Alexander I TartakovskiÇ•

List of Publications by Year
in descending order

137 papers	8,154 citations	53794 45 h-index	46799 89 g-index
140 all docs	140 docs citations	140 times ranked	8941 citing authors

#	Article	IF	Citations
1	Transition Metal Dichalcogenide Dimer Nanoantennas for Tailored Lightâ€“Matter Interactions. ACS Nano, 2022, 16, 6493-6505.	14.6	15
2	Giant effective Zeeman splitting in a monolayer semiconductor realized by spin-selective strong lightâ€“matter coupling. Nature Photonics, 2022, 16, 632-636.	31.4	14
3	Spinâ€“valley dynamics in alloy-based transition metal dichalcogenide heterobilayers. 2D Materials, 2021, 8, 025011.	4.4	9
4	Enhanced light-matter interaction in atomically thin semiconductors and 2D single photon emitters coupled to dielectric nano-antennas. , 2021, , .		0
5	Bright single photon emitters with enhanced quantum efficiency in a two-dimensional semiconductor coupled with dielectric nano-antennas. Nature Communications, 2021, 12, 6063.	12.8	36
6	Strong exciton-photon coupling in large area MoSe2 and WSe2 heterostructures fabricated from two-dimensional materials grown by chemical vapor deposition. 2D Materials, 2021, 8, 011002.	4.4	10
7	Manipulating molecules with strong coupling: harvesting triplet excitons in organic exciton microcavities. Chemical Science, 2020, 11, 343-354.	7.4	98
8	Excitons in 2D heterostructures. Nature Reviews Physics, 2020, 2, 8-9.	26.6	57
9	Highly nonlinear trion-polaritons in a monolayer semiconductor. Nature Communications, 2020, 11, 3589.	12.8	83
10	Dielectric Nanoantennas for Strain Engineering in Atomically Thin Two-Dimensional Semiconductors. ACS Photonics, 2020, 7, 2413-2422.	6.6	26
11	Emergence of Highly Linearly Polarized Interlayer Exciton Emission in MoSe₂/WSe₂ Heterobilayers with Transfer-Induced Layer Corrugation. ACS Nano, 2020, 14, 11110-11119.	14.6	26
12	Interplay between spin proximity effect and charge-dependent exciton dynamics in MoSe2/CrBr3 van der Waals heterostructures. Nature Communications, 2020, 11, 6021.	12.8	52
13	Large area chemical vapour deposition grown transition metal dichalcogenide monolayers automatically characterized through photoluminescence imaging. Npj 2D Materials and Applications, 2020, 4, .	7.9	20
14	MoirÃ© or not. Nature Materials, 2020, 19, 581-582.	27.5	11
15	Electrically pumped WSe2-based light-emitting van der Waals heterostructures embedded in monolithic dielectric microcavities. 2D Materials, 2020, 7, 031006.	4.4	16
16	Nonlinear polaritons in a monolayer semiconductor coupled to optical bound states in the continuum. Light: Science and Applications, 2020, 9, 56.	16.6	124
17	Enhanced light-matter interaction in an atomically thin semiconductor coupled with dielectric nano-antennas. Nature Communications, 2019, 10, 5119.	12.8	87
18	Measurement of local optomechanical properties of a direct bandgap 2D semiconductor. APL Materials, 2019, 7, .	5.1	18

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19	The valley Zeeman effect in inter- and intra-valley trions in monolayer WSe2. Nature Communications, 2019, 10, 2330.	12.8	55
20	Resonantly hybridized excitons in moirÃ© superlattices in van der Waals heterostructures. Nature, 2019, 567, 81-86.	27.8	621
21	Low-dimensional emissive states in non-stoichiometric methylammonium lead halide perovskites. Journal of Materials Chemistry A, 2019, 7, 11104-11116.	10.3	7
22	Valley coherent exciton-polaritons in a monolayer semiconductor. Nature Communications, 2018, 9, 4797.	12.8	66
23	Single-photon emitters in GaSe. 2D Materials, 2017, 4, 021010.	4.4	77
24	Valley-addressable polaritons in atomically thin semiconductors. Nature Photonics, 2017, 11, 497-501.	31.4	169
25	Imaging of Interlayer Coupling in van der Waals Heterostructures Using a Bright-Field Optical Microscope. Nano Letters, 2017, 17, 5342-5349.	9.1	74
26	On-Chip Waveguide Coupling of a Layered Semiconductor Single-Photon Source. Nano Letters, 2017, 17, 5446-5451.	9.1	72
27	Strong-coupling of WSe2 in ultra-compact plasmonic nanocavities at room temperature. Nature Communications, 2017, 8, 1296.	12.8	290
28	Resonantly excited exciton dynamics in two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m monolayers. Physical Review B, 2017, 96, .	3.2	16
29	Single-photon emitters in GaSe. , 2017, , .		0
30	Metalorganic vapor phase epitaxy growth, transmission electron microscopy, and magneto-optical spectroscopy of individual InAsxP1â^'x/Ga0.5In0.5P quantum dots. Physical Review Materials, 2017, 1, .	2.4	1
31	Exciton and trion dynamics in atomically thin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m Effect of localization. Physical Review B, 2016, 94, .	3.2	121
32	Vanishing electrongfactor and long-lived nuclear spin polarization in weakly strained nanohole-filled GaAs/AlGaAs quantum dots. Physical Review B, 2016, 93, .	3.2	22
33	Electrically pumped single-defect light emitters in WSe ₂. 2D Materials, 2016, 3, 025038.	4.4	66
34	Few-second-long correlation times in a quantum dot nuclear spin bath probed by frequency-comb nuclear magnetic resonance spectroscopy. Nature Physics, 2016, 12, 688-693.	16.7	16
35	Cross sectional STEM imaging and analysis of multilayered two dimensional crystal heterostructure devices. Microscopy and Microanalysis, 2015, 21, 107-108.	0.4	1
36	WSe₂ Light-Emitting Tunneling Transistors with Enhanced Brightness at Room Temperature. Nano Letters, 2015, 15, 8223-8228.	9.1	231

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37	Light-emitting diodes by band-structure engineering in van der Waals heterostructures. Nature Materials, 2015, 14, 301-306.	27.5	1,397
38	Suppression of nuclear spin bath fluctuations in self-assembled quantum dots induced by inhomogeneous strain. Nature Communications, 2015, 6, 6348.	12.8	54
39	Photoluminescence of two-dimensional GaTe and GaSe films. 2D Materials, 2015, 2, 035010.	4.4	76
40	Strong exciton-photon coupling in monolayer heterostructures in tunable microcavities. , 2015, , .		0
41	Excitonâ€"polaritons in van der Waals heterostructures embedded in tunable microcavities. Nature Communications, 2015, 6, 8579.	12.8	377
42	Nuclear magnetic resonance inverse spectra of InGaAs quantum dots: Atomistic level structural information. Physical Review B, 2014, 90, .	3.2	21
43	All-Optical Formation of Coherent Dark States of Silicon-Vacancy Spins in Diamond. Physical Review Letters, 2014, 113, 263601.	7.8	121
44	Route to indistinguishable photons. Nature Photonics, 2014, 8, 427-429.	31.4	1
45	Two-Dimensional Metalâ€"Chalcogenide Films in Tunable Optical Microcavities. Nano Letters, 2014, 14, 7003-7008.	9.1	129
46	Element-sensitive measurement of the holeâ€"nuclear spin interaction in quantum dots. Nature Physics, 2013, 9, 74-78.	16.7	70
47	Nuclear spin effects in semiconductor quantum dots. Nature Materials, 2013, 12, 494-504.	27.5	195
48	Optical investigation of the natural electron doping in thin MoS2 films deposited on dielectric substrates. Scientific Reports, 2013, 3, 3489.	3.3	144
49	IIIâ€"V quantum light source and cavity-QED on Silicon. Scientific Reports, 2013, 3, 1239.	3.3	33
50	Dynamic nuclear polarization in InGaAs/GaAs and GaAs/AlGaAs quantum dots under nonresonant ultralow-power optical excitation. Physical Review B, 2013, 88, .	3.2	16
51	Restoring mode degeneracy in H1 photonic crystal cavities by uniaxial strain tuning. Applied Physics Letters, 2012, 100, .	3.3	42
52	Laser Location and Manipulation of a Single Quantum Tunneling Channel in an InAs Quantum Dot. Physical Review Letters, 2012, 108, 117402.	7.8	14
53	Single semiconductor quantum dots in nanowires: growth, optics, and devices. , 2012, , 21-40.		1
54	Structural analysis of strained quantum dots using nuclear magnetic resonance. Nature Nanotechnology, 2012, 7, 646-650.	31.5	65

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55	Effect of a GaAsP Shell on the Optical Properties of Self-Catalyzed GaAs Nanowires Grown on Silicon. Nano Letters, 2012, 12, 5269-5274.	9.1	31
56	Studies of the hole spin in self-assembled quantum dots using optical techniques. , 2012, , 63-85.		2
57	Holes in quantum dot molecules: structure, symmetry, and spin. , 2012, , 118-134.		1
58	Direct Measurement of the Hole-Nuclear Spin Interaction in Single<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>InP</mml:mi><mml:mo>/</mml:mo><mml:mi>GaInP</mml:mi></mml:math>Quantum Dots Using Photoluminescence Spectroscopy. Physical Review Letters, 2011, 106, 027402.	7.8	93
59	Charge control in InP/(Ga,In)P single quantum dots embedded in Schottky diodes. Physical Review B, 2011, 84, .	3.2	13
60	Holes avoid decoherence. Nature Photonics, 2011, 5, 647-649.	31.4	7
61	Purcell-enhanced single-photon emission from an InP quantum dot coupled to GaInP photonic crystal nanocavity. Proceedings of SPIE, 2011, , .	0.8	0
62	Fast control of nuclear spin polarization in an optically pumped single quantum dot. Nature Materials, 2011, 10, 844-848.	27.5	31
63	Light-polarization-independent nuclear spin alignment in a quantum dot. Physical Review B, 2011, 83, .	3.2	11
64	Stark spectroscopy and radiative lifetimes in single self-assembled CdTe quantum dots. Physical Review B, 2011, 83, .	3.2	17
65	Growth of low density InP/GaInP quantum dots. Journal of Physics: Conference Series, 2010, 245, 012061.	0.4	3
66	Optimization of low density InP/GaInP quantum dots for single-dot studies. Journal of Physics: Conference Series, 2010, 245, 012093.	0.4	2
67	Quantum Confined Stark Effect in Single Self-Assembled CdTe Quantum Dots. , 2010, , .		0
68	CdTe Quantum Dots in a Field Effect Structure: Photoluminescence Lineshape Analysis. , 2010, , .		0
69	Pumping of Nuclear Spins by Optical Excitation of Spin-Forbidden Transitions in a Quantum Dot. Physical Review Letters, 2010, 104, 066804.	7.8	61
70	Control of spontaneous emission from InP single quantum dots in GaInP photonic crystal nanocavities. Applied Physics Letters, 2010, 97, 181104.	3.3	13
71	Dynamics of optically induced nuclear spin polarization in individual<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>InP</mml:mtext><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mtext>Ga</mml:m dots. Physical Review B, 2010, 81, .	3.2	28
72	Optically tunable nuclear magnetic resonance in a single quantum dot. Physical Review B, 2010, 82, .	3.2	21

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73	Voltage-controlled nuclear polarization switching in a singleInxGa1â^'xAsquantum dot. Physical Review B, 2009, 79, .	3.2	5
74	Suppression of nuclear spin diffusion at a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>GaAs</mml:mtext><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mtext>Al</mml:m measured with a single quantum-dot nanoprobe. Physical Review B, 2009, 79, .	3.2	27
75	Voltage-controlled motional narrowing in a semiconductor quantum dot. New Journal of Physics, 2009, 11, 093032.	2.9	3
76	Long nuclear spin polarization decay times controlled by optical pumping in individual quantum dots. Physical Review B, 2008, 77, .	3.2	25
77	Nuclear spin pumping under resonant optical excitation in a quantum dot. Applied Physics Letters, 2008, 93, 073113.	3.3	13
78	Overhauser effect in individualInPâ^•GaxIn1â^'xPdots. Physical Review B, 2008, 77, .	3.2	27
79	Spin Phenomena in Self-assembled Quantum Dots. , 2008, , 165-215.		0
80	Bistability of optically induced nuclear spin orientation in quantum dots. Physical Review B, 2007, 76, .	3.2	7
81	Nuclear Spin Switch in Semiconductor Quantum Dots. Physical Review Letters, 2007, 98, 026806.	7.8	122
82	Bipolar charging in quantum dots array. AIP Conference Proceedings, 2007, , .	0.4	3
83	Charging and spin-polarization effects in InAs quantum dots under bipolar carrier injection. , 2007, , .		0
84	Exciton fine structure splitting in dot-in-a-well structures. Applied Physics Letters, 2006, 88, 131115.	3.3	6
85	Size, areal density and emission energy control of InAs self assemble quantum dots grown on GaAs by selective area molecular beam epitaxy. , 2006, , .		0
86	Control of nuclear spin in InGaAs quantum dots. , 2006, , .		0
87	Charging and spin-polarization effects in InAs quantum dots under bipolar carrier injection. Applied Physics Letters, 2006, 88, 111104.	3.3	5
88	The dynamics of amplified spontaneous emission in CdSeâ^•ZnSe quantum dots. Journal of Applied Physics, 2006, 100, 123510.	2.5	4
89	Energy relaxation of excitonlike polaritons in semiconductor microcavities: Effect on the parametric scattering of polaritons. Journal of Experimental and Theoretical Physics, 2005, 100, 126-138.	0.9	1
90	Instability effects in cw FWM of cavity polaritons in planar microcavities. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 751-754.	0.8	1

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91	Electronic Coupling between Self-Assembled Quantum Dots Tuned by High Pressure. AIP Conference Proceedings, 2005, , .	0.4	0
92	Tuning of electronic coupling between self-assembled quantum dots. Applied Physics Letters, 2005, 87, 033104.	3.3	4
93	Optical orientation and control of spin memory in individual InGaAs quantum dots. Physical Review B, 2005, 72, .	3.2	43
94	Individual neutral and chargedInxGa1â^’xAsâ^’GaAsquantum dots with strong in-plane optical anisotropy. Physical Review B, 2005, 72, .	3.2	61
95	Inversion of exciton level splitting in quantum dots. Physical Review B, 2005, 72, .	3.2	167
96	Influence of nonstimulated polariton relaxation on parametric scattering of microcavity polaritons. Physical Review B, 2004, 70, .	3.2	7
97	Temperature-induced carrier escape processes studied in absorption of individualInxGa1â^’xAsquantum dots. Physical Review B, 2004, 69, .	3.2	18
98	Precise measurement of the fraction of charged dots in self-assembled quantum dot ensembles using ultrafast pump-probe techniques. Applied Physics Letters, 2004, 85, 2226-2228.	3.3	7
99	Dynamics of Coherent and Incoherent Spin Polarizations in Ensembles of Quantum Dots. Physical Review Letters, 2004, 93, 057401.	7.8	76
100	Nonlinear dynamics of polariton scattering in semiconductor microcavity: Bistability vs. stimulated scattering. Europhysics Letters, 2004, 67, 997-1003.	2.0	113
101	High pressure as a tool to tune electronic coupling in self-assembled quantum dot nanostructures. Physica Status Solidi (B): Basic Research, 2004, 241, 3257-3262.	1.5	2
102	Effect of thermal annealing and strain engineering on the fine structure of quantum dot excitons. Physical Review B, 2004, 70, .	3.2	78
103	Quantum-confined Stark shifts of charged exciton complexes in quantum dots. Physical Review B, 2004, 70, .	3.2	108
104	Dynamics of stimulated emission in InAs quantum dot laser structures measured in pump-probe experiments. , 2004, , .		0
105	Continuum transitions and phonon coupling in single self-assembled Stranski-Krastanow quantum dots. Physical Review B, 2003, 68, .	3.2	59
106	Giant enhancement of polariton relaxation in semiconductor microcavities by polariton-free carrier interaction:â€ƒExperimental evidence and theory. Physical Review B, 2003, 67, .	3.2	36
107	Photoluminescence emission and Raman scattering polarization in birefringent organic microcavities in the strong coupling regime. Journal of Applied Physics, 2003, 93, 5003-5007.	2.5	11
108	Continuous wave stimulation in semiconductor microcavities in the strong coupling limit. Semiconductor Science and Technology, 2003, 18, S301-S310.	2.0	1

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109	Polaritonâ€"polariton scattering and the nonequilibrium condensation of exciton polaritons in semiconductor microcavities. Physics-Uspekhi, 2003, 46, 967-971.	2.2	15
110	Comparative study of InGaAs quantum dot lasers with different degrees of dot layer confinement. Applied Physics Letters, 2002, 81, 1-3.	3.3	72
111	Polariton parametric scattering processes in semiconductor microcavities observed in continuous wave experiments. Physical Review B, 2002, 65, .	3.2	41
112	Threshold power and internal loss in the stimulated scattering of microcavity polaritons. Physical Review B, 2002, 66, .	3.2	9
113	Dynamics of stimulated emission in InAs quantum-dot laser structures measured in pump-probe experiments. Applied Physics Letters, 2002, 81, 4118-4120.	3.3	2
114	<title>Influence of temperature and free carries on four-wave mixing in semiconductor microcavities</title>. , 2002, , .		0
115	Transition from strong to weak coupling and the onset of lasing in semiconductor microcavities. Physical Review B, 2002, 65, .	3.2	91
116	High Occupancy Effects and Condensation Phenomena in Semiconductor Microcavities and Bulk Semiconductors. Nanoscience and Technology, 2002, , 273-296.	1.5	0
117	Stimulated Polariton Scattering in Semiconductor Microcavities: New Physics and Potential Applications. Advanced Materials, 2001, 13, 1725-1730.	21.0	17
118	Nonlinear effects in a dense two-dimensional exciton-polariton system in semiconductor microcavities. Nanotechnology, 2001, 12, 475-479.	2.6	24
119	Raman scattering in strongly coupled organic semiconductor microcavities. Physical Review B, 2001, 63, .	3.2	50
120	Observation of multicharged excitons and biexcitons in a single InGaAs quantum dot. Physical Review B, 2001, 63, .	3.2	142
121	Magnetophonon resonance in photoluminescence excitation spectra of magnetoexcitons inGaAs/Al0.3Ga0.7Assuperlattice. Physical Review B, 2000, 62, 2743-2750.	3.2	4
122	Parametric oscillation in a vertical microcavity: A polariton condensate or micro-optical parametric oscillation. Physical Review B, 2000, 62, R16247-R16250.	3.2	222
123	Polariton-polariton scattering in semiconductor microcavities: Distinctive features and similarities to the three-dimensional case. Physical Review B, 2000, 62, R13298-R13301.	3.2	80
124	Relaxation bottleneck and its suppression in semiconductor microcavities. Physical Review B, 2000, 62, R2283-R2286.	3.2	147
125	Continuous Wave Observation of Massive Polariton Redistribution by Stimulated Scattering in Semiconductor Microcavities. Physical Review Letters, 2000, 85, 3680-3683.	7.8	401
126	Nonlinearities in emission from the lower polariton branch of semiconductor microcavities. Physical Review B, 1999, 60, R11293-R11296.	3.2	38

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127	Far-field emission pattern and photonic band structure in one-dimensional photonic crystals made from semiconductor microcavities. Physical Review B, 1999, 59, 10251-10254.	3.2	9
128	Direct and spatially indirect excitons in GaAs/AlGaAs superlattices in strong magnetic fields. Physics of the Solid State, 1998, 40, 767-769.	0.6	2
129	Exciton-photon interaction in low-dimensional semiconductor microcavities. Journal of Experimental and Theoretical Physics, 1998, 87, 723-730.	0.9	3
130	Exciton-photon coupling in photonic wires. Physical Review B, 1998, 57, R6807-R6810.	3.2	33
131	Effect of interparticle interactions on radiative lifetime of photoexcited electron-hole system in GaAs quantum wells. Journal of Experimental and Theoretical Physics, 1997, 85, 195-199.	0.9	6
132	Direct and spatially indirect excitons in GaAs/AlGaAs superlattices in strong magnetic fields. Journal of Experimental and Theoretical Physics, 1997, 85, 601-608.	0.9	5
133	Exciton Spin-Splitting in InxGa1â€"xAs Quantum Wires and Dots. Physica Status Solidi A, 1997, 164, 409-412.	1.7	0
134	Interwell and Intrawell Magnetoexcitons in GaAs/AlGaAs Superlattices. Physica Status Solidi A, 1997, 164, 595-599.	1.7	1
135	Angle Resolved Photoluminescence Excitation Spectroscopy of Excitonâ€"Photon Modes in a Microcavity: K-Dependence and Relaxation. Physica Status Solidi A, 1997, 164, 81-84.	1.7	1
136	Nuclear spin effects in quantum dot optics. , 0, , 237-252.		1
137	Electrically operated entangled light sources based on quantum dots. , 0, , 319-340.		0