

Olivier Krebs

List of Publications by Year in descending order

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108
papers

3,853
citations

136885

32
h-index

123376

61
g-index

110
all docs

110
docs citations

110
times ranked

2515
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrabright source of entangled photon pairs. <i>Nature</i> , 2010, 466, 217-220.	13.7	501
2	Nuclear spin physics in quantum dots: An optical investigation. <i>Reviews of Modern Physics</i> , 2013, 85, 79-133.	16.4	298
3	Optically Driven Spin Memory in Doped InAs-GaAs Quantum Dots. <i>Physical Review Letters</i> , 2002, 89, 207401.	2.9	234
4	Direct Observation of the Electron Spin Relaxation Induced by Nuclei in Quantum Dots. <i>Physical Review Letters</i> , 2005, 94, 116601.	2.9	225
5	Manipulating exciton fine structure in quantum dots with a lateral electric field. <i>Applied Physics Letters</i> , 2007, 90, 041101.	1.5	186
6	Giant Optical Anisotropy of Semiconductor Heterostructures with No Common Atom and the Quantum-Confined Pockels Effect. <i>Physical Review Letters</i> , 1996, 77, 1829-1832.	2.9	183
7	Influence of an in-plane electric field on exciton fine structure in InAs-GaAs self-assembled quantum dots. <i>Applied Physics Letters</i> , 2005, 86, 041907.	1.5	134
8	Optically Probing the Fine Structure of a Single Mn Atom in an InAs Quantum Dot. <i>Physical Review Letters</i> , 2007, 99, 247209.	2.9	133
9	Dynamic nuclear polarization of a single charge-tunable InAs-GaAs quantum dot. <i>Physical Review B</i> , 2006, 74, .	1.1	107
10	Robust Quantum Dot Exciton Generation via Adiabatic Passage with Frequency-Swept Optical Pulses. <i>Physical Review Letters</i> , 2011, 106, 166801.	2.9	105
11	Bistability of the nuclear polarization created through optical pumping in In _{1-x} Ga _x As quantum dots. <i>Physical Review B</i> , 2006, 74, .	1.1	99
12	Inversion Asymmetry in Heterostructures of Zinc-Blende Semiconductors: Interface and External Potential versus Bulk Effects. <i>Physical Review Letters</i> , 1998, 80, 5770-5773.	2.9	77
13	Optical Nonlinearity for Few-Photon Pulses on a Quantum Dot-Pillar Cavity Device. <i>Physical Review Letters</i> , 2012, 109, 166806.	2.9	77
14	Electrical Control of Hole Spin Relaxation in Charge Tunable InAs/GaAs Quantum Dots. <i>Physical Review Letters</i> , 2005, 94, 147401.	2.9	76
15	Macroscopic rotation of photon polarization induced by a single spin. <i>Nature Communications</i> , 2015, 6, 6236.	5.8	73
16	Quantum dot-cavity strong-coupling regime measured through coherent reflection spectroscopy in a very high-Q micropillar. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	65
17	Bright Polarized Single-Photon Source Based on a Linear Dipole. <i>Physical Review Letters</i> , 2021, 126, 233601.	2.9	65
18	Polarization of the interband optical dipole in InAs/GaAs self-organized quantum dots. <i>Physical Review B</i> , 2001, 63, .	1.1	63

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19	Coherent manipulation of a solid-state artificial atom with few photons. Nature Communications, 2016, 7, 11986.	5.8	55
20	Efficient dynamical nuclear polarization in quantum dots: Temperature dependence. Physical Review B, 2007, 76, .	1.1	50
21	Investigations of giant 'forbidden' optical anisotropy in GaInAs - InP quantum well structures. Semiconductor Science and Technology, 1997, 12, 938-942.	1.0	45
22	Negative circular polarization as a general property of n-doped self-assembled InAs/GaAs quantum dots under nonresonant optical excitation. Physical Review B, 2006, 73, .	1.1	44
23	Reproducibility of High-Performance Quantum Dot Single-Photon Sources. ACS Photonics, 2020, 7, 1050-1059.	3.2	44
24	Anomalous Hanle Effect due to Optically Created Transverse Overhauser Field in Single InAs/GaAs Quantum Dots. Physical Review Letters, 2010, 104, 056603.	2.9	42
25	Topological nanophononic states by band inversion. Physical Review B, 2018, 97, .	1.1	41
26	Generation of non-classical light in a photon-number superposition. Nature Photonics, 2019, 13, 803-808.	15.6	39
27	Controlling the Polarization Eigenstate of a Quantum Dot Exciton with Light. Physical Review Letters, 2009, 103, 086601.	2.9	38
28	Optical bistability in a quantum dots/micropillar device with a quality factor exceeding 200 000. Applied Physics Letters, 2012, 100, 111111.	1.5	38
29	Nuclear magnetization in gallium arsenide quantum dots at zero magnetic field. Nature Communications, 2014, 5, 3268.	5.8	37
30	Manipulating the exciton fine structure of single CdTe/ZnTe quantum dots by an in-plane magnetic field. Physical Review B, 2007, 75, .	1.1	35
31	Optical alignment and polarization conversion of the neutral-exciton spin in individual InAs/GaAs quantum dots. Physical Review B, 2008, 77, 045307.	1.1	34
32	Magnetic anisotropy of singly Mn-doped InAs/GaAs quantum dots. Physical Review B, 2009, 80, .	1.1	34
33	Hong-Ou-Mandel Interference with Imperfect Single Photon Sources. Physical Review Letters, 2021, 126, 063602.	2.9	32
34	Interface profiles and in-plane anisotropy in common anion type- $\text{ICdTe/MgxTe/CdTe/CdTe/MnxTe}$ heterostructures studied by reflectivity. Physical Review B, 2001, 64, .	1.1	30
35	Monitoring electrically driven cancellation of exciton fine structure in a semiconductor quantum dot by optical orientation. Applied Physics Letters, 2007, 91, .	1.5	30
36	Optical Pumping and a Nondestructive Readout of a Single Magnetic Impurity Spin in an InAs/GaAs Quantum Dot. Physical Review Letters, 2011, 107, 197402.	2.9	29

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37	Nonequilibrium polariton condensate in a magnetic field. <i>Physical Review B</i> , 2015, 91, .	1.1	29
38	Excitonic contributions to the quantum-confined Pockels effect. <i>Physical Review B</i> , 2000, 63, .	1.1	25
39	Optically Induced Coupling of Two Magnetic Dopant Spins by a Photoexcited Hole in a Mn-Doped InAs/GaAs Quantum Dot. <i>Physical Review Letters</i> , 2013, 111, 187401.	2.9	25
40	Single-shot initialization of electron spin in a quantum dot using a short optical pulse. <i>Physical Review B</i> , 2011, 83, .	1.1	22
41	Hyperfine interaction in InAs/GaAs self-assembled quantum dots: dynamical nuclear polarization versus spin relaxation. <i>Comptes Rendus Physique</i> , 2008, 9, 874-884.	0.3	21
42	A quantum dot based bright source of entangled photon pairs operating at 53 K. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	21
43	Band discontinuities in $\text{In}_x\text{Ga}_{1-x}\text{As}$ -InP and InP-Al $_y$ In $_{1-y}$ As heterostructures: Evidence of noncommutativity. <i>Physical Review B</i> , 1997, 55, 2274-2279.	1.1	18
44	In-plane optical anisotropy of quantum well structures: From fundamental considerations to interface characterization and optoelectronic engineering. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000, 18, 2232.	1.6	18
45	Breakdown of rotational symmetry at semiconductor interfaces: a microscopic description of valence subband mixing. <i>European Physical Journal B</i> , 2001, 21, 241-250.	0.6	17
46	Stark spectroscopy and radiative lifetimes in single self-assembled CdTe quantum dots. <i>Physical Review B</i> , 2011, 83, .	1.1	17
47	Photon-number entanglement generated by sequential excitation of a two-level atom. <i>Nature Photonics</i> , 2022, 16, 374-379.	15.6	17
48	Cavity-Enhanced Real-Time Monitoring of Single-Charge Jumps at the Microsecond Time Scale. <i>Physical Review X</i> , 2014, 4, .	2.8	16
49	Electron spin quantum beats in positively charged quantum dots: Nuclear field effects. <i>Physical Review B</i> , 2007, 75, .	1.1	15
50	Brillouin scattering in hybrid optophononic Bragg micropillar resonators at 300 GHz. <i>Optica</i> , 2019, 6, 854.	4.8	15
51	Diamagnetic contribution to the effect of in-plane magnetic field on a quantum-dot exciton fine structure. <i>Physical Review B</i> , 2007, 76, .	1.1	13
52	High power saturation, polarisation insensitive electroabsorption modulator with spiked shallow wells. <i>Electronics Letters</i> , 1997, 33, 161.	0.5	12
53	Light-heavy hole mixing and in-plane optical anisotropy of InP-Al $_x$ In $_{1-x}$ As type-II multiquantum wells. <i>Physical Review B</i> , 2000, 61, 7265-7268.	1.1	12
54	Stark spectroscopy of Coulomb interactions in individual InAs/GaAs self-assembled quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 3890-3894.	0.8	12

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55	Tomography of the optical polarization rotation induced by a single quantum dot in a cavity. <i>Optica</i> , 2017, 4, 1326.	4.8	12
56	Role of hyperfine interaction on electron spin optical orientation in charge-controlled InAs-GaAs single quantum dots. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 202-207.	0.8	10
57	Krebs and Voisin Reply:. <i>Physical Review Letters</i> , 1999, 82, 1340-1340.	2.9	8
58	In-plane optical anisotropy of parabolic and half-parabolic Cd _{1-x} Mn _x Te quantum wells. <i>Solid State Communications</i> , 2003, 126, 467-471.	0.9	7
59	Nanomechanical resonators based on adiabatic periodicity-breaking in a superlattice. <i>Applied Physics Letters</i> , 2017, 111, 173107.	1.5	7
60	Deterministic assembly of a charged-quantum-dot micropillar cavity device. <i>Physical Review B</i> , 2020, 102, .	1.1	7
61	Exciton Spin Dynamics in Semiconductor Quantum Dots. <i>Springer Series in Solid-state Sciences</i> , 2008, , 91-113.	0.3	7
62	Optical orientation and spin relaxation of resident electrons in n-doped InAs/GaAs self-assembled quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004, 20, 404-411.	1.3	6
63	Potential-inserted InGaAs - AlGaInAs shallow quantum wells for electro-optical modulation at. <i>Semiconductor Science and Technology</i> , 1997, 12, 729-732.	1.0	5
64	Spin dynamics of neutral and charged excitons in InAs/GaAs quantum dots: towards Q-bit implementation?. <i>Superlattices and Microstructures</i> , 2002, 32, 157-170.	1.4	5
65	Semiconductor heterostructures for spintronics and quantum information. <i>Comptes Rendus Physique</i> , 2007, 8, 243-252.	0.3	5
66	Anisotropic magneto-resistance in a GaMnAs-based single impurity tunnel diode: A tight binding approach. <i>Applied Physics Letters</i> , 2012, 100, 062403.	1.5	5
67	Polarization of the interband optical dipole in InAs/GaAs self-organized quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 220-223.	1.3	4
68	Spin polarization dynamics in n-doped InAs/GaAs quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 508-511.	1.3	4
69	Spin dynamics in p-doped InAs/GaAs quantum dots. <i>Physica Status Solidi (B): Basic Research</i> , 2005, 242, 1233-1236.	0.7	4
70	Influence of electric field on fine structure of exciton complexes in CdTe/ZnTe self-assembled quantum dot. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 865-869.	0.8	4
71	Giant optical anisotropy in semiconductor heterostructures with no-common atom. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 1998, 2, 59-64.	1.3	3
72	Spin dynamics and hyperfine interaction in InAs semiconductor quantum dots. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 2266-2273.	0.7	3

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73	Spin relaxation of positive trions in InAs/GaAs quantum dots: the role of hyperfine interaction. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 3917-3921.	0.7	3
74	Influence of an Electric Field on Fine Properties of III-V and II-VI Quantum Dots Systems. <i>Acta Physica Polonica A</i> , 2004, 106, 177-184.	0.2	3
75	Anisotropic propagation of light in planar waveguides containing InGaAs/InP quantum wells. <i>Applied Physics Letters</i> , 1999, 75, 1890-1892.	1.5	2
76	Counter polarized photoluminescence of trions in n-doped selfassembled InAs/GaAs quantumdots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 430-433.	0.8	2
77	Controlling hole spin relaxation in charge tunable InAs/GaAs quantum dots. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	2
78	Spin dynamics of electrons and holes in p-doped InAs/GaAs quantum dots. <i>Brazilian Journal of Physics</i> , 2006, 36, 482-487.	0.7	2
79	Direct observation of the electron spin relaxation induced by nuclei in quantum dots. , 2006, , .		2
80	Fine structure and real space analysis of neutral acceptor states in GaAs. <i>Semiconductor Science and Technology</i> , 2015, 30, 035019.	1.0	2
81	Optical Orientation of Trions in Charge-Tunable InAs/GaAs Quantum Dots. <i>Acta Physica Polonica A</i> , 2004, 106, 185-192.	0.2	2
82	Electrical and optical charging of CdTe quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 2516-2519.	0.8	1
83	Spin state of a single Mn atom embedded in an InAs quantum dot. <i>Proceedings of SPIE</i> , 2009, , .	0.8	1
84	Exchange interaction-driven dynamic nuclear polarization in Mn-doped InGaAs/GaAs quantum dots. <i>Physical Review B</i> , 2016, 94, .	1.1	1
85	The quantum confined Pockels effect in GaAs-based multi-quantum wells. <i>European Physical Journal Special Topics</i> , 1999, 09, Pr2-37.	0.2	1
86	Normal-incidence intersubband absorption in AlGaSb quantum wells: enhanced oscillator strength and new functionalities using asymmetry. <i>IEE Proceedings: Optoelectronics</i> , 2003, 150, 381.	0.8	0
87	Coherent spin dynamics in semiconductor quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 3157-3162.	0.8	0
88	Control Of The Anisotropic Exchange Splitting Of Individual InAs/GaAs Quantum Dots With An In-Plane Electric Field. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	0
89	Charge-controlled nuclear polarization of a single InAs/GaAs quantum dot under optical pumping. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 3752-3756.	0.8	0
90	Optical probing of spin-dependent interactions in II-VI semiconductor structures. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 906-913.	0.7	0

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91	Strong linear polarization induced by a longitudinal magnetic field in II-VI semimagnetic semiconductor layers. <i>Physical Review B</i> , 2006, 74, .	1.1	0
92	Dynamic nuclear polarization of a single InAs/GaAs quantum dot : positive versus negative trions. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
93	Electron spin quantum beats in positively charged quantum dots. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
94	Optical initialisation and control of carrier and nuclear spins in individual semiconductor quantum dots. , 2008, , .		0
95	Quantum Confined Stark Effect in Single Self-Assembled CdTe Quantum Dots. , 2010, , .		0
96	CdTe Quantum Dots in a Field Effect Structure: Photoluminescence Lineshape Analysis. , 2010, , .		0
97	A solid state ultrabright source of entangled photon pairs. <i>Proceedings of SPIE</i> , 2011, , .	0.8	0
98	Robust quantum dot exciton preparation via adiabatic passage with frequency-swept laser pulses. , 2011, , .		0
99	Electron Spin Dynamics in Semiconductor Quantum Dots. , 2011, , .		0
100	Optical spectroscopy of InAs/GaAs quantum dots doped with a single Mn atom. , 0, , 221-236.		0
101	Optical nonlinearity with few-photon pulses using a quantum dot-pillar cavity device. , 2013, , .		0
102	Exciton Spin Dynamics in Semiconductor Quantum Dots. <i>Springer Series in Solid-state Sciences</i> , 2017, , 105-129.	0.3	0
103	Breakdown of Rotational Symmetry at Semiconductor Interfaces: a Microscopic Description of Valence Subband Mixing. <i>Acta Physica Polonica A</i> , 2000, 98, 303-323.	0.2	0
104	Field-induced optical anisotropy in semiconductor superlattices: the Wannier-Pockels effect. <i>Springer Proceedings in Physics</i> , 2001, , 535-536.	0.1	0
105	Self-quenching of hyperfine-induced electron spin relaxation in InAs/GaAs quantum dots due to dynamic nuclear polarization. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
106	Giant Polarization Rotation Induced by a Single Spin: a Cavity-Based Spin-Photon Interface. , 2015, , .		0
107	Generation of quantum light in a photon-number superposition. , 2019, , .		0
108	Spin Quantum-bits and Decoherence in InAs/GaAs Quantum Dots. , 0, , 201-227.		0