C to 150 °C. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2017</b> , 106, 121-127	4.6	4
28	Holographically Recorded Low Spatial Frequency Volume Bragg Gratings and Holographic Optical Elements <b>2017</b> ,		4
27	Stacked volume holographic gratings for extending the operational wavelength range in LED and solar applications. <i>Applied Optics</i> , <b>2020</b> , 59, 2569-2579	1.7	4
26	Polyvinyl alcohol cryogel based vessel mimicking material for modelling the progression of atherosclerosis. <i>Physica Medica</i> , <b>2020</b> , 69, 1-8	2.7	4
25	Modified Surface Relief Layer Created by Holographic Lithography: Application to Selective Sodium and Potassium Sensing. <i>Sensors</i> , <b>2019</b> , 19,	3.8	3
24	In-Situ Ellipsometric Study of the Optical Properties of LTL-Doped Thin Film Sensors for Copper(II) Ion Detection. <i>Coatings</i> , <b>2020</b> , 10, 423	2.9	3
23	Determination of threshold exposure and intensity for recording holograms in thick green-sensitive acrylamide-based photopolymer. <i>Applied Optics</i> , <b>2010</b> , 49, 5276-83	0.2	3
22	Two way diffusion model for the recording mechanism in a self developing dry acrylamide photopolymer <b>2006</b> ,		3
21	Holographic Sensors <b>2020</b> , 165-190		3
20	Water Resistant Cellulose Acetate Based Photopolymer for Recording of Volume Phase Holograms. <i>Photonics</i> , <b>2021</b> , 8, 329	2.2	3
19	Study of the Effect of Methyldiethanolamine Initiator on the Recording Properties of Acrylamide Based Photopolymer. <i>Polymers</i> , <b>2020</b> , 12,	4.5	2
18	Investigation of polymerization rate in an acrylamide-based photopolymer using Raman spectroscopy <b>2005</b> , 5826, 75		2
17	Cantilever-Based Sensor Utilizing a Diffractive Optical Element with High Sensitivity to Relative Humidity. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
16	Development and Testing of a Dual-Wavelength Sensitive Photopolymer Layer for Applications in Stacking of HOE Lenses. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 5564	2.6	2
15	Humidity and temperature response of photopolymer-based holographic gratings <b>2015</b> ,		1

14	Research on Holographic Sensors and Novel Photopolymers at the Centre for Industrial and Engineering Optics <b>2013</b> ,		1
13	Fabrication of switchable liquid crystal devices using surface relief gratings in photopolymer. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2009</b> , 20, 198-201	2.1	1
12	Simple electronic speckle pattern shearing interferometer with a holographic grating as a shearing element <b>2005</b> , 5962, 669		1
11	Development of sensitive holographic devices for physiological metal ion detection <b>2017</b> ,		1
10	Compositional Changes for Reduction of Polymerisation-Induced Shrinkage in Holographic Photopolymers. <i>Advances in Materials Science and Engineering</i> , <b>2016</b> , 2016, 1-11	1.5	1
9	Recording of high efficiency volume Bragg gratings in a photopolymer using diffraction from very weak pre-recorded gratings. <i>Optical Data Processing and Storage</i> , <b>2016</b> , 2,		1
8	Replay at optical communications wavelengths of holographic gratings recorded in the visible <b>2006</b> , 6252, 31		0
7	Synthesis of Fast Curing, Water-Resistant and Photopolymerizable Glass for Recording of Holographic Structures by One- and Two-Photon Lithography. <i>Advanced Optical Materials</i> , 2102089	8.1	0
6	Birefringent optofluidic gratings. <i>Optics Express</i> , <b>2020</b> , 28, 31729-31742	3.3	0
5	Temperature-Sensitive Holograms with Switchable Memory. <i>Advanced Photonics Research</i> , <b>2021</b> , 2, 2100062	1.62	0
4	A novel calibration device for quality assurance of therapeutic ultrasound. <i>Physica Medica</i> , <b>2018</b> , 52, 1752-7		
3	Monomer diffusion rates in photopolymer material Part I Low spatial frequency holographic gratings: comment. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2012</b> , 29, 458	1.7	
2	Optimising Copying Accuracy in Holographic Patterning. <i>Mathematics in Industry</i> , <b>2016</b> , 291-298	0.2	
1	Modelling Two-Dimensional Photopolymer Patterns Produced with Multiple-Beam Holography. <i>Mathematics in Industry</i> , <b>2012</b> , 365-371	0.2	