Boris Polyakov

List of Publications by Year in descending order

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71	1,101	361296	434063
papers	citations	20 h-index	31 g-index

73	73	73	1413
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Kinking in Semiconductor Nanowires: A Review. Crystal Growth and Design, 2022, 22, 871-892.	1.4	6
2	Unraveling the Structure and Properties of Layered and Mixed ReO₃â€“WO₃ Thin Films Deposited by Reactive DC Magnetron Sputtering. ACS Omega, 2022, 7, 1827-1837.	1.6	3
3	Different strategies for GaN-MoS2 and GaN-WS2 coreâ€“shell nanowire growth. Applied Surface Science, 2022, 590, 153106.	3.1	2
4	Excited States Calculations of MoS2@ZnO and WS2@ZnO Two-Dimensional Nanocomposites for Water-Splitting Applications. Energies, 2022, 15, 150.	1.6	14
5	The role of Al2O3 interlayer in the synthesis of ZnS/Al2O3/MoS2 core-shell nanowires. Journal of Alloys and Compounds, 2022, 918, 165648.	2.8	4
6	Tailoring of rhenium oxidation state in ReOx thin films during reactive HiPIMS deposition process and following annealing. Materials Chemistry and Physics, 2022, 289, 126399.	2.0	1
7	Comparative study of WSe2 thin films synthesized via pre-deposited WO3 and W precursor material selenization. Journal of Crystal Growth, 2022, 593, 126764.	0.7	2
8	Preparation of functional Ga2S3 and Ga2Se3 shells around Ga2O3 nanowires via sulfurization or selenization. Optical Materials, 2022, 131, 112675.	1.7	1
9	Synthesis and characterization of GaN/ReS2, ZnS/ReS2 and ZnO/ReS2 core/shell nanowire heterostructures. Applied Surface Science, 2021, 536, 147841.	3.1	13
10	Nanoscale X-ray detectors based on individual CdS, SnO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e136" altimg="si1.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mi mathvariant="bold">2</mml:mi></mml:mrow></mml:msub></mml:math> and ZnO nanowires. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1014, 165736.	0.7	2
11	Understanding the Conversion Process of Magnetron-Deposited Thin Films of Amorphous ReO_x to Crystalline ReO₃ upon Thermal Annealing. Crystal Growth and Design, 2020, 20, 6147-6156.	1.4	3
12	The effect of heat treatment on the morphology and mobility of Au nanoparticles. Beilstein Journal of Nanotechnology, 2020, 11, 61-67.	1.5	4
13	Growth and characterization of PbI2-decorated ZnO nanowires for photodetection applications. Journal of Alloys and Compounds, 2020, 825, 154095.	2.8	9
14	Mechanical characterisation of pentagonal gold nanowires in three different test configurations: A comparative study. Micron, 2019, 124, 102686.	1.1	7
15	Abrupt elastic-to-plastic transition in pentagonal nanowires under bending. Beilstein Journal of Nanotechnology, 2019, 10, 2468-2476.	1.5	3
16	Low-friction nanojoint prototype. Nanotechnology, 2018, 29, 195707.	1.3	1
17	Fast-Response Single-Nanowire Photodetector Based on ZnO/WS₂ Core/Shell Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 13869-13876.	4.0	60
18	Towards metal chalcogenide nanowire-based colour-sensitive photodetectors. Optical Materials, 2018, 75, 501-507.	1.7	5

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19	Au nanowire junction breakup through surface atom diffusion. Nanotechnology, 2018, 29, 015704.	1.3	27
20	Adhesion and Mechanical Properties of PDMS-Based Materials Probed with AFM: A Review. Reviews on Advanced Materials Science, 2018, 56, 62-78.	1.4	36
21	A comparative study of heterostructured CuO/CuWO4 nanowires and thin films. Journal of Crystal Growth, 2017, 480, 78-84.	0.7	17
22	Enhanced flexibility and electron-beam-controlled shape recovery in alumina-coated Au and Ag coreâ€“shell nanowires. Nanotechnology, 2017, 28, 505707.	1.3	15
23	Synthesis and characterization of ZnO/ZnS/MoS2 core-shell nanowires. Journal of Crystal Growth, 2017, 459, 100-104.	0.7	20
24	Target Transportation of Auxin on Mesoporous Au/SiO₂ Nanoparticles as a Method for Somaclonal Variation Increasing in Flax (L. usitatissimum L.). Journal of Nanomaterials, 2017, 2017, 1-9.	1.5	7
25	Complex tribomechanical characterization of ZnO nanowires: nanomanipulations supported by FEM simulations. Nanotechnology, 2016, 27, 335701.	1.3	19
26	Effect of cobalt doping on the mechanical properties of ZnO nanowires. Materials Characterization, 2016, 121, 40-47.	1.9	8
27	Unexpected Epitaxial Growth of a Few WS₂ Layers on {11Ì…00} Facets of ZnO Nanowires. Journal of Physical Chemistry C, 2016, 120, 21451-21459.	1.5	22
28	Structural factor in bending testing of fivefold twinned nanowires revealed by finite element analysis. Physica Scripta, 2016, 91, 115701.	1.2	4
29	The Impact of CdS Nanoparticles on Ploidy and DNA Damage of Rucola (Eruca sativaMill.) Plants. Journal of Nanomaterials, 2015, 2015, 1-7.	1.5	9
30	Mechanical and structural characterizations of gamma- and alpha-alumina nanofibers. Materials Characterization, 2015, 107, 119-124.	1.9	25
31	Metal nanodumbbells for nanomanipulations and tribological experiments. Physica Scripta, 2015, 90, 094007.	1.2	4
32	Plasmonic photoluminescence enhancement by silver nanowires. Physica Scripta, 2015, 90, 094008.	1.2	2
33	Mechanical characterization of TiO2 nanofibers produced by different electrospinning techniques. Materials Characterization, 2015, 100, 98-103.	1.9	25
34	Electron beam induced growth of silver nanowhiskers. Journal of Crystal Growth, 2015, 410, 63-68.	0.7	11
35	Mechanical properties of solâ€“gel derived SiO₂ nanotubes. Beilstein Journal of Nanotechnology, 2014, 5, 1808-1814.	1.5	9
36	Shape Restoration Effect in Agâ€“SiO₂ Coreâ€“Shell Nanowires. Nano Letters, 2014, 14, 5201-5205.	4.5	26

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37	Some aspects of formation and tribological properties of silver nanodumbbells. Nanoscale Research Letters, 2014, 9, 186.	3.1	11
38	Elasticity and yield strength of pentagonal silver nanowires: In situ bending tests. Materials Chemistry and Physics, 2014, 143, 1026-1031.	2.0	50
39	Analysis of static friction and elastic forces in a nanowire bent on a flat surface: A comparative study. Tribology International, 2014, 72, 31-34.	3.0	15
40	Manipulation of nanoparticles of different shapes inside a scanning electron microscope. Beilstein Journal of Nanotechnology, 2014, 5, 133-140.	1.5	24
41	Laser scribing on HOPG for graphene stamp printing on silicon wafer. Open Physics, 2013, 11, .	0.8	0
42	Realâ€time manipulation of ZnO nanowires on a flat surface employed for tribological measurements: Experimental methods and modeling. Physica Status Solidi (B): Basic Research, 2013, 250, 305-317.	0.7	26
43	Work function of colloidal semiconducting nanocrystals measured by Kelvin probe. IOP Conference Series: Materials Science and Engineering, 2012, 38, 012048.	0.3	7
44	Processing of amorphous Si by pulsed laser irradiation at different wavelengths. IOP Conference Series: Materials Science and Engineering, 2012, 38, 012009.	0.3	0
45	Modeling of kinetic and static friction between an elastically bent nanowire and a flat surface. Journal of Materials Research, 2012, 27, 580-585.	1.2	22
46	In situ measurements of ultimate bending strength of CuO and ZnO nanowires. European Physical Journal B, 2012, 85, 1.	0.6	19
47	The effect of substrate roughness on the static friction of CuO nanowires. Surface Science, 2012, 606, 1393-1399.	0.8	23
48	In situ measurement of the kinetic friction of ZnO nanowires inside a scanning electron microscope. Applied Surface Science, 2012, 258, 3227-3231.	3.1	21
49	Simultaneous measurement of static and kinetic friction of ZnO nanowires in situ with a scanning electron microscope. Micron, 2012, 43, 1140-1146.	1.1	11
50	PBS Nanodots for Ultraviolet Radiation Nanosensor. NATO Science for Peace and Security Series A: Chemistry and Biology, 2012, , 361-366.	0.5	0
51	Crystallization processes of amorphous Si by thermal annealing and pulsed laser processing. IOP Conference Series: Materials Science and Engineering, 2011, 23, 012035.	0.3	12
52	PbS Nanodots Embedded in ZrO2 Thin Films for Ultraviolet Radiation Dosimetry. IFMBE Proceedings, 2011, , 1307-1310.	0.2	1
53	Real-time measurements of sliding friction and elastic properties of ZnO nanowires inside a scanning electron microscope. Solid State Communications, 2011, 151, 1244-1247.	0.9	22
54	Structure and characteristics of laser crystallized thin amorphous Si films. Energy Procedia, 2011, 3, 42-45.	1.8	1

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55	Real-time manipulation of gold nanoparticles inside a scanning electron microscope. Solid State Communications, 2011, 151, 688-692.	0.9	17
56	Object size effect on the contact potential difference measured by scanning Kelvin probe method. EPJ Applied Physics, 2010, 51, 21201.	0.3	3
57	PATTERNED LASER CRYSTALLIZATION OF a-Si. Latvian Journal of Physics and Technical Sciences, 2009, 46, 50-54.	0.4	2
58	Rapid Annealing of Black ZnO Thin Films Prepared by Pulsed Laser Deposition. Latvian Journal of Physics and Technical Sciences, 2009, 46, 44-48.	0.4	0
59	Some aspects of pulsed laser deposition of Si nanocrystalline films. EPJ Applied Physics, 2009, 48, 20502.	0.3	3
60	<title>Formation of deep acceptor centers in AlGaN alloys</title>. , 2008, , .		0
61	AlGaN-InGaN-GaN Near Ultraviolet Light Emitting Diode. Latvian Journal of Physics and Technical Sciences, 2008, 45, 25-32.	0.4	4
62	Photoconductivity of Germanium Nanowire Arrays Incorporated in Anodic Aluminum Oxide. Journal of Physics: Conference Series, 2007, 61, 283-287.	0.3	12
63	Laser ablation for analysis of nanoscale layers. Journal of Physics: Conference Series, 2007, 93, 012043.	0.3	0
64	Study of the High-Frequency Inductive Coupled Discharge Plasma Interaction with Walls. Plasma Processes and Polymers, 2007, 4, S1026-S1029.	1.6	3
65	High Density Germanium Nanowire Assemblies:Â Contact Challenges and Electrical Characterization. Journal of Physical Chemistry B, 2006, 110, 820-826.	1.2	55
66	High-Density Arrays of Germanium Nanowire Photoresistors. Advanced Materials, 2006, 18, 1812-1816.	11.1	64
67	Bistable nanoelectromechanical devices. Applied Physics Letters, 2004, 84, 4074-4076.	1.5	74
68	Semiconducting Nanowires: Properties and Architectures. Solid State Phenomena, 2004, 99-100, 109-116.	0.3	4
69	Conductive films of ordered nanowire arrays. Journal of Materials Chemistry, 2004, 14, 585.	6.7	52
70	Spatial and Mechanical Properties of Dilute DNA Monolayers on Gold Imaged by AFM. Journal of Physical Chemistry B, 2003, 107, 3591-3597.	1.2	53
71	Electric and elastic properties of conductive polymeric nanocomposites on macro- and nanoscales. Materials Science and Engineering C, 2002, 19, 15-19.	3.8	61