Valeriy Bolotov

List of Publications by Year
in descending order

101	576	687335 13	794568 19
papers	citations	h-index	g-index

108	108	108	442
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Excimer laser and rapid thermal annealing stimulation of solid-phase nucleation and crystallization in amorphous silicon films on glass substrates. Journal of Physics Condensed Matter, 1996, 8, 273-286.	1.8	30
2	Experimental and theoretical study of electronic structure of disordered MWCNTs. Carbon, 2019, 153, 40-51.	10.3	29
3	Ordered arrays of vertically correlated GaAs and AlAs quantum wires grown on a GaAs(311)A surface. Applied Physics Letters, 2002, 81, 1080-1082.	3.3	28
4	Electronic structure of nitrogen-containing carbon nanotubes irradiated with argon ions: XPS and XANES studies. Physics of the Solid State, 2017, 59, 2030-2035.	0.6	26
5	Determination of work function in the individual carbon nanotubes using electrostatic force microscopy. Materials Letters, 2015, 161, 534-537.	2.6	24
6	Changes of the electronic structure of the atoms of nitrogen in nitrogen-doped multiwalled carbon nanotubes under the influence of pulsed ion radiation. Nuclear Instruments & Methods in Physics Research B, 2015, 358, 131-135.	1.4	22
7	Formation of tin-tin oxide coreâ€“shell nanoparticles in the composite SnO2â^'x/nitrogen-doped carbon nanotubes by pulsed ion beam irradiation. Nuclear Instruments & Methods in Physics Research B, 2017, 394, 37-43.	1.4	20
8	Effect of carbon nanotubes irradiation by argon ions on the formation of SnO 2-x /MWCNTs composite. Nuclear Instruments & Methods in Physics Research B, 2017, 410, 222-229.	1.4	18
9	Formation mechanisms of nanocomposite layers based on multiwalled carbon nanotubes and non-stoichiometric tin oxide. Physics of the Solid State, 2012, 54, 166-173.	0.6	16
10	The effect of carbon and boron on the accumulation of vacancy-oxygen complexes in silicon. Radiation Effects, 1980, 52, 149-152.	0.4	14
11	Raman study of mechanical stresses in processes of oxygen precipitation in silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1993, 21, 49-54.	3.5	14
12	Effect of pulsed ion irradiation on the electronic structure of multi-walled carbon nanotubes. Physics of the Solid State, 2014, 56, 835-838.	0.6	14
13	Nanocomposite por-Si/SnOx layers formation for gas microsensors. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 1-7.	3.5	13
14	Origin of the low-frequency band in Raman spectra of multi-walled carbon nanotubes synthesized by the CVD method. Physics of the Solid State, 2013, 55, 1459-1462.	0.6	13
15	Transformation of the electronic structure of the SnO2 â^' x /MWCNT nanocomposite under high-vacuum annealing conditions. Physics of the Solid State, 2014, 56, 1899-1903.	0.6	13
16	The origin of changes in the electronic structure of oriented multi-walled carbon nanotubes under the influence of pulsed ion radiation. Nuclear Instruments & Methods in Physics Research B, 2014, 337, 1-6.	1.4	13
17	Kinetics of Accumulation of Radiation Defects and Annihilation of Vacancies and Interstitials in Carbon- and Boron-Containing Silicon. Physica Status Solidi A, 1982, 72, 61-68.	1.7	12
18	Fabrication of por-Si/SnO x nanocomposite layers for gas microsensors and nanosensors. Semiconductors, 2011, 45, 693-698.	0.5	12

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19	Interfacial interaction in a composite based on multi-walled carbon nanotubes and amorphous tin oxide. Physics of the Solid State, 2016, 58, 997-1003.	0.6	12
20	The defect accumulation and irradiation-induced lattice strain in Si at high-dose neutron irradiation. Physica Status Solidi A, 1983, 75, 601-606.	1.7	10
21	XANES and XPS studies of processes initiated by high-vacuum annealing in SnO x /MWCNT composite layers. Physics of the Solid State, 2013, 55, 1289-1293.	0.6	9
22	Synthesis of the â€˜Carbon Nanotubes-porous Siliconâ€™ Hybrid Material for Gas Sensors. Procedia Engineering, 2016, 152, 706-710.	1.2	9
23	Study of stress relaxation in implanted silicon on sapphire structures using Raman spectroscopy. Thin Solid Films, 1992, 208, 217-222.	1.8	8
24	Phonon-plasmon interaction in tunneling GaAs/AlAs superlattices. JETP Letters, 2000, 71, 477-480.	1.4	8
25	Effect of ethanol on optical and electrical parameters of porous silicon. Semiconductors, 2009, 43, 925-928.	0.5	8
26	An observation of the radial breathing mode in the Raman spectra of CVD-grown multi-wall carbon nanotubes. New Carbon Materials, 2015, 30, 385-390.	6.1	8
27	The Structure and Electrophysical Properties of Multiwall Carbon Nanotubes Subjected to Argon Ion Bombardment. Physics of the Solid State, 2019, 61, 433-439.	0.6	8
28	Mechanical stress relaxation in ion-implanted SOS structures. Thin Solid Films, 1994, 248, 212-219.	1.8	7
29	Raman study of confined TO phonons in GaAs/AlAs superlattices grown on GaAs (311)A and B surfaces. Superlattices and Microstructures, 1999, 26, 11-16.	3.1	7
30	Structure and electrochemical characterization of SnOx/Sn@MWCNT composites formed by pulsed ion beam irradiation. Journal of Alloys and Compounds, 2019, 793, 723-731.	5.5	7
31	Raman scattering anisotropy in a system of (110)-oriented silicon nanocrystals formed in a-Si film. Solid State Communications, 1998, 108, 645-648.	1.9	6
32	Formation of silicon nanocrystals with preferred (100) orientation in amorphous Si:H films grown on glass substrates and exposed to nanosecond pulses of ultraviolet radiation. Semiconductors, 2002, 36, 102-109.	0.5	6
33	Formation of por-Si/SnOx nanocomposite by high-power ion beams of nanosecond duration. Journal of Surface Investigation, 2011, 5, 1185-1188.	0.5	6
34	Electrostatic force microscopy evaluation of the conductivity of individual multiwalled carbon nanotubes. Technical Physics Letters, 2017, 43, 205-208.	0.7	6
35	Transformation of individual MWCNTs structure after impact ion and electron irradiation. AIP Conference Proceedings, 2018, , .	0.4	6
36	Accumulation of defects in silicon at superhigh doses of electron irradiation. Radiation Effects, 1980, 53, 33-39.	0.4	5

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37	Transverse optical phonon splitting in GaAs/AlAs superlattices grown on the GaAs(311) surface studied by the method of Raman light scattering. Semiconductors, 2000, 34, 61-66.	0.5	5
38	Formation of two-layer composite-on-insulator structures based on porous silicon and SnO x . Study of their electrical and gas-sensing properties. Semiconductors, 2014, 48, 397-401.	0.5	5
39	Modifying the Structure of Multiwalled Carbon Nanotubes with Continuous and Pulsed Ion Beams. Physics of the Solid State, 2018, 60, 2616-2622.	0.6	5
40	Lateral localization of optical phonons in GaAs quantum islands. JETP Letters, 1999, 70, 75-81.	1.4	4
41	<title>Quantum wires and quantum dots on corrugated (311) surfaces: potential applications in optoelectronics</title>. , 2002, , .		4
42	Electrical and gas sensing properties of por-Si/SnO x nanocomposite layers. Semiconductors, 2012, 46, 105-108.	0.5	4
43	Features of the image contrast of doped carbon nanotubes in electrostatic force microscopy. Technical Physics Letters, 2014, 40, 965-968.	0.7	4
44	Investigation of Structural Changes in MWCNT Caused by Ion Irradiation and Thermal Annealing. Procedia Engineering, 2016, 152, 701-705.	1.2	4
45	Formation of Multilayer Structures with Integrated Membranes Based on Porous Silicon. Semiconductors, 2020, 54, 609-613.	0.5	4
46	Radiation defects passivation by neutron irradiation of hydrogen-implanted silicon. Nuclear Instruments & Methods in Physics Research B, 1993, 80-81, 663-666.	1.4	3
47	Fabrication of blocked impurity-band structures on gallium-doped silicon by plasma hydrogenation. Semiconductors, 1997, 31, 255-260.	0.5	3
48	Adsorption of hemoglobin molecules on porous silicon. Technical Physics Letters, 2010, 36, 7-8.	0.7	3
49	Determining the Static Dielectric Constant of Individual Hemoglobin Molecules by Electrostatic Force Microscopy. Technical Physics Letters, 2019, 45, 981-983.	0.7	3
50	Localization of Optical Phonons in Diamond Nanocrystals. Journal of Experimental and Theoretical Physics, 2019, 129, 816-824.	0.9	3
51	Functionalization of Individual Multi-Wall Carbon Nanotubes during Irradiation and Annealing. Physics of the Solid State, 2020, 62, 2173-2183.	0.6	3
52	Accumulation of Radiation Defects in Oxygen-Rich n-Type Silicon Heat-Treated at Temperatures from 600 to 1000 Â°C. Physica Status Solidi A, 1986, 96, 129-134.	1.7	2
53	Negative differential resistance in proton-beam modified silicon. Nuclear Instruments & Methods in Physics Research B, 1993, 80-81, 667-669.	1.4	2
54	Interface corrugation effect on the polarization anisotropy of photoluminescence from (311)A GaAs/AlAs short-period superlattices. JETP Letters, 2000, 72, 205-208.	1.4	2

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55	The investigation of the structural and electrophysical properties of carbon nanotubes with controlled dopant and defect composition. Physica B: Condensed Matter, 2009, 404, 5209-5211.	2.7	2
56	Effect of halogens on the formation and properties of the porous silicon layers. Semiconductors, 2009, 43, 92-95.	0.5	2
57	Effect of the catalyst on structural and electrophysical characteristics of the layers of nitrogen-containing carbon nanotubes obtained by gas phase synthesis. Inorganic Materials: Applied Research, 2010, 1, 110-114.	0.5	2
58	Investigation of the hemoglobin adsorption in porous silicon by the ellipsometry method. Technical Physics, 2011, 56, 1053-1055.	0.7	2
59	Spectroscopic ellipsometry study of porous silicon-tin oxide nanocomposite layers. Technical Physics, 2011, 56, 1593-1598.	0.7	2
60	Multi-Layer Structures â€œPor-Si-on-insulatorâ€/SnOx for Gas Sensing Application. Procedia Engineering, 2015, 113, 506-510.	1.2	2
61	Formation and properties of the buried isolating silicon-dioxide layer in double-layer â€œporous silicon-on-insulatorâ€•structures. Semiconductors, 2017, 51, 49-53.	0.5	2
62	Combination of scanning probe microscopy techniques for evaluating the electrical parameters of individual multiwalled carbon nanotubes. IOP Conference Series: Materials Science and Engineering, 2017, 256, 012018.	0.6	2
63	Formation of the N-MWCNT/TiOx nanocomposite structure using magnetron method for gas sensing application. AIP Conference Proceedings, 2017, , .	0.4	2
64	Changes in the chemical state and concentration of iron in carbon nanotubes obtained by the CVD method and exposed to pulsed ion irradiation. Physics of the Solid State, 2017, 59, 2045-2052.	0.6	2
65	Determination of the Conductivity of Individual Carbon Nanotubes Based on Image Profile Analysis of Electrostatic Force Microscopy. Instruments and Experimental Techniques, 2019, 62, 578-581.	0.5	2
66	Data on the structure, chemical state of carbon and discharge characteristics of multi-walled carbon nanotubes and composites based on them modified by pulsed ion beam. Data in Brief, 2019, 25, 104108.	1.0	2
67	Synthesis and Gas-Sensing Properties of MnO2Ââ€“Âx and MnO2Ââ€“Âx/CuO-Coated Multiwalled Carbon Nanotube Nanocomposites. Physics of the Solid State, 2019, 61, 2224-2227.	0.6	2
68	Atomic Hydrogen Regeneration and Defect Passivation in Hydrogenated Silicon under Neutron Irradiation. Physica Status Solidi A, 1993, 137, 67-74.	1.7	1
69	Title is missing!. Journal of Physics Condensed Matter, 1995, 7, 7643-7649.	1.8	1
70	‹title›Formation of poly-Si films on glass substrates using excimer laser treatments‹/title›. , 1996, , .		1
71	The effect of NO2 adsorption on optical and electrical properties of porous silicon layers. Semiconductors, 2007, 41, 962-964.	0.5	1
72	The photoluminescence of the thermo-treated silicon. Physica B: Condensed Matter, 2009, 404, 4555-4557.	2.7	1

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73	IR luminescence in thermally treated silicon. Semiconductors, 2009, 43, 26-28.	0.5	1
74	AES and XPS studies of a por-Si/SnOx nanocomposite formed using a powerful ion beam of nanosecond duration. Journal of Surface Investigation, 2013, 7, 62-66.	0.5	1
75	Study of the interaction mechanisms between absorbed NO2 and por-Si/SnO x nanocomposite layers. Semiconductors, 2013, 47, 1362-1366.	0.5	1
76	Oxidation of the porous silicon surface under the action of a pulsed ionic beam: XPS and XANES studies. Physics of the Solid State, 2014, 56, 1256-1260.	0.6	1
77	The formation of layers of porous crystalline tin dioxide from a composite on the basis of multiwalled carbon-nanotube arrays. Technical Physics Letters, 2017, 43, 961-964.	0.7	1
78	Functionalization of multi-walled carbon nanotubes using ion beams of various intensities. AIP Conference Proceedings, 2018, , .	0.4	1
79	Gas sensing properties of individual composite nanostructures TiO2-x/MWCNT and SnOx/MWCNT measured by scanning probe microscopy. IOP Conference Series: Materials Science and Engineering, 2019, 699, 012010.	0.6	1
80	A Study of the Composition and Structure of a Solid Electrolyte Interface (SEI) Formed on the Surface of Electrode Material Based on SnOx/Sn@MWCNT Nanocomposite. Protection of Metals and Physical Chemistry of Surfaces, 2021, 57, 59-67.	1.1	1
81	Hopping Mechanism of Hole Transport in SiO₂ at Cryogenic Temperatures. Physica Status Solidi (B): Basic Research, 1993, 176, 157-162.	1.5	0
82	Photoluminescence in [311]A GaAs/AlAs short-period superlattices with arrays of quantum well wires. , 0, , .		0
83	Polarization anisotropy of photoluminescence in corrugated and flat GaAs/AlAs short-period superlattices. , 0, , .		0
84	Interface reconstruction in GaAs/AlAs ultrathin superlattices grown on (311) and (001) surfaces. Nanotechnology, 2001, 12, 421-424.	2.6	0
85	Formation of Si nanocrystals in a-Si films using excimer laser. , 2002, 4748, 465.		0
86	Changes in the state of phosphorus atoms in the silicon lattice as a result of interaction with radiation defects. Semiconductors, 2002, 36, 363-366.	0.5	0
87	Structure of heterointerfaces and photoluminescence properties of GaAs/AlAs superlattices grown on (311)A and (311)B surfaces: Comparative analysis. Semiconductors, 2002, 36, 895-898.	0.5	0
88	The effect of the hydrogen state in lattice on the introduction efficiency of donor centers in oxygen-containing silicon. Semiconductors, 2006, 40, 125-127.	0.5	0
89	Synthesis of nanocomposite CNT/SnO<inf>x</inf> for Gas microsensors. , 2010, , .		0
90	Study of multilayer carbon nanotubes subjected to the impact of a nanosecond high-energy ion beam. Journal of Surface Investigation, 2016, 10, 332-334.	0.5	0

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91	Synthesis and investigation of the nanocomposite materials based on multi-walled carbon nanotubes and metal oxides. AIP Conference Proceedings, 2018, , .	0.4	0
92	Experimental and theoretical study of the structure of multi-walled carbon nanotubes modified by argon and helium ions. AIP Conference Proceedings, 2019, , .	0.4	0
93	Application of ion-beam irradiation and heat treatment to optimisation of the structure and properties of composites based on multi-walled carbon nanotubes and metal oxide. AIP Conference Proceedings, 2019, , .	0.4	0
94	Transformation of the individual MWCNTâ€™s structure under electron irradiation and annealing in inert atmosphere. AIP Conference Proceedings, 2019, , .	0.4	0
95	The formation of membranes based on oxidized two-layer porous silicon. AIP Conference Proceedings, 2019, , .	0.4	0
96	Formation and structural studies of integrated membranes based on channel silicon. Omsk Scientific Bulletin, 2018, , 59-63.	0.1	0
97	Ion-beam modification of composite based on multi-walled carbon nanotubes and tin dioxide. Omsk Scientific Bulletin, 2018, , 88-92.	0.1	0
98	Functionalization of Multiwalled Carbon Nanotubes by an Ion Beam to Increase the Interfacial Adhesion in Tin Oxide Composites. Technical Physics Letters, 2020, 46, 752-755.	0.7	0
99	Gas sensing properties of multicomponent systems based on oxides of manganese, copper and yttrium. Omsk Scientific Bulletin, 2020, , 111-114.	0.1	0
100	Macroporous layers formation on n-Si substrates in an HF-containing electrolyte adding HCl. Omsk Scientific Bulletin, 2020, , 65-69.	0.1	0
101	Morphology and gas response of nanocomposite structures based on irradiated ensembles of multi-walled carbon nanotubes and titanium oxide. Omsk Scientific Bulletin, 2020, , 36-41.	0.1	0