Valentyn A Smyntyna

List of Publications by Year
in descending order

81	1,827	304743 22	265206 42
papers	citations	h-index	g-index

83	83	83	2610
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optical biosensors based on ZnO nanostructures: advantages and perspectives. A review. Sensors and Actuators B: Chemical, 2016, 229, 664-677.	7.8	253
2	Structural and XPS characterization of ALD Al2O3 coated porous silicon. Vacuum, 2015, 113, 52-58.	3.5	225
3	Tuning Optical Properties of Al₂O₃/ZnO Nanolaminates Synthesized by Atomic Layer Deposition. Journal of Physical Chemistry C, 2014, 118, 3811-3819.	3.1	111
4	Evolution of microstructure and related optical properties of ZnO grown by atomic layer deposition. Beilstein Journal of Nanotechnology, 2013, 4, 690-698.	2.8	92
5	Continuous sensing of hydrogen peroxide and glucose via quenching of the UV and visible luminescence of ZnO nanoparticles. Mikrochimica Acta, 2015, 182, 1819-1826.	5.0	82
6	Toward development of optical biosensors based on photoluminescence of TiO2 nanoparticles for the detection of Salmonella. Sensors and Actuators B: Chemical, 2017, 252, 95-102.	7.8	70
7	Tuning of ZnO 1D nanostructures by atomic layer deposition and electrospinning for optical gas sensor applications. Nanotechnology, 2015, 26, 105501.	2.6	67
8	Porous silicon based photoluminescence immunosensor for rapid and highly-sensitive detection of Ochratoxin A. Biosensors and Bioelectronics, 2018, 102, 661-667.	10.1	64
9	The influence of localized plasmons on the optical properties of Au/ZnO nanostructures. Journal of Materials Chemistry C, 2015, 3, 6815-6821.	5.5	63
10	ZnO films formed by atomic layer deposition as an optical biosensor platform for the detection of Grapevine virus A-type proteins. Biosensors and Bioelectronics, 2017, 92, 763-769.	10.1	60
11	Gold coated porous silicon nanocomposite as a substrate for photoluminescence-based immunosensor suitable for the determination of Aflatoxin B1. Talanta, 2017, 175, 297-304.	5.5	59
12	Application of Room Temperature Photoluminescence From ZnO Nanorods for Salmonella Detection. IEEE Sensors Journal, 2014, 14, 2028-2034.	4.7	57
13	Tailoring the Structural, Optical, and Photoluminescence Properties of Porous Silicon/TiO₂ Nanostructures. Journal of Physical Chemistry C, 2015, 119, 7164-7171.	3.1	53
14	Atomic layer deposition TiO2 coated porous silicon surface: Structural characterization and morphological features. Thin Solid Films, 2015, 589, 303-308.	1.8	45
15	The causes of thickness dependence of CdSe and CdS gas-sensor sensitivity to oxygen. Sensors and Actuators B: Chemical, 1994, 19, 464-465.	7.8	40
16	One and two-phonon Raman scattering from nanostructured silicon. Optik, 2015, 126, 1650-1655.	2.9	37
17	A Novel Optochemical Sensor Based on $hbox{SnO}_{2}$ Sensitive Thin Film for ppm Ammonia Detection in Liquid Environment. Journal of Lightwave Technology, 2006, 24, 5000-5007.	4.6	31
18	The nature of emission centers in CdS nanocrystals. Radiation Measurements, 2007, 42, 693-696.	1.4	28

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19	Enhancement of optical and mechanical properties of Si nanopillars by ALD TiO2 coating. RSC Advances, 2016, 6, 97070-97076.	3.6	28
20	Application of ZnO Nanorods Based Whispering Gallery Mode Resonator in Optical Immunosensors. Colloids and Surfaces B: Biointerfaces, 2020, 191, 110999.	5.0	28
21	Optical properties of ultrathin Al2O3/ZnO nanolaminates. Thin Solid Films, 2015, 594, 96-100.	1.8	25
22	Novel Immune TiO2 Photoluminescence Biosensors for Leucosis Detection. Procedia Engineering, 2012, 47, 338-341.	1.2	24
23	Photoactivation of luminescence in CdS nanocrystals. Beilstein Journal of Nanotechnology, 2014, 5, 355-359.	2.8	24
24	Interaction mechanism between TiO₂ nanostructures and bovine leukemia virus proteins in photoluminescence-based immunosensors. RSC Advances, 2018, 8, 37740-37748.	3.6	22
25	Optical properties of cadmium sulfide nanocrystals obtained by the sol-gel method in gelatin. Journal of Applied Spectroscopy, 2008, 75, 576-582.	0.7	21
26	Influence of chemical composition on sensitivity and signal reproducibility of CdS sensors of oxygen. Sensors and Actuators B: Chemical, 1995, 25, 628-630.	7.8	19
27	Optical properties of ZnO deposited by atomic layer deposition (ALD) on Si nanowires. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 236-237, 139-146.	3.5	19
28	Optochemical sensor for water monitoring based on SnO2 particle layer deposited onto optical fibers by the electrospray pyrolysis method. Applied Physics Letters, 2006, 89, 111103.	3.3	16
29	Immune Biosensor Based on Silica Nanotube Hydrogels for Rapid Biochemical Diagnostics of Bovine Retroviral Leukemia. Procedia Engineering, 2011, 25, 948-951.	1.2	16
30	Effect of porous silicon substrate on structural, mechanical and optical properties of MOCVD and ALD ruthenium oxide nanolayers. Applied Surface Science, 2019, 471, 686-693.	6.1	15
31	The chemisorption forms and the centre nature of oxygen chemisorption on the CdSe thin-film surfaces. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1981, 63, 642-650.	0.2	10
32	Surface spectroscopy study of CdSe and CdS thin-film oxygen sensors. Sensors and Actuators B: Chemical, 1994, 22, 189-194.	7.8	10
33	Raman spectroscopy of nanostructured silicon fabricated by metal-assisted chemical etching. Proceedings of SPIE, 2014, , .	0.8	10
34	Surface plasmon resonance investigation procedure as a structure sensitive method for SnO2 nanofilms. Thin Solid Films, 2012, 522, 452-456.	1.8	9
35	The sensitization of semiconductor gas sensors. Sensors and Actuators B: Chemical, 1992, 6, 289-292.	7.8	7
36	Peculiarities of Photoluminescence in Porous Silicon Prepared by Metal-Assisted Chemical Etching. , 2012, 2012, 1-6.		7

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37	Optical and structural properties of Al₂O₃/ZnO nanolaminates deposited by ALD method. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1505-1508.	0.8	7
38	Dependence of sensitivity and reproducibility of CdS oxygen sensors. Sensors and Actuators B: Chemical, 1994, 19, 460-463.	7.8	6
39	Oxygen interaction of CdS based gas sensors with different stoichiometric compositions was studied by X-ray photoelectron spectroscopy (XPS) and thermal-desorption mass spectroscopy observations combined with conductivity measurements. Three different types of film with different atomic ratios of Cd/S were used in the study of oxygen chemisorption in a low-temperature range between 300 and 570 K. Spray pyrolysis was used for the deposition of the films on glass substrates: XPS and energy dispersive spectros. Sensors and Actuators B: Chemical, 1995, 26, 108-112.	7.8	5
40	Nonradiative and Radiative Recombination in CdS Polycrystalline Structures. Advances in Condensed Matter Physics, 2013, 2013, 1-15.	1.1	5
41	Optical Properties of CdS Nanocrystals Doped with Zinc and Copper. Semiconductors, 2019, 53, 361-367.	0.5	5
42	PLD-grown <mml:math altimg="si1.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	1.2	4
43	Dependence of conductivity of an illuminated nonideal heterojunction on external bias. Semiconductors, 2011, 45, 894-899.	0.5	4
44	Open-circuit voltage of an illuminated nonideal heterojunction. Semiconductors, 2013, 47, 838-843.	0.5	4
45	Interaction between collective and local subsystems in semiconductor surface-active structures. Sensors and Actuators B: Chemical, 1995, 25, 647-652.	7.8	3
46	Optical constants detection in tin dioxide nano-size layers by surface plasmon resonance investigation. Semiconductors, 2011, 45, 316-319.	0.5	3
47	TiO₂optical sensor for amino acid detection. Proceedings of SPIE, 2013, , .	0.8	3
48	Metal Oxide Based Biosensors for the Detection of Dangerous Biological Compounds. NATO Science for Peace and Security Series A: Chemistry and Biology, 2016, , 281-288.	0.5	3
49	Nanostructured SnO2 as CBRN Safety Material. NATO Science for Peace and Security Series A: Chemistry and Biology, 2018, , 107-127.	0.5	3
50	Structural properties of PbTe films studied by X-ray asymmetric reflections. Journal of Crystal Growth, 1982, 58, 611-616.	1.5	2
51	Electronic mechanism for absorptive sensitivity in semiconductor gas sensors. Sensors and Actuators B: Chemical, 1994, 19, 426-428.	7.8	2
52	Tin dioxide based optical sensor for in water ppm detection of ammonia at room temperature. , 2005, , .		2
53	Simultaneous Temperature and Ammonia Detection in Water by Tin-Dioxide Optoelectronic Sensor. , 0, , .		2
54	Technique for Oxidation Parameters Definition, Based on Investigation of Defects Formation Images in Silicon Inversion MOS - Structures. , 2007, , .		2

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55	Polarization characteristics of surface plasmon resonance in SnO2 nanocluster films. Semiconductors, 2011, 45, 1467-1473.	0.5	2
56	Thermogravimetric Study of Nano-SnO2 Precursors. Springer Proceedings in Physics, 2017, , 53-61.	0.2	2
57	Correlation between electro-physical characteristics and elastic properties of cadmium selenide films. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 690-693.	0.8	1
58	Ammonia detection in water with a tin dioxide based optical sensor. , 2005, , .		1
59	Influence of Initial Silicon Defects on Processes of the Dioxide Silicon Defect Formation. , 2006, , .		1
60	Influence of Layers Morphology on the Sensitivity of SnO2-based Optical Fiber Sensors. , 2006, , .		1
61	Influence of structural defects on thermostability and radiation sensitivity of Si MOSFET dosimeters. Radiation Measurements, 2011, 46, 1650-1653.	1.4	1
62	Ammonia detection using optical reflectance from porous silicon formed by metal-assisted chemical etching. , 2013, , .		1
63	Automated system of operational hydromonitoring of Ukrainian water bodies. Russian Meteorology and Hydrology, 2014, 39, 350-355.	1.3	1
64	Large-scale protein/antibody patterning with limiting unspecific adsorption. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	1
65	Porous silicon photoluminescence biosensor for rapid and sensitive detection of toxins. , 2017, , .		1
66	SPECTRAL LUMINESCENCE PROPERTIES OF CdS NANOCOMPOSITES IN A POLYMER SHELL. Composites: Mechanics, Computations, Applications, 2017, 8, 171-180.	0.3	1
67	Characteristics of recombination in semiconductors with intercrystallite barriers. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1989, 32, 203-206.	0.0	0
68	Influence of laser treatment on the adsorption interaction of cadmium sulfide films with oxygen. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1990, 33, 272-275.	0.0	0
69	Optical and photoelectric- and gas-sensitive properties of porous silicon. , 1998, , .		0
70	Current relaxation in microporous silicon. Technical Physics, 1999, 44, 1394-1395.	0.7	0
71	Functional materials based on the complex compounds of germanium. Technical Physics Letters, 2000, 26, 168-169.	0.7	0
72	Influence of structural defects on electric current in the channel of MOS-transistor. , 2005, , .		0

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73	Atom Force Microscopy of SnO2 Nano Layers. , 2006, , .		0
74	Room temperature detection of chemical pollutants by SnO 2 -based optical fiber sensors. , 2007, , .		0
75	High sensitivity near-field opto-chemical sensors based on SnO 2 particle layers. , 2007, , .		0
76	Tin dioxide nanofilms as sensitive detectors for surface plasmon resonance phenomenon. Procedia Engineering, 2011, 25, 276-279.	1.2	0
77	Study on structural and optical properties of TiO₂ALD coated silicon nanostructures. Proceedings of SPIE, 2016, , .	0.8	0
78	Characterization of SnO2 Sensors Nanomaterials by Polarization Modulation Method. NATO Science for Peace and Security Series A: Chemistry and Biology, 2016, , 259-266.	0.5	0
79	Method of infrared radiation detection by uncooled photodetector. Radioelectronics and Communications Systems, 2017, 60, 368-374.	0.5	0
80	Optical Immunosensor Based on Nanostructured ZnO Thin Films for Agricultural Purposes. , 2018, , .		0
81	Heterogeneous Systems with Ag Nanoparticles. NATO Science for Peace and Security Series A: Chemistry and Biology, 2018, , 301-308.	0.5	0