Anna V Rodina

List of Publications by Year
in descending order

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84 papers	5,015 citations	159585 30 h-index	88630 70 g-index
85 all docs	85 docs citations	85 times ranked	4545 citing authors

#	Article	IF	Citations
1	Bound exciton and donorâ€“acceptor pair recombinations in ZnO. Physica Status Solidi (B): Basic Research, 2004, 241, 231-260.	1.5	1,499
2	Absorption and intensity-dependent photoluminescence measurements on CdSe quantum dots: assignment of the first electronic transitions. Journal of the Optical Society of America B: Optical Physics, 1993, 10, 100.	2.1	723
3	Valence-band ordering and magneto-optic exciton fine structure in ZnO. Physical Review B, 2002, 65, .	3.2	241
4	Thermal activation of non-radiative Auger recombination in charged colloidal nanocrystals. Nature Nanotechnology, 2013, 8, 206-212.	31.5	219
5	Free excitons in wurtzite GaN. Physical Review B, 2001, 64, .	3.2	161
6	Bound excitons in ZnO: Structural defect complexes versus shallow impurity centers. Physical Review B, 2011, 84, .	3.2	157
7	Spin dynamics in semiconductor nanocrystals. Physical Review B, 2002, 66, .	3.2	149
8	Band-edge absorption and luminescence of nonspherical nanometer-size crystals. Physical Review B, 1993, 47, 10005-10007.	3.2	128
9	Confined excitons, trions and biexcitons in semiconductor microcrystals. Solid State Communications, 1989, 72, 645-649.	1.9	104
10	Addressing the exciton fine structure in colloidal nanocrystals: the case of CdSe nanoplatelets. Nanoscale, 2018, 10, 646-656.	5.6	89
11	Biexciton Auger Recombination in CdSe/CdS Core/Shell Semiconductor Nanocrystals. Nano Letters, 2016, 16, 2503-2511.	9.1	71
12	Spin dynamics of negatively charged excitons in CdSe/CdS colloidal nanocrystals. Physical Review B, 2013, 88, .	3.2	64
13	Nonradiative Auger Recombination in Semiconductor Nanocrystals. Nano Letters, 2015, 15, 2092-2098.	9.1	62
14	General boundary conditions for the envelope function in the multibandkâ‹…pmodel. Physical Review B, 2002, 65, .	3.2	61
15	Magneto-optical properties of bound excitons in ZnO. Physical Review B, 2004, 69, .	3.2	61
16	Second-harmonic generation spectroscopy of excitons in ZnO. Physical Review B, 2013, 88, .	3.2	58
17	Dynamics of Intraband and Interband Auger Processes in Colloidal Coreâ€“Shell Quantum Dots. ACS Nano, 2015, 9, 10366-10376.	14.6	52
18	Effect of the surface on the electron quantum size levels and electrongfactor in spherical semiconductor nanocrystals. Physical Review B, 2003, 67, .	3.2	51

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19	Electron and Hole g-Factors and Spin Dynamics of Negatively Charged Excitons in CdSe/CdS Colloidal Nanoplatelets with Thick Shells. Nano Letters, 2018, 18, 373-380.	9.1	50
20	The role of polarization fields in Auger-induced efficiency droop in nitride-based light-emitting diodes. Applied Physics Letters, 2013, 103, .	3.3	46
21	Fine structure of the band-edge excitons and trions in CdSe/CdS core/shell nanocrystals. Physical Review B, 2012, 86, .	3.2	45
22	Magnetic polaron on dangling-bond spins in CdSe colloidal nanocrystals. Nature Nanotechnology, 2017, 12, 569-574.	31.5	44
23	Effects of strain on the valence band structure and exciton-polariton energies in ZnO. Physical Review B, 2013, 88, .	3.2	42
24	Identification of bound exciton complexes in ZnO. Physica Status Solidi (B): Basic Research, 2004, 241, 607-611.	1.5	41
25	Effect of dielectric confinement on optical properties of colloidal nanostructures. Journal of Experimental and Theoretical Physics, 2016, 122, 554-566.	0.9	40
26	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>Î“</mml:mi><mml:mn>7</mml:mn></mml:msub></mml:mrow></mml:math>valen band symmetry related hole fine splitting of bound excitons in ZnO observed in magneto-optical studies. Physical Review B, 2009, 80, .	3.2	36
27	Magnetic Properties of Nonmagnetic Nanostructures: Dangling Bond Magnetic Polaron in CdSe Nanocrystals. Nano Letters, 2015, 15, 4214-4222.	9.1	36
28	Field-enhanced ionization of deep-level centers as a triggering mechanism for superfast impact ionization fronts in Si structures. Journal of Applied Physics, 2005, 98, 094506.	2.5	35
29	Radiative recombination from dark excitons in nanocrystals: Activation mechanisms and polarization properties. Physical Review B, 2016, 93, .	3.2	32
30	Dynamic Evolution from Negative to Positive Photocharging in Colloidal CdS Quantum Dots. Nano Letters, 2017, 17, 2844-2851.	9.1	32
31	Surface spin magnetism controls the polarized exciton emission from CdSe nanoplatelets. Nature Nanotechnology, 2020, 15, 277-282.	31.5	32
32	Band-edge biexciton in nanocrystals of semiconductors with a degenerate valence band. Physical Review B, 2010, 82, .	3.2	30
33	General Expression for the Size-Dependent Optical Properties of Quantum Dots. Nano Letters, 2022, 22, 1778-1785.	9.1	30
34	Exciton spin dynamics and photoluminescence polarization of CdSe/CdS dot-in-rod nanocrystals in high magnetic fields. Physical Review B, 2015, 91, .	3.2	29
35	Magneto-Stark Effect of Excitons as the Origin of Second Harmonic Generation in ZnO. Physical Review Letters, 2013, 110, 116402.	7.8	27
36	Anisotropy of conduction bandgvalues and interband momentum matrix elements in wurtzite GaN. Physical Review B, 2001, 64, .	3.2	26

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37	Electric field effect on optical harmonic generation at the exciton resonances in GaAs. Physical Review B, 2015, 92, .	3.2	23
38	Ground-state characteristics of an acceptor center in wide-gap semiconductors with a weak spin-orbit coupling. Physics of the Solid State, 1998, 40, 917-923.	0.6	22
39	Suris Tetrons: Possible Spectroscopic Evidence for Four-Particle Optical Excitations of a Two-Dimensional Electron Gas. Physical Review Letters, 2014, 112, 147402.	7.8	22
40	Ground state of the holes localized in II-VI quantum dots with Gaussian potential profiles. Physical Review B, 2016, 93, .	3.2	22
41	Nonradiative and radiative FÃ¶rster energy transfer between quantum dots. Journal of Experimental and Theoretical Physics, 2016, 122, 531-538.	0.9	22
42	Theory of the Zeeman effect in semiconductor nanocrystals. Materials Science and Engineering C, 2002, 19, 435-438.	7.3	21
43	Single and Double Electron Spin-Flip Raman Scattering in CdSe Colloidal Nanoplatelets. Nano Letters, 2020, 20, 517-525.	9.1	21
44	Exciton Spectroscopy of Semiconductors by the Method of Optical Harmonics Generation (Review). Physics of the Solid State, 2018, 60, 1471-1486.	0.6	17
45	FÃ¶rster energy transfer of dark excitons enhanced by a magnetic field in an ensemble of CdTe colloidal nanocrystals. Physical Review B, 2015, 92, .	3.2	16
46	Exciton spin dynamics of colloidal CdTe nanocrystals in magnetic fields. Physical Review B, 2014, 89, .	3.2	15
47	Exciton Energy Structure in Wurtzite GaN. Physica Status Solidi (B): Basic Research, 1999, 216, 21-26.	1.5	14
48	Anisotropy of effective masses in CuInSe2. Applied Physics Letters, 2012, 101, .	3.3	14
49	Least-action principle for envelope functions in abrupt heterostructures. Physical Review B, 2006, 73, .	3.2	12
50	Spectral selection of excitonic transitions in a dense array of CdSe/ZnSe quantum dots. Physica Status Solidi (B): Basic Research, 2016, 253, 1485-1489.	1.5	12
51	Influence of the spin-orbit split-off valence band on the hole <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>g</mml:mi></mml:math> factor in semiconductor nanocrystals. Physical Review B, 2021, 104, .	3.2	11
52	Spin Physics of Excitons in Colloidal Nanocrystals. Physics of the Solid State, 2018, 60, 1537-1553.	0.6	10
53	Polarized emission of CdSe nanocrystals in magnetic field: the role of phonon-assisted recombination of the dark exciton. Nanoscale, 2021, 13, 790-800.	5.6	10
54	Third harmonic generation on exciton-polaritons in bulk semiconductors subject to a magnetic field. Physical Review B, 2018, 98, .	3.2	9

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55	Theory of acceptor-ground-state description and hot photoluminescence in cubic semiconductors. Physical Review B, 1997, 55, 4388-4399.	3.2	8
56	Magnetic absorption of hexagonal crystals CdSe in strong and weak fields: Quasi-cubic approximation. Physics of the Solid State, 2000, 42, 1242-1252.	0.6	8
57	Density of States and Photoluminescence Spectra in the Dense Arrays of Epitaxial CdSe/ZnSe Quantum Dots with Gaussian Potential Profile. Acta Physica Polonica A, 2016, 129, A-107-A-110.	0.5	8
58	Absorption and intensity-dependent photoluminescence measurements on CdSe quantum dots: assignment of the first electronic transitions: erratum. Journal of the Optical Society of America B: Optical Physics, 1994, 11, 524.	2.1	7
59	Effective Mass Calculation of the Shallow Acceptor Ground State g-Factor for A3B5 Semiconductors. Physica Status Solidi (B): Basic Research, 1998, 210, 865-868.	1.5	7
60	Dangling Bond Spins Controlling Recombination Dynamics of Excitons in Colloidal Nanocrystals and Nanoplatelets. Semiconductors, 2018, 52, 572-574.	0.5	6
61	Temperature activation of indirect exciton in nanostructures based on MoS₂. Journal of Physics: Conference Series, 2020, 1482, 012038.	0.4	6
62	Theory of single and double electron spin-flip Raman scattering in semiconductor nanoplatelets. Physical Review B, 2020, 102, .	3.2	6
63	A+â€" center and exciton bound to neutral acceptor in diamond-like semiconductors. Solid State Communications, 1993, 85, 23-28.	1.9	5
64	Weak- and strong-field magnetooptics of wurtzite CdSe: parameters of quasi-cubic approximation. Journal of Crystal Growth, 2000, 214-215, 899-903.	1.5	5
65	Theory of intrinsic electric polarization and spin Hall current in spin-orbit-coupled semiconductor heterostructures. Physical Review B, 2008, 78, .	3.2	5
66	Exchange Interaction Between Carriers and Magnetic Ions in Quantum Size Heterostructures. Springer Series in Materials Science, 2010, , 65-101.	0.6	5
67	Effect of Dangling Bond Spins on the Dark Exciton Recombination and Spin Polarization in CdSe Colloidal Nanostructures. Journal of Electronic Materials, 2018, 47, 4338-4344.	2.2	5
68	Landau levels of the C-exciton in CuInSe2 studied by magneto-transmission. Applied Physics Letters, 2014, 105, .	3.3	4
69	FÃ¶rster Resonance Energy Transfer and Harvesting in IIâ€"VI Fractional Monolayer Structures. Journal of Electronic Materials, 2017, 46, 3922-3926.	2.2	4
70	Biexciton in IIâ€"VI quantum dots with different localization potentials. Physics of the Solid State, 2017, 59, 1215-1224.	0.6	3
71	Spin Dynamics of Charged and Neutral Excitons in Colloidal Nanocrystals. Journal of Electronic Materials, 2018, 47, 4260-4271.	2.2	3
72	FÃ¶rster Energy Transfer in Arrays of Epitaxial CdSe/ZnSe Quantum Dots Involving Bright and Dark Excitons. Physics of the Solid State, 2018, 60, 1590-1594.	0.6	3

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73	Resonance energy transfer in a dense array of IIâ€“VI quantum dots. Physics of the Solid State, 2016, 58, 2256-2260.	0.6	2
74	Excitons and Biexcitons in Spheroidal Quantum Dots A2B6. Physics of the Solid State, 2018, 60, 1510-1513.	0.6	2
75	Novel mechanisms of optical harmonic generation on excitons in semiconductors. , 2015, , .		1
76	Switching of resonance energy transfer mechanism in a dense array of II-VI quantum dots. Journal of Physics: Conference Series, 2016, 741, 012155.	0.4	1
77	Suppression of slow decaying emission in II-VI quantum dots with FÃ¶rster resonance energy transfer. Journal of Physics: Conference Series, 2017, 917, 062048.	0.4	1
78	Electronic energy band parameters of CuInSe2 : Landau levels in magnetotransmission spectra. Physical Review B, 2019, 100, .	3.2	1
79	Comment on â€œSize Dependent Optical Properties and Structure of ZnS Nanocrystals Prepared from a Library of Thioureasâ€• Chemistry of Materials, 2022, 34, 6182-6184.	6.7	1
80	Biexciton Binding Energy in Spherical Quantum Dots with Î“8 Valence Band. Semiconductors, 2018, 52, 554-557.	0.5	0
81	Photocharging Dynamics in Colloidal CdS Quantum Dots Visualized by Electron Spin Coherence. Semiconductors, 2018, 52, 548-550.	0.5	0
82	Localization of Carriers in Quantum Dots with Uniaxial Anisotropy of Shape and Composition. Physics of the Solid State, 2019, 61, 506-514.	0.6	0
83	Magnetic circular polarization of photoluminescence of an inhomogeneous ensemble of colloidal nanocrystals. Journal of Physics: Conference Series, 2020, 1697, 012204.	0.4	0
84	Mid-infrared irradiation keeps nanocrystals bright. Nature Nanotechnology, 2021, 16, 1304-1305.	31.5	0