Vladimir Aroutiounian

List of Publications by Year
in descending order

76 papers	2,027 citations	304743 22 h-index	243625 44 g-index
78 all docs	78 docs citations	78 times ranked	2297 citing authors

#	Article	IF	Citations
1	Metal oxide photoelectrodes for hydrogen generation using solar radiation-driven water splitting. Solar Energy, 2005, 78, 581-592.	6.1	289
2	Quantum dot solar cells. Journal of Applied Physics, 2001, 89, 2268-2271.	2.5	283
3	Metal oxide hydrogen, oxygen, and carbon monoxide sensors for hydrogen setups and cells. International Journal of Hydrogen Energy, 2007, 32, 1145-1158.	7.1	209
4	Photoelectrochemistry of tin-doped iron oxide electrodes. Solar Energy, 2007, 81, 1369-1376.	6.1	91
5	Solâ€“gel derived thin-film semiconductor hydrogen gas sensor. International Journal of Hydrogen Energy, 2007, 32, 4101-4108.	7.1	83
6	Investigation of ceramic Fe2O3Ã¢ÂŒÂ©TaÃ¢ÂŒÂª photoelectrodes for solar energy photoelectrochemical converters. International Journal of Hydrogen Energy, 2002, 27, 33-38.	7.1	81
7	Wide gap semiconductor microwave devices. Journal Physics D: Applied Physics, 2007, 40, 6355-6385.	2.8	70
8	Photoelectrochemistry of semiconductor electrodes made of solid solutions in the system Fe2O3â€“Nb2O5. Solar Energy, 2006, 80, 1098-1111.	6.1	61
9	Low reflectance of diamond-like carbon/porous silicon double layer antireflection coating for silicon solar cells. Journal Physics D: Applied Physics, 2004, 37, L25-L28.	2.8	58
10	Study of sensitivity and response kinetics changes for SnO2 thin-film hydrogen sensors. International Journal of Hydrogen Energy, 2009, 34, 8438-8443.	7.1	56
11	Smoke sensor on the base of Bi2O3 sesquioxide. Sensors and Actuators B: Chemical, 1996, 35, 241-243.	7.8	53
12	Almost zero reflectance of a silicon oxynitride/porous silicon double layer antireflection coating for silicon photovoltaic cells. Journal Physics D: Applied Physics, 2006, 39, 1623-1625.	2.8	50
13	Study of the surface-ruthenated SnO2/MWCNTs nanocomposite thick-film gas sensors. Sensors and Actuators B: Chemical, 2013, 177, 308-315.	7.8	44
14	Electrical conductivity mechanisms in porous silicon. Physica Status Solidi A, 2003, 197, 462-466.	1.7	33
15	Noise Spectroscopy of Gas Sensors. IEEE Sensors Journal, 2008, 8, 786-790.	4.7	32
16	Phonon mechanism of mobility equilibrium fluctuation and properties of 1/f-noise. Physica B: Condensed Matter, 2006, 382, 65-70.	2.7	31
17	Smoke sensor with overcoming of humidity cross-sensitivity. Sensors and Actuators B: Chemical, 2003, 93, 416-421.	7.8	28
18	Strain-induced InAsSbP islands and quantum dots grown by liquid phase epitaxy on a InAs(1â€‰0â€‰0) substrate. Journal Physics D: Applied Physics, 2008, 41, 162004.	2.8	24

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19	Hydrogen Sensor Made of Porous Silicon and Covered by TiO$_{2-{m x}}$ or ZnO$langle$Al$angle$ Thin Film. IEEE Sensors Journal, 2009, 9, 9-12.	4.7	24
20	To the theory of semiconductor gas sensors. Sensors and Actuators B: Chemical, 1998, 50, 80-84.	7.8	23
21	Investigations of the Fe1.99Ti0.01O3â€“electrolyte interface. Electrochimica Acta, 2000, 45, 1999-2005.	5.2	23
22	Hydrogen sensitive gas sensor based on porous silicon/TiO2â^'x structure. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 38, 219-221.	2.7	23
23	Manufacturing and investigations of i-butane sensor made of SnO2/multiwall-carbon-nanotube nanocomposite. Sensors and Actuators B: Chemical, 2012, 173, 890-896.	7.8	23
24	Preparation and characterization of multiwalled carbon nanotube/In2O3 composites. Carbon, 2013, 60, 266-272.	10.3	23
25	Thin-film SnO₂ and ZnO detectors of hydrogen peroxide vapors. Journal of Sensors and Sensor Systems, 2018, 7, 281-288.	0.9	21
26	Investigations of hydrogen sensors made of porous silicon. Thin Solid Films, 2008, 517, 239-241.	1.8	20
27	Nanocomposite sensors of propylene glycol, dimethylformamide and formaldehyde vapors. Journal of Sensors and Sensor Systems, 2018, 7, 31-41.	0.9	19
28	Selective petrol vapour sensor based on an Fe2O3 thin film. Sensors and Actuators B: Chemical, 1994, 18, 155-157.	7.8	17
29	Preparation of SnO2 Films with Thermally Stable Nanoparticles. Sensors, 2003, 3, 438-442.	3.8	16
30	Low-frequency noise in non-homogeneously doped semiconductor. Sensors and Actuators A: Physical, 2004, 113, 338-343.	4.1	14
31	Investigations of the structure of the iron oxide semiconductorâ€“electrolyte interface. Comptes Rendus Chimie, 2006, 9, 325-331.	0.5	14
32	Photovoltaic and optoelectronic properties of InAs(100)-based photoconductive cells with quantum dots and nanopits. Infrared Physics and Technology, 2011, 54, 114-120.	2.9	14
33	Microwave characteristics of BARITT diodes based on silicon carbide. Solid-State Electronics, 1999, 43, 343-348.	1.4	12
34	Peculiarities of electron distribution function's fluctuations damping in homogeneous semiconductors. Physica B: Condensed Matter, 2005, 357, 398-407.	2.7	11
35	Fluctuation-enhanced gas sensing. Procedia Chemistry, 2009, 1, 216-219.	0.7	10
36	Currentâ€“voltage and low-frequency noise characteristics of structures with porous silicon layers exposed to different gases. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 38, 160-163.	2.7	9

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37	Thin film n-titanium oxide photoanodes for photoelectrochemical production of hydrogen. Renewable Energy, 2008, 33, 299-303.	8.9	9
38	Competing nucleation mechanisms and growth of InAsSbP quantum dots and nano-pits on the InAs(100) surface. Surface Science, 2010, 604, 1127-1134.	1.9	9
39	InAsSbP/InAs heterostructures for thermophotovoltaic converters: Growth technology and properties. Technical Physics Letters, 2008, 34, 69-71.	0.7	8
40	Structural properties of porous media. Physica Status Solidi A, 2003, 197, 419-424.	1.7	7
41	The growth of InAsSbPâ€based diode heterostructures with quantum dots as a new material for thermophotovoltaic application. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1456-1459.	0.8	7
42	Magnetoresistance and capacitance oscillations and hysteresis in type-II InAsSbP ellipsoidal quantum dots. Journal Physics D: Applied Physics, 2015, 48, 275302.	2.8	7
43	Iâ€“V characteristics of structures with porous silicon in electrolyte. Optical Materials, 2005, 27, 962-966.	3.6	6
44	EPR Study of TiO2 (Rutile) Doped with Vanadium. Applied Magnetic Resonance, 2016, 47, 479-485.	1.2	6
45	Electro-optical characteristics of a liquid crystal cell with graphene electrodes. Beilstein Journal of Nanotechnology, 2017, 8, 2802-2806.	2.8	6
46	A New Model for Light Emitting Structures with a Porous Material Layer. Physica Status Solidi A, 1998, 165, 105-109.	1.7	5
47	Investigation of thermoelectric parameters of solid solutions Pb1â^'xSnxTeâ€ˆCdâ€‰ and determination of their applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 107, 78-83.	3.5	5
48	Silicon carbide TUNNETT diodes. Solid-State Electronics, 2004, 48, 1569-1577.	1.4	5
49	A new model of noise characteristics of SiC Schottky barrier MESFET with deep impurity levels and traps. Applied Surface Science, 2006, 252, 5445-5448.	6.1	5
50	The influence of exciton field dissociation on the efficiency of photoelectrochemical production of hydrogen. International Journal of Hydrogen Energy, 1994, 19, 209-213.	7.1	4
51	A new type of gas sensor based on the semiconductor-cleft-semiconductor structure. Sensors and Actuators B: Chemical, 1995, 25, 353-356.	7.8	4
52	Response of HTSC films to modulated optical radiation. Solid State Communications, 1998, 108, 579-581.	1.9	4
53	Features of optical absorption and photoluminescence of porous silicon. Physica Status Solidi A, 2003, 197, 425-431.	1.7	4
54	Technique for Spectropolarimetry Based on Liquid Crystal Polarization Diffraction Grating. Molecular Crystals and Liquid Crystals, 2015, 615, 63-69.	0.9	4

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55	Sub-linear dependencies of the surface conductivity on the gas pressure. Applied Surface Science, 1998, 135, 1-7.	6.1	3
56	Electrophysical and photoelectrical properties of UV-range injection structures made of silicon carbide. Applied Surface Science, 2001, 184, 460-465.	6.1	3
57	Determination of basic parameters of porous silicon. Journal Physics D: Applied Physics, 2006, 39, 3543-3546.	2.8	3
58	Novel Narrow Band-Gap InAsSbP-Based Quantum Dot Mid-Infrared Photodetectors: Fabrication, Optoelectronic and Electrophysical Properties. Journal of Nanoscience and Nanotechnology, 2013, 13, 799-803.	0.9	3
59	InAsSbP quantum dot mid-IR photodetectors operating at room temperature. Infrared Physics and Technology, 2015, 70, 12-14.	2.9	3
60	Current-voltage response of an electrochemical photosensor. Sensors and Actuators B: Chemical, 1993, 14, 632-634.	7.8	2
61	Smoke-detector signal micrologic processing circuit. Sensors and Actuators B: Chemical, 1996, 35, 60-61.	7.8	2
62	An IR-Radiometer with Internal Signal Modulation. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 827-833.	0.6	2
63	Electro- and Photoluminescence in Graded-Gap Structures with Double Injection. Physica Status Solidi A, 1998, 165, 135-139.	1.7	2
64	Investigation of InAsSbP quantum dot mid-infrared sensors. Journal of Sensors and Sensor Systems, 2015, 4, 249-253.	0.9	2
65	LASER-STIMULATED DOPING OF SILICON WITH MAGNESIUM. Modern Physics Letters B, 1999, 13, 479-484.	1.9	1
66	On thermoelectric figure-of-merit of Pb0.78Sn0.22Teã€ˆGeã€‰ solid solution. Journal of Alloys and Compounds, 2008, 463, 480-483.	5.5	1
67	Investigation of Transient Processes in Nematic Liquid Crystal Cells with Semiconductor Substrate, Caused by the Electric Field Applied to Semiconductor. Molecular Crystals and Liquid Crystals, 2008, 488, 231-237.	0.9	1
68	A new principle for creating an optochemical sensor on the basis of a waveguide with moving borders. Sensors and Actuators B: Chemical, 1996, 35, 192-196.	7.8	0
69	A New Method of Determination of Parameters of Traps in Semiconductors. Physica Status Solidi (B): Basic Research, 1998, 210, 805-808.	1.5	0
70	An optical sensor based on a layered structure with moving borders. Sensors and Actuators A: Physical, 1998, 65, 123-127.	4.1	0
71	Optical transitions coupled with the two-dimensional surface subbands. Applied Surface Science, 1998, 134, 267-270.	6.1	0
72	Photo-emf in Parabolic Graded-Gap Semiconductors. Physica Status Solidi A, 2001, 184, 433-436.	1.7	0

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73	Thermoelectric coefficient of the non-homogeneously doped pâ€“n junctions made on Si and Pb0.8Sn0.2Te. Sensors and Actuators A: Physical, 2004, 113, 370-375.	4.1	0
74	Temperature dependencies of frequency characteristics of HTSC RLC curcuit. Applied Surface Science, 2006, 252, 5441-5444.	6.1	0
75	Manufacture and investigation of nanoporous titanium oxide photoelectrodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1782-1785.	0.8	0
76	Computational Search and Stability Analysis of Two-Dimensional Tin Oxides. Journal of Physical Chemistry C, 2022, 126, 4647-4654.	3.1	0