Buczko Ryszard

List of Publications by Year in descending order

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90 papers	2,899 citations	279487 23 h-index	168136 53 g-index
90 all docs	90 docs citations	90 times ranked	3487 citing authors

#	Article	IF	Citations
1	Structure Inversion Asymmetry and Rashba Effect in Quantum Confined Topological Crystalline Insulator Heterostructures. Advanced Functional Materials, 2021, 31, 2008885.	7.8	12
2	Sub-Band Spectrum Engineering via Structural Order in Tapered Nanowires. Nano Letters, 2021, 21, 10215-10221.	4.5	1
3	Comment on â€œTuning topological surface states by cleavage angle in topological crystalline insulatorsâ€• Physical Review B, 2020, 101, .	1.1	1
4	Fragility of the Dirac Cone Splitting in Topological Crystalline Insulator Heterostructures. ACS Nano, 2018, 12, 617-626.	7.3	7
5	Topological states on uneven (Pb,Sn)Se (001) surfaces. Physical Review B, 2018, 98, .	1.1	8
6	Giant Rashba Splitting in Pb_{1â€“}_xSn_xTe (111) Topological Crystalline Insulator Films Controlled by Bi Doping in the Bulk. Advanced Materials, 2017, 29, 1604185.	11.1	44
7	Atomic Structure and Properties of Dislocations and Grain Boundaries. , 2016, , .		0
8	Quantum Spin Hall Effect in Strained (111)-Oriented SnSe Layers. Acta Physica Polonica A, 2016, 129, A-150-A-152.	0.2	0
9	Quantum spin Hall effect in IV-VI topological crystalline insulators. New Journal of Physics, 2015, 17, 063041.	1.2	38
10	Observation of topological crystalline insulator surface states on (111)-oriented Pb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Sn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Se films. Physical Review B, 2014, 89, .	1.1	62
11	Topological crystalline insulator (Pb,Sn)Te: Surface states and their spin polarization. Physical Review B, 2013, 88, .	1.1	91
12	Crystal Structure and Transport in Merged InAs Nanowires MBE Grown on (001) InAs. Nano Letters, 2013, 13, 5190-5196.	4.5	35
13	Segregation of Impurities in GaAs and InAs Nanowires. Journal of Physical Chemistry C, 2013, 117, 20361-20370.	1.5	12
14	First principles studies of structural, electrical and magnetic properties of semiconductor nanowires. Physica Status Solidi - Rapid Research Letters, 2013, 7, 739-753.	1.2	2
15	Spin-polarized (001) surface states of the topological crystalline insulator Pb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.73</mml:mn></mml:mrow></mml:msub></mml:math>Sn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.27</mml:mn></mml:mrow></mml:msub></mml:math>Se. Physical Review B, Structural and electronic properties of Pb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Cd<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Te and Pb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Cd<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Te	1.1	68
16		1.1	20
17	Topological crystalline insulator states inÂPb1â^’xSnxSe. Nature Materials, 2012, 11, 1023-1027.	13.3	693
18	PbTe/PbSnTe heterostructures as analogs of topological insulators. Physical Review B, 2012, 85, .	1.1	32

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19	Structure-Dependent Ferromagnetism in Mn-Doped IIIâ€“V Nanowires. Nano Letters, 2011, 11, 3319-3323.	4.5	38
20	Ferromagnetism in Mn-doped III-V Nanowires. AIP Conference Proceedings, 2011, , .	0.3	1
21	Crystal and electronic structure of PbTe/CdTe nanostructures. Nanoscale Research Letters, 2011, 6, 126.	3.1	13
22	Merging of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>4</mml:mn></mml:msup></mml:math>F<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn><mml:mo>/</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>level states of Nd<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:mo></	1.1	14
23	display="inline"><mml:mrow><mml:mi>I</mml:mi></mml:mrow></mml:math>-acceptor-doped GaAs/Al<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math>Ga<mml:math	1.1	6
24	Phonon Effects on the Weak Measurement of Charge States in Quantum Dots with a Quantum Point Contact. Acta Physica Polonica A, 2011, 119, 640-643.	0.2	1
25	Stability of IIIâ€“V and IVâ€“VI nanowiresâ€”A theoretical study. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 795-798.	1.3	7
26	What Determines the Crystal Structure of Nanowires?. AIP Conference Proceedings, 2010, , .	0.3	8
27	Optical Î“[sub 6]â†’Î“[sub 8] Free-to-Bound Transition in Acceptor Î´-doped Single Heterostructureâ€”Theoretical Analysis. , 2010, , .		0
28	Defect Free PbTe Nanowires Grown by Molecular Beam Epitaxy on GaAs(111)B Substrates. Crystal Growth and Design, 2010, 10, 109-113.	1.4	18
29	Optical electron spin pumping in n-doped quantum wells. Journal of Physics Condensed Matter, 2009, 21, 045802.	0.7	2
30	Method for Suppression of Stacking Faults in Wurtzite IIIâˆ’V Nanowires. Nano Letters, 2009, 9, 1506-1510.	4.5	162
31	Equation of state for gadolinium gallium garnet crystals: Experimental and computational study. Applied Physics Letters, 2009, 95, .	1.5	14
32	Experimental and Theoretical Analysis Î¿f PbTe-CdTe Solid Solution Grown by Physical Vapour Transport Method. Acta Physica Polonica A, 2009, 116, 959-961.	0.2	20
33	Modelling the structure of GaAs and InAs nanowires. Journal of Physics Condensed Matter, 2008, 20, 454226.	0.7	59
34	Optical Î“â,† â†’ Î“â,ˆ Free-to-Bound Transitions in Acceptor Î´-Doped Single Heterostructure - Theoretical Analysis. Acta Physica Polonica A, 2008, 114, 1079-1083.	0.2	3
35	Resonant Photoemission Study Î¿f 4f Electrons on the Surface Î¿f Semiconductors. Acta Physica Polonica A, 2008, 114, S-103-S-114.	0.2	5
36	Interband polarization spectroscopy to test the spherical model of a shallow acceptor in Î´-doped heterostructures. Journal of Physics Condensed Matter, 2007, 19, 236205.	0.7	4

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37	Modeling of Small Diameter Semiconductor Nanowires. Acta Physica Polonica A, 2007, 112, 425-430.	0.2	5
38	Spectroscopy of Be Acceptor Ground State in GaAs/AlGaAs Heterostructure. Acta Physica Polonica A, 2007, 112, 209-213.	0.2	0
39	Si/SiO₂ and SiC/SiO₂ Interfaces for MOSFETs â€“ Challenges and Advances. Materials Science Forum, 2006, 527-529, 935-948.	0.3	54
40	Optical pumping of the electron spin polarization in bulk CuCl. Physical Review B, 2005, 72, .	1.1	2
41	Nucleation of Single-Walled Carbon Nanotubes. Physical Review Letters, 2003, 90, 145501.	2.9	127
42	Origin of the Residual Acceptor Ground-State Splitting in Silicon. Physical Review Letters, 2003, 90, 016404.	2.9	24
43	Transmission Electron Microscopy: Overview and Challenges. AIP Conference Proceedings, 2003, , .	0.3	4
44	Probing Nanostructures Site by Site with the Aberration-Corrected STEM. Microscopy and Microanalysis, 2003, 9, 2-3.	0.2	3
45	Magnesium Acceptor Energy Levels in Cubic GaN. Acta Physica Polonica A, 2003, 103, 683-688.	0.2	3
46	Magnetic polarons in weakly doped high-Tcsuperconductors. Physical Review B, 2002, 66, .	1.1	0
47	Nanoscale Structure/Property Correlation Through Aberration-Corrected Stem And Theory. Materials Research Society Symposia Proceedings, 2002, 738, 111.	0.1	1
48	Core Hole Effects on Eels Near-Edge Fine Structure in Semiconductors and Insulators. Microscopy and Microanalysis, 2001, 7, 1174-1175.	0.2	0
49	The Si/SiO2 Interface: Atomic Structures, Composition, Strain and Energetics. Microscopy and Microanalysis, 2001, 7, 768-769.	0.2	0
50	Degenerate impurity states in hopping conduction. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2001, 81, 965-984.	0.6	0
51	Core-hole effects on energy-loss near-edge structure. Ultramicroscopy, 2001, 86, 355-362.	0.8	65
52	Local and Global Bonding at the Si-SiO2 Interface. Springer Series in Materials Science, 2001, , 193-218.	0.4	6
53	Dislocations in Semiconductors: Atomic Structure and Properties. , 2001, , 2312-2325.		0
54	Bonding, Defects, And Defect Dynamics In The Sic-SiO2 System. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	2

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55	New type of antiferromagnetic polaron and bipolaron in high-Tc superconductors. Physica B: Condensed Matter, 2000, 284-288, 437-438.	1.3	2
56	Excitonic Effects in Core-Excitation Spectra of Semiconductors. Physical Review Letters, 2000, 85, 2168-2171.	2.9	76
57	Atomic-Scale Engineering of the SiC-SiO₂ Interface. Materials Science Forum, 2000, 338-342, 1133-1136.	0.3	9
58	Bonding Arrangements at theSiâˆ'SiO2andSiCâˆ'SiO2Interfaces and a Possible Origin of their Contrasting Properties. Physical Review Letters, 2000, 84, 943-946.	2.9	186
59	Atomic Arrangement of Iodine Atoms inside Single-Walled Carbon Nanotubes. Physical Review Letters, 2000, 84, 4621-4624.	2.9	224
60	Reactions of hydrogen with Si-SiO/sub 2/ interfaces. IEEE Transactions on Nuclear Science, 2000, 47, 2262-2268.	1.2	184
61	"Comb-Like" Polarons and Bipolarons in High-T_cMaterials. Acta Physica Polonica A, 2000, 97, 185-188.	0.2	1
62	The Si/SiO₂ Interface: Atomic Structures, Composition, Strain And Energetics. Microscopy and Microanalysis, 1999, 5, 122-123.	0.2	3
63	Atomic Structure and Properties of Extended Defects in Silicon. Solid State Phenomena, 1999, 67-68, 3-14.	0.3	13
64	Atomic-Scale Structure of the Si-SiO₂ and SiC-SiO₂ Interfaces and the Origin of Their Contrasting Properties. Materials Research Society Symposia Proceedings, 1999, 592, 234.	0.1	2
65	Direct Observation of Intercalant and Catalyst Particle in Single Wall Carbon Nanotubes. Materials Research Society Symposia Proceedings, 1999, 593, 129.	0.1	2
66	Quantum Phenomena in Small Antiferromagnets. Acta Physica Polonica A, 1997, 92, 379-382.	0.2	0
67	Bound and resonant electron states in quantum dots: The optical spectrum. Physical Review B, 1996, 54, 2667-2674.	1.1	92
68	Evidence for correlated hole distribution in neutron-transmutation-doped isotopically controlled germanium. Physical Review B, 1996, 53, 7797-7804.	1.1	10
69	Magnetic Properties of Semiconductor-Antiferromagnet Superlattices. Acta Physica Polonica A, 1996, 90, 973-976.	0.2	2
70	Bound and Resonant States of Shallow Donors in Quantum Antidots. Acta Physica Polonica A, 1996, 90, 743-746.	0.2	0
71	Small Antiferromagnetic Clusters. Acta Physica Polonica A, 1996, 90, 747-750.	0.2	0
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73	Shallow acceptor resonant states in Si and Ge. Solid State Communications, 1995, 93, 367-373.	0.9	11
74	Bound and resonant states of shallow donors in quantum dots. Solid State Communications, 1995, 93, 470.	0.9	1
75	Electric Field Broadening of Gallium Acceptor States in Compensated Ge: Ga, As. Materials Science Forum, 1995, 196-201, 127-132.	0.3	1
76	Test for the Impurity Wavefunction Modelling from the Alloy Broadening of the Impurity-Related Luminescence. Materials Science Forum, 1994, 143-147, 501-506.	0.3	1
77	Alloy Broadening of the Acceptor-Related Near-Gap Luminescence in Semiconductor Alloys. Materials Science Forum, 1993, 117-118, 105-110.	0.3	0
78	Impurity Wave Function and Alloy Broadening of Impurity-Related Luminescence. Acta Physica Polonica A, 1993, 84, 591-594.	0.2	0
79	Alloy broadening of the near-gap luminescence and the natural band offset in semiconductor alloys. Semiconductor Science and Technology, 1992, 7, 547-551.	1.0	16
80	Shallow acceptor resonant states in Si and Ge. Physical Review B, 1992, 45, 5838-5847.	1.1	48
81	Valence Band Quantization in a Spherical Quantum Dot. Acta Physica Polonica A, 1992, 82, 789-792.	0.2	1
82	Shallow donor impurities in GaAs-Ga1â^'xAlxAs quantum-well structures: Role of the dielectric-constant mismatch. Physical Review B, 1990, 41, 5096-5103.	1.1	102
83	Binding energies of excited shallow acceptor states in GaAs/Ga1â^'xAlxAs quantum wells. Physical Review B, 1989, 40, 5602-5612.	1.1	52
84	Percolative Transport in GaAs at 10 T Magnetic Fields: Interpretation via Hydrogen Wavefunctions at Megatesla Fields. Springer Series in Solid-state Sciences, 1989, , 588-591.	0.3	0
85	Percolative transport in GaAs at 10 T magnetic fields Interpretation via hydrogen wavefunctions at megatesla fields. Philosophical Magazine Letters, 1987, 56, 251-258.	0.5	5
86	Effect of uniaxial stress on shallow acceptor states in silicon and germanium. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1987, 9, 669-689.	0.4	32
87	The ground state of the shallow acceptor in highly doped P-type Hg1â^'xMnxTe. Solid State Communications, 1986, 59, 495-497.	0.9	1
88	Effect of uniaxial stress on the acceptor ground state and on hopping conduction in p-type germanium and silicon. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1984, 50, 429-462.	0.6	10
89	The acceptor wavefunctions in the spherical approximation and the piezoresistance in p-type germanium. Journal of Physics C: Solid State Physics, 1980, 13, L9-L12.	1.5	4
90	The effect of stress on the acceptor ground state in germanium. Journal of Physics C: Solid State Physics, 1980, 13, 71-83.	1.5	11