Andrey Bakin

List of Publications by Year in descending order

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138 papers	2,930 citations	201674 27 h-index	197818 49 g-index
140 all docs	140 docs citations	140 times ranked	3501 citing authors

#	Article	IF	Citations
1	Liquid metal intercalation of epitaxial graphene: Large-area gallenene layer fabrication through gallium self-propagation at ambient conditions. Physical Review Materials, 2021, 5, .	2.4	10
2	Vertical 3D gallium nitride field-effect transistors based on fin structures with inverted p-doped channel. Semiconductor Science and Technology, 2021, 36, 014002.	2.0	13
3	Plasma profiling time-of-flight mass spectrometry for fast elemental analysis of semiconductor structures with depth resolution in the nanometer range. Semiconductor Science and Technology, 2020, 35, 035006.	2.0	0
4	Top-down GaN nanowire transistors with nearly zero gate hysteresis for parallel vertical electronics. Scientific Reports, 2019, 9, 10301.	3.3	32
5	Organophosphonate Functionalization of Al₂O₃-Coated Nanopores. , 2019, , .		1
6	Homogeneous Large-Area Quasi-Free-Standing Monolayer and Bilayer Graphene on SiC. ACS Applied Nano Materials, 2019, 2, 844-852.	5.0	24
7	Probing the structural transition from buffer layer to quasifreestanding monolayer graphene by Raman spectroscopy. Physical Review B, 2019, 99, .	3.2	13
8	A morphology study on the epitaxial growth of graphene and its buffer layer. Thin Solid Films, 2018, 659, 7-15.	1.8	22
9	Self-actuating and self-sensing ZNO nanorods/chitosan coated piezoresistive silicon microcantilever for humidit Y sensing. , 2018, , .		7
10	Normally Off Vertical 3-D GaN Nanowire MOSFETs With Inverted <inline-formula> <tex-math notation="LaTeX">${p}$ </tex-math> </inline-formula>-GaN Channel. IEEE Transactions on Electron Devices, 2018, 65, 2439-2445.	3.0	32
11	GaN nanowire arrays with nonpolar sidewalls for vertically integrated field-effect transistors. Nanotechnology, 2017, 28, 095206.	2.6	58
12	Modelling plexcitons of periodic gold nanorod arrays with molecular components. Nanotechnology, 2017, 28, 195201.	2.6	3
13	Fabrication of ZnO Nanorods on MEMS Piezoresistive Silicon Microcantilevers for Environmental Monitoring. Proceedings (mdpi), 2017, 1, .	0.2	15
14	Vertical architecture for enhancement mode power transistors based on GaN nanowires. Applied Physics Letters, 2016, 108, .	3.3	55
15	Effect of Potentiostatic and Galvanostatic Electrodeposition Modes on the Basic Parameters of Solar Cells Based on Cu₂O Thin Films. ECS Journal of Solid State Science and Technology, 2016, 5, Q183-Q187.	1.8	23
16	Fabrication and characterization of low cost Cu 2 O/ZnO:Al solar cells for sustainable photovoltaics with earth abundant materials. Solar Energy Materials and Solar Cells, 2016, 145, 454-461.	6.2	40
17	Fabrication of wear-resistant silicon microprobe tips for high-speed surface roughness scanning devices. Proceedings of SPIE, 2015, , .	0.8	2
18	Fabrication and characterization of flexible solar cell from electrodeposited Cu2O thin film on plastic substrate. Solar Energy, 2015, 122, 1193-1198.	6.1	41

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19	Surface photovoltage in heavily doped GaN:Si,Zn. , 2014, , .		1
20	Oxides for sustainable photovoltaics with earth-abundant materials. Proceedings of SPIE, 2014, , .	0.8	5
21	Fabrication of ZnO Nanostructures. , 2014, , 1-42.		0
22	Determination of zinc concentration in GaN:Zn,Si from photoluminescence. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 523-526.	0.8	4
23	Spin noise spectroscopy of donor-bound electrons in ZnO. Physical Review B, 2013, 87, .	3.2	17
24	Second-harmonic generation spectroscopy of excitons in ZnO. Physical Review B, 2013, 88, .	3.2	58
25	Higher than 90% internal quantum efficiency of photoluminescence in GaN:Si,Zn. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 507-510.	0.8	1
26	Magneto-Stark Effect of Excitons as the Origin of Second Harmonic Generation in ZnO. Physical Review Letters, 2013, 110, 116402.	7.8	27
27	Spin noise spectroscopy of ZnO. , 2013, , .		0
28	Vapour phase epitaxy of Cu2 O on a-plane Al2 O3. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1284-1287.	0.8	4
29	Determination of the absolute internal quantum efficiency of photoluminescence in GaN co-doped with Si and Zn. Journal of Applied Physics, 2012, 111, .	2.5	47
30	Transparent conductive Gaâ€doped ZnO films fabricated by MOCVD. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 708-713.	1.8	13
31	Zn doped GaN for singleâ€photon emission. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1024-1027.	0.8	2
32	Two step deposition method with a high growth rate for ZnO nanowire arrays and its application in photovoltaics. Thin Solid Films, 2012, 520, 4637-4641.	1.8	10
33	Fabrication and characterization of nanoporous ZnO layers for sensing applications. Thin Solid Films, 2012, 520, 4662-4665.	1.8	11
34	Analysis and Modeling of Thermomechanically Improved Silver-Sintered Die-Attach Layers Modified by Additives. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1846-1855.	2.5	30
35	ZnO Epitaxial Growth. , 2011, , 368-395.		2
36	Excitonic spectrum of the ZnO/ZnMgO quantum wells. Semiconductors, 2011, 45, 766-770.	0.5	1

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37	Interpretation of transport measurements in ZnO-thin films. Applied Physics A: Materials Science and Processing, 2011, 102, 161-168.	2.3	3
38	Implementation of ZnO/ZnMgO strained-layer superlattice for ZnO heteroepitaxial growth on sapphire. Journal of Crystal Growth, 2011, 323, 111-113.	1.5	6
39	Extremely high absolute internal quantum efficiency of photoluminescence in co-doped GaN:Zn,Si. Applied Physics Letters, 2011, 99, 171110.	3.3	9
40	ZnO-GaN Hybrid Heterostructures as Potential Cost-Efficient LED Technology. Proceedings of the IEEE, 2010, 98, 1281-1287.	21.3	25
41	GaN and ZnO nanostructures. Physica Status Solidi (B): Basic Research, 2010, 247, 2315-2328.	1.5	4
42	Electroluminescence from a n-ZnO/p-GaN hybrid LED. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1709-1711.	0.8	5
43	Development of a Wire-Bond Technology for SiC High Temperature Applications. Materials Science Forum, 2010, 645-648, 749-752.	0.3	2
44	Swelling Phenomena in Sintered Silver Die Attach Structures at High Temperatures: Reliability Problems and Solutions for an Operation above 350Â°C. Additional Conferences (Device Packaging) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5		1
45	MOVPE gallium-nitride nanostructures fabricated on ZnO nanorod templates grown from aqueous chemical solution. IOP Conference Series: Materials Science and Engineering, 2009, 6, 012003.	0.6	2
46	Mechanisms for high internal quantum efficiency of ZnO nanorods. Journal of Applied Physics, 2009, 106, .	2.5	16
47	ZnO Nanostructures and Thin Layers for Device Applications. ECS Transactions, 2009, 16, 107-115.	0.5	6
48	Photoluminescence from ZnO nanowires. Journal of Vacuum Science & Technology B, 2009, 27, 1688.	1.3	16
49	On quantum efficiency of photoluminescence in ZnO layers and nanostructures. Physica B: Condensed Matter, 2009, 404, 4813-4815.	2.7	6
50	Investigation of ZnO nanopillars fabrication in a new Thomas Swan close coupled showerhead MOCVD reactor. Microelectronics Journal, 2009, 40, 280-282.	2.0	15
51	Compared optical properties of ZnO heteroepitaxial, homoepitaxial 2D layers and nanowires. Journal of Crystal Growth, 2009, 311, 2172-2175.	1.5	15
52	Zinc oxide nanorod based photonic devices: recent progress in growth, light emitting diodes and lasers. Nanotechnology, 2009, 20, 332001.	2.6	572
53	Properties of Mn-doped ZnO nanopowder. Applied Physics A: Materials Science and Processing, 2008, 91, 375-378.	2.3	5
54	Electrodeposition of ZnO nanorods for device application. Applied Physics A: Materials Science and Processing, 2008, 91, 595-599.	2.3	41

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55	Growth of ZnO layers for transparent and flexible electronics. Thin Solid Films, 2008, 516, 1401-1404.	1.8	22
56	On the difficulties in characterizing ZnO nanowires. Nanotechnology, 2008, 19, 365707.	2.6	45
57	Gallium nitride heterostructures on 3D structured silicon. Nanotechnology, 2008, 19, 405301.	2.6	10
58	Electrical and structural characterisation of single ZnO nanorods. Microelectronic Engineering, 2008, 85, 1248-1252.	2.4	4
59	Demonstration of a ZnO/MgZnO-based one-dimensional photonic crystal multiquantum well laser. Applied Physics Letters, 2008, 93, 101109.	3.3	11
60	Characterization of an optically pumped ZnO-based 3rdorder distributed feedback laser. , 2008, , .		0
61	Dye-Sensitized Solar Cells on the Basis of ZnO Nanorods. Journal of the Korean Physical Society, 2008, 53, 115-118.	0.7	16
62	Electrical Properties of ZnO-Based Nanostructures. Journal of the Korean Physical Society, 2008, 53, 119-122.	0.7	2
63	Structural and Spectroscopic Properties of a 2 Inch ZnO-on-Sapphire Epiwafer Grown by Using Molecular Beam Epitaxy. Journal of the Korean Physical Society, 2008, 53, 2877-2879.	0.7	1
64	Studies of N-Doped p-ZnO Layers Grown on c-Sapphire by Radical Source Molecular Beam Epitaxy. Journal of the Korean Physical Society, 2008, 53, 3016-3020.	0.7	7
65	Microscopic Origin of the Near-Band-Edge Emission in Aqueous Chemically-Grown ZnO Nanorods. Journal of the Korean Physical Society, 2008, 53, 2867-2869.	0.7	0
66	Controlled low-temperature fabrication of ZnO nanopillars with a wet-chemical approach. Nanotechnology, 2007, 18, 195602.	2.6	25
67	Etch-Pit Density Investigation on Both Polar Faces of ZnO Substrates. Electrochemical and Solid-State Letters, 2007, 10, H357.	2.2	16
68	Properties of V-implanted ZnO nanorods. Nanotechnology, 2007, 18, 125609.	2.6	6
69	Determination of the specific resistance of individual freestanding ZnO nanowires with the low energy electron point source microscope. Applied Physics Letters, 2007, 91, 253126.	3.3	34
70	Demonstration of an ultraviolet ZnO-based optically pumped third order distributed feedback laser. Applied Physics Letters, 2007, 91, 111108.	3.3	20
71	Recombination dynamics and lasing in ZnOâˆ•ZnMgO single quantum well structures. Applied Physics Letters, 2007, 91, 201104.	3.3	19
72	Optical investigations and exciton localization in high quality Zn1â^'xMgxOâ€“ZnO single quantum wells. Applied Physics Letters, 2007, 91, .	3.3	27

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73	Influence of ZnO seed crystals and annealing on the optical quality of low-temperature grown ZnO nanorods. Journal of Applied Physics, 2007, 102, .	2.5	37
74	Photoluminescence dynamics of surface-related emission in VPE grown ZnO nanowires. AIP Conference Proceedings, 2007, , .	0.4	0
75	Fabrication of ZnO nanorod-based pâ€“n heterojunction on SiC substrate. Superlattices and Microstructures, 2007, 42, 415-420.	3.1	26
76	Magnetic characterization of ZnO doped with vanadium. Superlattices and Microstructures, 2007, 42, 236-241.	3.1	18
77	Growth of wide band gap wurtzite ZnMgO layers on (0001) Al2O3 by radical-source molecular beam epitaxy. Superlattices and Microstructures, 2007, 42, 129-133.	3.1	24
78	Vapour phase transport growth of ZnO layers and nanostructures. Superlattices and Microstructures, 2007, 42, 33-39.	3.1	30
79	Misfit reduction by a spinel layer formed during the epitaxial growth of ZnO on sapphire using a MgO buffer layer. Journal of Crystal Growth, 2007, 308, 314-320.	1.5	18
80	ZnMgO-ZnO quantum wells embedded in ZnO nanopillars: Towards realisation of nano-LEDs. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 158-161.	0.8	35
81	Growth kinetics and properties of ZnO/ZnMgO hetero- structures grown by radical-source molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 154-157.	0.8	5
82	Cathodoluminescence of single ZnO nanorod heterostructures. Physica Status Solidi (B): Basic Research, 2007, 244, 1458-1461.	1.5	16
83	Electrical characterization of ZnO nanorods. Physica Status Solidi (B): Basic Research, 2007, 244, 1473-1477.	1.5	17
84	High performance III/V RTD and PIN diode on a silicon (001) substrate. Applied Physics A: Materials Science and Processing, 2007, 87, 539-544.	2.3	11
85	H2O2-molecular beam epitaxy of high quality ZnO. Applied Physics A: Materials Science and Processing, 2007, 88, 57-60.	2.3	5
86	Vapour transport growth of ZnO nanorods. Applied Physics A: Materials Science and Processing, 2007, 88, 17-20.	2.3	16
87	Magnetism in V-/Mn-doped ZnO layers fabricated on sapphire. Applied Physics A: Materials Science and Processing, 2007, 88, 161-166.	2.3	12
88	Selective growth of ZnO nanorods in aqueous solution. Superlattices and Microstructures, 2007, 42, 425-430.	3.1	23
89	Layer by layer growth of ZnO on (0001) sapphire substrates by radical-source molecular beam epitaxy. Superlattices and Microstructures, 2007, 42, 158-164.	3.1	8
90	Fabrication and characterization of n-ZnO on p-SiC heterojunction diodes on 4H-SiC substrates. Superlattices and Microstructures, 2007, 42, 387-391.	3.1	26

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91	Optical studies of ZnO doped with transition metals. , 2006, , .		1
92	Influence of exciton-phonon coupling on the energy position of the near-band-edge photoluminescence of ZnO nanowires. Applied Physics Letters, 2006, 89, 182107.	3.3	124
93	A study of ZnMnO as a material for magneto- and spin-electronics. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1104-1108.	0.8	3
94	Catalyst-free vapor-phase transport growth of vertically aligned ZnO nanorods on 6H-SiC and (11-20)Al2O3. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1046-1050.	0.8	35
95	CBE growth of high-quality ZnO epitaxial layers. Physica Status Solidi (B): Basic Research, 2006, 243, 768-772.	1.5	18
96	MBE growth of ZnO layers on sapphire employing hydrogen peroxide as an oxidant. Journal of Crystal Growth, 2006, 287, 7-11.	1.5	39
97	Optical and electrical properties of ZnMnO layers grown by peroxide MBE. Superlattices and Microstructures, 2006, 39, 291-298.	3.1	29
98	Magnetic property investigations on ZnMnO. Superlattices and Microstructures, 2006, 39, 381-386.	3.1	18
99	Analysis of a conducting channel at the native zinc oxide surface. Superlattices and Microstructures, 2006, 39, 8-16.	3.1	60
100	Photoluminescence properties: Catalyst-free ZnO nanorods and layers versus bulk ZnO. Applied Physics Letters, 2006, 89, 231911.	3.3	31
101	Dynamics of surface-excitonic emission in ZnO nanowires. Physical Review B, 2006, 74, .	3.2	98
102	Structural characterization of ZnO films grown by molecular beam epitaxy on sapphire with MgO buffer. Journal of Applied Physics, 2006, 100, 103506.	2.5	26
103	A two-step obtainment of quantum confinement in ZnO nanorods. Nanotechnology, 2006, 17, 4859-4862.	2.6	9
104	High-quality ZnO layers grown by MBE on sapphire. Superlattices and Microstructures, 2005, 38, 265-271.	3.1	65
105	SiC HOMOEPITAXY AND HETEROEPITAXY. International Journal of High Speed Electronics and Systems, 2005, 15, 747-780.	0.7	5
106	Magnetic property investigations on Mn-doped ZnO Layers on sapphire. Applied Physics Letters, 2005, 87, 062501.	3.3	97
107	Growth of III/V resonant tunnelling diode on Si substrate with LP-MOVPE. Journal of Crystal Growth, 2003, 248, 380-383.	1.5	8
108	Growth of InP Layers on Nanometer-Scale Patterned Si Substrates. Crystal Growth and Design, 2003, 3, 89-93.	3.0	20

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109	Elastic and anelastic properties of Fe-doped InP films on silicon cantilevers. Journal of Applied Physics, 2002, 91, 9031-9038.	2.5	2
110	Growth of 3C-SiC on Si(100) by LPCVD and Patterning of the Grown Layers. Materials Science Forum, 2002, 389-393, 327-330.	0.3	4
111	Micromachining of silicon carbide on silicon fabricated by low-pressure chemical vapour deposition. Journal of Micromechanics and Microengineering, 2002, 12, 380-384.	2.6	12
112	Mechanical Spectroscopy of Pure and Fe-Doped InP Films on Silicon Cantilevers. Defect and Diffusion Forum, 2002, 206-207, 179-182.	0.4	0
113	Semiconductor nanostructures for quantum wire lasers. , 2002, 4748, 476.		1
114	Monolithic InGaAsP optoelectronic devices with silicon electronics. IEEE Journal of Quantum Electronics, 2001, 37, 1246-1252.	1.9	17
115	Growth of SiC on Si(100) by Low-Pressure MOVPE. Materials Science Forum, 2001, 353-356, 163-166.	0.3	3
116	Hetero-Micromachining of Epitaxial III/V Compound Semiconductors. , 2001, , 1-8.		0
117	Hetero-micromachining of epitaxial III/V compound semiconductors. Sensors and Actuators A: Physical, 2000, 85, 324-329.	4.1	6
118	Stress and misoriented area formation under large silicon carbide boule growth. Journal of Crystal Growth, 1999, 198-199, 1015-1018.	1.5	11
119	The analysis of mass transfer in system Î²-SiCâ€“Î±-SiC under silicon carbide sublimation growth. Journal of Crystal Growth, 1999, 198-199, 1011-1014.	1.5	29
120	Optically Transparent 6H-Silicon Carbide. Materials Science Forum, 1998, 264-268, 53-56.	0.3	0
121	SnO2 based gas sensitive sensor. Thin Solid Films, 1997, 296, 168-171.	1.8	17
122	Simulation of heat and mass transfer during growth of silicon carbide single crystals. Semiconductors, 1997, 31, 672-676.	0.5	6
123	Surface processing of silicon carbide substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 46, 370-373.	3.5	3
124	High temperature chemical vapor deposition of SiC. Applied Physics Letters, 1996, 69, 1456-1458.	3.3	111
125	Simulation of the orientationâ€dependent growth of InGaAs/InP by metalorganic vaporâ€phase epitaxy. Journal of Applied Physics, 1994, 76, 4906-4908.	2.5	7
126	Sizes of crystallites as a function of cooling rate. Scripta Metallurgica Et Materialia, 1994, 31, 1131-1134.	1.0	1

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127	The Pb1â^'xSnxTe gas phase epitaxy. Journal of Crystal Growth, 1989, 94, 651-655.	1.5	1
128	Electrical conductivity of ceramics of SiC-AlN, SiC-BeO, Al/sub 2/O/sub 3/ in the temperature range 300-1800 K. , 0, , .		1
129	Silicon carbide as a material for high temperature posistors. , 0, , .		1
130	State-of-the-art in defect control of bulk SiC. , 0, , .		0
131	6H- and 4H-silicon carbide for device applications. , 0, , .		0
132	Homogeneity of InGaAs/InP nanostructures. , 0, , .		0
133	Intersubband absorption in Î´-doped GaInAs-InP multi quantum wells. , 0, , .		0
134	Influence of substrate preparation on fracture properties of InP cantilevers. , 0, , .		0
135	High-speed InP-based resonant tunnelling diode on silicon substrate. , 0, , .		2
136	Design and modelling of a III/V mobile-gate with optical input on a silicon substrate. , 0, , .		3
137	Excitonic Properties of ZnO. , 0, , 275-287.		20
138	SiC-Die-Attachment for High Temperature Applications. Materials Science Forum, 0, 645-648, 741-744.	0.3	15