

Dmitri Pavlov

List of Publications by Year in descending order

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103
papers

876
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687220

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times ranked

740
citing authors

#	ARTICLE	IF	CITATIONS
1	Field- and irradiation-induced phenomena in memristive nanomaterials. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 870-881.	0.8	92
2	Multilayer Metal-Oxide Memristive Device with Stabilized Resistive Switching. <i>Advanced Materials Technologies</i> , 2020, 5, 1900607.	3.0	78
3	Noise-assisted persistence and recovery of memory state in a memristive spiking neuromorphic network. <i>Chaos, Solitons and Fractals</i> , 2021, 146, 110890.	2.5	76
4	Bipolar resistive switching and charge transport in silicon oxide memristor. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2015, 194, 48-54.	1.7	75
5	Yttria-stabilized zirconia cross-point memristive devices for neuromorphic applications. <i>Microelectronic Engineering</i> , 2019, 215, 110988.	1.1	61
6	Ripplocation in graphite nanoplatelets during sonication assisted liquid-phase exfoliation. <i>Carbon</i> , 2018, 129, 826-829.	5.4	27
7	High-temperature intrinsic ferromagnetism in the (In,Fe)Sb semiconductor. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	25
8	Monolithically integrated InGaAs/GaAs/AlGaAs quantum well laser grown by MOCVD on exact Ge/Si(001) substrate. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	24
9	Filamentary model of bipolar resistive switching in capacitor-like memristive nanostructures on the basis of yttria-stabilised zirconia. <i>International Journal of Nanotechnology</i> , 2017, 14, 604.	0.1	24
10	Impact of growth and annealing conditions on the parameters of Ge/Si(001) relaxed layers grown by molecular beam epitaxy. <i>Semiconductors</i> , 2015, 49, 1415-1420.	0.2	23
11	GaAs/Ge/Si epitaxial substrates: Development and characteristics. <i>AIP Advances</i> , 2017, 7, .	0.6	20
12	Deep UV narrow-band photodetector based on ion beam synthesized indium oxide quantum dots in Al ₂ O ₃ matrix. <i>Nanotechnology</i> , 2018, 29, 305603.	1.3	18
13	Thermal evolution of the morphology, structure, and optical properties of multilayer nanoperiodic systems produced by the vacuum evaporation of SiO and SiO ₂ . <i>Semiconductors</i> , 2013, 47, 481-486.	0.2	15
14	Light-emitting 9R-Si phase formed by Kr ⁺ ion implantation into SiO ₂ /Si substrate. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	14
15	Capacitors with nonlinear characteristics based on stabilized zirconia with built-in gold nanoparticles. <i>Technical Physics Letters</i> , 2014, 40, 369-371.	0.2	13
16	Forming dense arrays of gold nanoparticles in thin films of yttria stabilized zirconia by magnetron sputtering. <i>Technical Physics Letters</i> , 2016, 42, 36-39.	0.2	13
17	Electrically pumped InGaAs/GaAs quantum well microdisk lasers directly grown on Si(100) with Ge/GaAs buffer. <i>Optics Express</i> , 2017, 25, 16754.	1.7	13
18	Anomalous Hall effect in two-phase semiconductor structures: The role of ferromagnetic inclusions. <i>Physical Review B</i> , 2014, 90, .	1.1	12

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19	Resistive switching in the Au/Zr/ZrO ₂ -Y ₂ O ₃ /TiN/Ti memristive devices deposited by magnetron sputtering. Journal of Physics: Conference Series, 2016, 741, 012174.	0.3	11
20	Enhanced Solar-Blind Photodetection Performance of Encapsulated Ga ₂ O ₃ Nanocrystals in Al ₂ O ₃ Matrix. IEEE Sensors Journal, 2018, 18, 4046-4052.	2.4	11
21	MOCVD Growth of InGaAs/GaAs/AlGaAs Laser Structures with Quantum Wells on Ge/Si Substrates. Crystals, 2018, 8, 311.	1.0	11
22	Peculiarities in the formation of gold nanoparticles by ion implantation in stabilized zirconia. Technical Physics Letters, 2012, 38, 185-187.	0.2	9
23	Application of cobalt in spin light-emitting Schottky diodes with InGaAs/GaAs quantum wells. Journal of Surface Investigation, 2015, 9, 706-709.	0.1	9
24	Robustness of ferromagnetism in (In,Fe)Sb diluted magnetic semiconductor to variation of charge carrier concentration. Journal of Magnetism and Magnetic Materials, 2019, 485, 236-243.	1.0	9
25	Annealing-induced evolution of the structural and morphological properties of a multilayer nanoporous SiO _x /ZrO ₂ system containing Si nanoclusters. Semiconductors, 2014, 48, 42-45.	0.2	8
26	Quenching the photoluminescence from Si nanocrystals of smaller sizes in dense ensembles due to migration processes. Journal of Luminescence, 2014, 155, 1-6.	1.5	8
27	Formation of hexagonal 9R silicon polytype by ion implantation. Technical Physics Letters, 2017, 43, 767-769.	0.2	8
28	Formation of epitaxial p-i-n structures on the basis of (In,Fe)Sb and (Ga,Fe)Sb diluted magnetic semiconductors layers. Journal of Magnetism and Magnetic Materials, 2019, 487, 165321.	1.0	8
29	Effect of ion doping on the dislocation-related photoluminescence in Si ⁺ -implanted silicon. Semiconductors, 2014, 48, 199-203.	0.2	7
30	Epitaxial growth of hexagonal silicon polytypes on sapphire. Semiconductors, 2015, 49, 95-98.	0.2	7
31	Layer-by-layer composition and structure of silicon subjected to combined gallium and nitrogen ion implantation for the ion synthesis of gallium nitride. Semiconductors, 2016, 50, 271-275.	0.2	7
32	The nature of transport and ferromagnetic properties of the GaAs structures with the Mn ²⁺ -doped layer. Journal of Magnetism and Magnetic Materials, 2019, 478, 84-90.	1.0	7
33	High-temperature intrinsic ferromagnetism in heavily Fe-doped GaAs layers. Semiconductor Science and Technology, 2020, 35, 125032.	1.0	7
34	Effect of Boron Impurity on the Light-Emitting Properties of Dislocation Structures Formed in Silicon by Si ⁺ Ion Implantation. Semiconductors, 2018, 52, 843-848.	0.2	6
35	Growing nanocrystalline silicon on sapphire by molecular beam epitaxy. Technical Physics Letters, 2010, 36, 548-550.	0.2	5
36	Tunnel-coupled InGaAs/GaAs quantum wells: Structure, composition, and energy spectrum. Semiconductors, 2012, 46, 1476-1480.	0.2	5

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37	Investigation of deformations and strain fields in silicon matrix structures embedded with vertically stacked Ge(Si) self-assembled islands. Applied Physics Letters, 2014, 105, .	1.5	5
38	Self-assembled nanocrystals discovered in Chelyabinsk meteorite. Scientific Reports, 2015, 4, 4280.	1.6	5
39	Peculiarities of growing InGaAs/GaAs/AlGaAs laser structures by MOCVD on Ge/Si substrates. Semiconductors, 2017, 51, 1527-1530.	0.2	5
40	Photoluminescence of silicon at 1235Ånm produced by irradiation of SiO ₂ /Si with Kr ⁺ ions and subsequent high-temperature annealing. Surface and Coatings Technology, 2020, 386, 125496.	2.2	5
41	Impact of metallic coating on the retention of ²²⁵ Ac and its daughters within core-shell nanocarriers. Journal of Colloid and Interface Science, 2022, 608, 2571-2583.	5.0	5
42	Formation of Au ₄ Zr nanocrystals in yttria stabilized zirconia in the course of implantation of gold ions. Technical Physics Letters, 2015, 41, 543-546.	0.2	4
43	Localization of dislocation-related luminescence centers in self-ion implanted silicon and effect of additional boron ion doping. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 84-88.	0.8	4
44	Single-phase epitaxial InFeSb layers with a Curie temperature above room temperature. Physics of the Solid State, 2017, 59, 2220-2222.	0.2	4
45	Conductive Atomic Force Microscopy Study of the Resistive Switching in Yttria-Stabilized Zirconia Films with Au Nanoparticles. Scanning, 2018, 2018, 1-9.	0.7	4
46	Electrophysical Characteristics of Multilayer Memristive Nanostructures Based on Yttria-Stabilized Zirconia and Tantalum Oxide. Technical Physics, 2020, 65, 284-290.	0.2	4
47	A mechanism of effect of optical excitation on resistive switching in ZrO ₂ (Y) films with Au nanoparticles. Journal Physics D: Applied Physics, 2021, 54, 485303.	1.3	4
48	Investigation of silicon-on-sapphire structures by means of TEM. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 1002-1004.	0.1	3
49	Epitaxial growth of MnGa/GaAs layers for diodes with spin injection. Physics of the Solid State, 2014, 56, 2131-2134.	0.2	3
50	Distribution of D1 dislocation luminescence centers in Si ⁺ -implanted silicon and the photoluminescence model. Modern Electronic Materials, 2015, 1, 33-37.	0.2	3
51	Growth of light-emitting SiGe heterostructures on strained silicon-on-insulator substrates with a thin oxide layer. Semiconductors, 2015, 49, 1104-1110.	0.2	3
52	An oscillator based on a single Au nanocluster. Journal of Applied Physics, 2017, 121, 014308.	1.1	3
53	Memristive Spike- Timing-Dependent Plasticity. , 2021, , .		3
54	Silicon-Compatible Memristive Devices Tailored by Laser and Thermal Treatments. Journal of Low Power Electronics and Applications, 2022, 12, 14.	1.3	3

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55	Ion-Beam Synthesis of Gallium Oxide Nanocrystals in a SiO ₂ /Si Dielectric Matrix. <i>Nanomaterials</i> , 2022, 12, 1840.	1.9	3
56	Structural and photoluminescence properties of heteroepitaxial silicon-on-sapphire layers. <i>Physics of the Solid State</i> , 2004, 46, 10-12.	0.2	2
57	Heteroepitaxy of Erbium-Doped Silicon Layers on Sapphire Substrates. <i>Physics of the Solid State</i> , 2005, 47, 89.	0.2	2
58	Growth model of silicon nanoislands on sapphire. <i>Semiconductors</i> , 2013, 47, 1595-1597.	0.2	2
59	Ion-beam synthesis of GaN in silicon. <i>Journal of Physics: Conference Series</i> , 2015, 643, 012082.	0.3	2
60	Distribution of elastic strains appearing in gallium arsenide as a result of doping with isovalent impurities of phosphorus and indium. <i>Semiconductors</i> , 2015, 49, 1-3.	0.2	2
61	Resistive Switching in Memristors Based on Ge/Si(001) Epitaxial Layers. <i>Semiconductors</i> , 2020, 54, 1833-1835.	0.2	2
62	Bipolar resistive switching in memristors based on Ge/Si(001) epitaxial layers. <i>Journal of Physics: Conference Series</i> , 2020, 1695, 012158.	0.3	2
63	Influence of chemical nature of implanted atoms on photoluminescence of ion-synthesized 9R-Si hexagonal silicon. <i>Materials Letters</i> , 2022, 308, 131103.	1.3	2
64	The Properties of Amorphous Silicon Doped with Isovalent Impurities. <i>Physica Status Solidi (B): Basic Research</i> , 1987, 142, K125.	0.7	1
65	Nonmonotonic character of the growth-temperature dependence of the resistance of polycrystalline silicon films. <i>Semiconductors</i> , 1998, 32, 562-564.	0.2	1
66	Structural perfection of heteroepitaxial silicon layers grown on sapphire by sublimation-source molecular beam epitaxy. <i>Inorganic Materials</i> , 2007, 43, 331-337.	0.2	1
67	<title>Molecular-beam epitaxy of ultrathin Si films on sapphire</title>. , 2008, , .		1
68	Influence of ion irradiation on the morphology, structure, and optical properties of gold nanoparticles synthesized in SiO ₂ and Al ₂ O ₃ dielectric matrices. <i>Journal of Surface Investigation</i> , 2012, 6, 681-687.	0.1	1
69	Effect of ion irradiation on the structure and luminescence characteristics of porous silicon impregnated with tungsten-telluride glass doped by Er and Yb impurities. <i>Physics of the Solid State</i> , 2014, 56, 631-634.	0.2	1
70	Influence of the technological parameters of growth on the characteristics of double tunnel-coupled InGaAs/GaAs quantum wells. <i>Semiconductors</i> , 2015, 49, 55-59.	0.2	1
71	Effect of thermal annealing on the emission properties of heterostructures containing a quantum-confined GaAsSb layer. <i>Semiconductors</i> , 2015, 49, 9-12.	0.2	1
72	Structural, optical, and current investigations of superlattices with a complex AlGaAs-based unit cell. <i>Semiconductors</i> , 2015, 49, 118-123.	0.2	1

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73	On the crystal structure and thermoelectric properties of thin Si _{1-x} Mn _x films. Semiconductors, 2016, 50, 1453-1457.	0.2	1
74	Features of the selective manganese doping of GaAs structures. Semiconductors, 2017, 51, 1415-1419.	0.2	1
75	Formation of hexagonal silicon regions in silicon. Journal of Physics: Conference Series, 2018, 1124, 022007.	0.3	1
76	X-Ray Photoelectron Spectroscopy of Stabilized Zirconia Films with Embedded Au Nanoparticles Formed under Irradiation with Gold Ions. Physics of the Solid State, 2018, 60, 598-602.	0.2	1
77	Studies of the Cross Section and Photoluminescence of a GaAs Layer Grown on a Si/Al ₂ O ₃ Substrate. Semiconductors, 2019, 53, 1242-1245.	0.2	1
78	Diode Structures Based on (In, Fe)Sb/GaAs Magnetic Heterojunctions. Technical Physics Letters, 2019, 45, 668-671.	0.2	1
79	Mechanism of formation of light-emitting silicon hexagonal phase 9R-Si. Journal of Physics: Conference Series, 2019, 1410, 012037.	0.3	1
80	Growth of a Ge Layer on a Si/SiO ₂ /Si(100) Structure by the Hot Wire Chemical Vapor Deposition. Semiconductors, 2020, 54, 1332-1335.	0.2	1
81	Circularly Polarized Electroluminescence of Spin LEDs with a Ferromagnetic (In, Fe)Sb Injector. Technical Physics Letters, 2020, 46, 691-694.	0.2	1
82	Light-emitting hexagonal 9R-Si phase obtained by implantation of Kr ⁺ ions in Si and SiO ₂ /Si. Journal of Physics: Conference Series, 2020, 1695, 012031.	0.3	1
83	Growth defects in GeSn/Ge/Si(001) epitaxial layers grown by hot wire chemical vapor deposition of Ge with co-evaporation of Sn. Journal of Crystal Growth, 2022, 578, 126421.	0.7	1
84	Comparison of III-V Heterostructures Grown on Ge/Si, Ge/SOI, and GaAs. Semiconductors, 2022, 56, 122-133.	0.2	1
85	Structure and properties of amorphous silicon doped with isovalent impurities. Physica Status Solidi A, 1989, 116, 697-702.	1.7	0
86	Structure and electrical conductivity of polycrystalline silicon films grown by molecularbeam deposition accompanied by low-energy ion bombardment of the growth surface. Semiconductors, 1997, 31, 237-240.	0.2	0
87	Hydrogen sensitivity of a silicon Schottky diode increased by modification of the semiconductor surface microrelief. Technical Physics Letters, 2002, 28, 355-356.	0.2	0
88	Sapphire surface preparation for the growth of silicon layers by molecular-beam epitaxy. Inorganic Materials, 2010, 46, 693-702.	0.2	0
89	Analysis of the growth dependences of silicon-on-sapphire heteroepitaxy. Semiconductors, 2013, 47, 865-869.	0.2	0
90	A method for determining the state of the silicon-sapphire boundary in thin silicon-on-sapphire layers. Russian Microelectronics, 2013, 42, 529-531.	0.1	0

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91	Influence of the ion synthesis and ion doping regimes on the effect of sensitization of erbium emission by silicon nanoclusters in silicon dioxide films. <i>Physics of the Solid State</i> , 2013, 55, 2361-2367.	0.2	0
92	Structure and luminescence of silicon irradiated by protons. <i>Inorganic Materials: Applied Research</i> , 2014, 5, 133-137.	0.1	0
93	Study of the crystal structure of silicon nanoislands on sapphire. <i>Semiconductors</i> , 2015, 49, 154-156.	0.2	0
94	Fabrication of MnGa/GaAs contacts for optoelectronics and spintronics applications. <i>Semiconductors</i> , 2016, 50, 1443-1448.	0.2	0
95	Influence of the deposition and annealing temperatures on the luminescence of germanium nanocrystals formed in GeO _x films and multilayer Ge/SiO ₂ structures. <i>Physics of the Solid State</i> , 2017, 59, 992-998.	0.2	0
96	Effect of the cap-layer composition on the electronic properties of InAs/GaAs quantum dots. <i>Semiconductors</i> , 2017, 51, 1395-1398.	0.2	0
97	Investigation of local charge accumulation in yttria stabilized zirconia films with Au nanoparticles by Scanning Kelvin Probe Microscopy. <i>Journal of Physics: Conference Series</i> , 2018, 1124, 081028.	0.3	0
98	Relation between the Electronic Properties and Structure of InAs/GaAs Quantum Dots Grown by Vapor-Phase Epitaxy. <i>Semiconductors</i> , 2018, 52, 1525-1528.	0.2	0
99	On the Combined Application of Raman Spectroscopy and Photoluminescence Spectroscopy for the Diagnostics of Multilayer Heterostructures. <i>Semiconductors</i> , 2019, 53, 1207-1210.	0.2	0
100	Resistive switching in metal-oxide memristive materials and devices. , 2022, , 33-78.		0
101	Technology and neuromorphic functionality of magnetron-sputtered memristive devices. , 2022, , 109-131.		0
102	Electrical Properties of Silicon-Oxide-Based Memristors on Silicon-on-Insulator Substrates. <i>Nanobiotechnology Reports</i> , 2021, 16, 745-754.	0.2	0
103	Investigation of resistive switching in Ag/Ge/Si(001) stack by conductive atomic force microscopy. <i>Journal of Physics: Conference Series</i> , 2021, 2086, 012043.	0.3	0