

Scott A Crooker

List of Publications by Year in descending order

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79
papers

7,658
citations

71061

41
h-index

69214

77
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79
all docs

79
docs citations

79
times ranked

8252
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical detection of spin transport in lateral ferromagnet-semiconductor devices. <i>Nature Physics</i> , 2007, 3, 197-202.	6.5	732
2	Spectrally Resolved Dynamics of Energy Transfer in Quantum-Dot Assemblies: Towards Engineered Energy Flows in Artificial Materials. <i>Physical Review Letters</i> , 2002, 89, 186802.	2.9	617
3	Scaling law for excitons in 2D perovskite quantum wells. <i>Nature Communications</i> , 2018, 9, 2254.	5.8	559
4	Multiple temperature regimes of radiative decay in CdSe nanocrystal quantum dots: Intrinsic limits to the dark-exciton lifetime. <i>Applied Physics Letters</i> , 2003, 82, 2793-2795.	1.5	371
5	Optical spin resonance and transverse spin relaxation in magnetic semiconductor quantum wells. <i>Physical Review B</i> , 1997, 56, 7574-7588.	1.1	307
6	Imaging Spin Transport in Lateral Ferromagnet/Semiconductor Structures. <i>Science</i> , 2005, 309, 2191-2195.	6.0	298
7	Long-lived nanosecond spin relaxation and spin coherence of electrons in monolayer MoS ₂ and WS ₂ . <i>Nature Physics</i> , 2015, 11, 830-834.	6.5	253
8	Exciton diamagnetic shifts and valley Zeeman effects in monolayer WS ₂ and MoS ₂ to 65% Tesla. <i>Nature Communications</i> , 2016, 7, 10643.	5.8	253
9	Nano-engineered electron-hole exchange interaction controls exciton dynamics in core-shell semiconductor nanocrystals. <i>Nature Communications</i> , 2011, 2, 280.	5.8	223
10	Picosecond Energy Transfer in Quantum Dot Langmuir-Blodgett Nanoassemblies. <i>Journal of Physical Chemistry B</i> , 2003, 107, 13782-13787.	1.2	217
11	Tunable magnetic exchange interactions in manganese-doped inverted core-shell ZnSe-CdSe nanocrystals. <i>Nature Materials</i> , 2009, 8, 35-40.	13.3	217
12	Probing the Influence of Dielectric Environment on Excitons in Monolayer WSe ₂ : Insight from High Magnetic Fields. <i>Nano Letters</i> , 2016, 16, 7054-7060.	4.5	198
13	Spectroscopy of spontaneous spin noise as a probe of spin dynamics and magnetic resonance. <i>Nature</i> , 2004, 431, 49-52.	13.7	195
14	Magneto-optics of Exciton Rydberg States in a Monolayer Semiconductor. <i>Physical Review Letters</i> , 2018, 120, 057405.	2.9	195
15	Revealing exciton masses and dielectric properties of monolayer semiconductors with high magnetic fields. <i>Nature Communications</i> , 2019, 10, 4172.	5.8	179
16	Copper-Doped Inverted Core/Shell Nanocrystals with Permanent-Optically Active Holes. <i>Nano Letters</i> , 2011, 11, 4753-4758.	4.5	176
17	Electrical Detection of Spin Accumulation at a Ferromagnet-Semiconductor Interface. <i>Physical Review Letters</i> , 2006, 96, 176603.	2.9	173
18	Imaging Spin Flows in Semiconductors Subject to Electric, Magnetic, and Strain Fields. <i>Physical Review Letters</i> , 2005, 94, 236601.	2.9	161

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19	Spin Noise of Electrons and Holes in Self-Assembled Quantum Dots. <i>Physical Review Letters</i> , 2010, 104, 036601.	2.9	136
20	Magnetostriction and magnetic texture to 100.75 Tesla in frustrated SrCu ₂ (BO ₃) ₂ Tl. <i>Physical Review Letters</i> , 2012, 109, 12404-12407.	3.3	118
21	Long-lived photoinduced magnetization in copper-doped ZnSe/CdSe core-shell nanocrystals. <i>Nature Nanotechnology</i> , 2012, 7, 792-797.	15.6	110
22	Gate-Controlled Spin-Valley Locking of Resident Carriers in WS_2 Monolayers. <i>Physical Review Letters</i> , 2017, 119, 137401.	2.9	107
23	High magnetic fields for fundamental physics. <i>Physics Reports</i> , 2018, 765-766, 1-39.	10.3	87
24	Spin spectroscopy of dark excitons in CdSe quantum dots to 60 T. <i>Physical Review B</i> , 2001, 63, .	1.1	78
25	Intrinsic Spin Fluctuations Reveal the Dynamical Response Function of Holes Coupled to Nuclear Spin Baths in (In,Ga)As Quantum Dots. <i>Physical Review Letters</i> , 2012, 108, 186603.	2.9	77
26	Optical Spectroscopy of Spin Noise. <i>Physical Review Letters</i> , 2013, 110, 176601.	2.9	76
27	Spin noise of conduction electrons in n -type bulk GaAs. <i>Physical Review B</i> , 2009, 79, .	1.1	75
28	Magneto-Optical Properties of CuInS ₂ Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 4105-4109.	2.1	69
29	Evidence for the Band-Edge Exciton of CuInS ₂ Nanocrystals Enables Record Efficient Large-Area Luminescent Solar Concentrators. <i>Advanced Functional Materials</i> , 2020, 30, 1906629.	7.8	65
30	Time- and Polarization-Resolved Optical Spectroscopy of Colloidal CdSe Nanocrystal Quantum Dots in High Magnetic Fields. <i>Journal of Physical Chemistry B</i> , 2005, 109, 15332-15338.	1.2	64
31	Excitonic pathway to photoinduced magnetism in colloidal nanocrystals with nonmagnetic dopants. <i>Nature Nanotechnology</i> , 2018, 13, 145-151.	15.6	64
32	Negatively Charged Excitons in CdSe Nanoplatelets. <i>Nano Letters</i> , 2020, 20, 1370-1377.	4.5	58
33	Bright-exciton fine structure and anisotropic exchange in CdSe nanocrystal quantum dots. <i>Physical Review B</i> , 2006, 73, .	1.1	57
34	Cascade of Magnetic Field Induced Spin Transitions in LaCoO ₃ . <i>Physical Review Letters</i> , 2012, 109, 037201.	2.9	56
35	Spectroscopic and Magneto-Optical Signatures of Cu ¹⁺ and Cu ²⁺ Defects in Copper Indium Sulfide Quantum Dots. <i>ACS Nano</i> , 2020, 14, 2212-2223.	7.3	56
36	Two-colour spin noise spectroscopy and fluctuation correlations reveal homogeneous linewidths within quantum-dot ensembles. <i>Nature Communications</i> , 2014, 5, 4949.	5.8	54

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37	Revealing giant internal magnetic fields due to spin fluctuations in magnetically doped colloidal nanocrystals. <i>Nature Nanotechnology</i> , 2016, 11, 137-142.	15.6	53
38	Local Hanle-effect studies of spin drift and diffusion in n:GaAs epilayers and spin-transport devices. <i>New Journal of Physics</i> , 2007, 9, 347-347.	1.2	51
39	Spin Coherence and Dephasing of Localized Electrons in Monolayer MoS ₂ . <i>Nano Letters</i> , 2015, 15, 8250-8254.	4.5	49
40	Bias-controlled sensitivity of ferromagnet/semiconductor electrical spin detectors. <i>Physical Review B</i> , 2009, 80, .	1.1	47
41	Semiconductor Nanoplatelet Excimers. <i>Nano Letters</i> , 2018, 18, 6948-6953.	4.5	46
42	Spatial extent of the excited exciton states in WS_2 monolayers from diamagnetic shifts. <i>Physical Review B</i> , 2018, 98, .	4.1	40
43	Room-Temperature Magnetic Order in Air-Stable Ultrathin Iron Oxide. <i>Nano Letters</i> , 2019, 19, 3777-3781.	4.5	40
44	Direct Measurements of Magnetic Polarons in Cd _{1-x} Mn _x Se Nanocrystals from Resonant Photoluminescence. <i>Nano Letters</i> , 2017, 17, 3068-3075.	4.5	36
45	Determination of the In-Plane Exciton Radius in 2D CdSe Nanoplatelets via Magneto-optical Spectroscopy. <i>ACS Nano</i> , 2019, 13, 8589-8596.	7.3	35
46	Bias-dependent electron spin lifetimes in n-GaAs and the role of donor impact ionization. <i>Applied Physics Letters</i> , 2006, 89, 102102.	1.5	33
47	Effects of strain, electric, and magnetic fields on lateral electron-spin transport in semiconductor epilayers. <i>Physical Review B</i> , 2006, 73, .	1.1	32
48	Spin Noise Spectroscopy Beyond Thermal Equilibrium and Linear Response. <i>Physical Review Letters</i> , 2014, 113, 156601.	2.9	32
49	Comparing the anomalous Hall effect and the magneto-optical Kerr effect through antiferromagnetic phase transitions in Mn ₃ Sn. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	29
50	Quantitative study of spin noise spectroscopy in a classical gas of ⁴¹ K atoms. <i>Physical Review A</i> , 2006, 74, .	1.0	28
51	Valley relaxation of resident electrons and holes in a monolayer semiconductor: Dependence on carrier density and the role of substrate-induced disorder. <i>Physical Review Materials</i> , 2021, 5, .	0.9	28
52	Cross-correlation spin noise spectroscopy of heterogeneous interacting spin systems. <i>Scientific Reports</i> , 2015, 5, 9573.	1.6	27
53	Electrical Spin Injection and Detection in Silicon Nanowires through Oxide Tunnel Barriers. <i>Nano Letters</i> , 2013, 13, 430-435.	4.5	26
54	Covalent 2D Cr ₂ Te ₃ ferromagnet. <i>Materials Research Letters</i> , 2021, 9, 205-212.	4.1	25

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55	Fiber Bragg Grating Dilatometry in Extreme Magnetic Field and Cryogenic Conditions. <i>Sensors</i> , 2017, 17, 2572.	2.1	24
56	Nonreciprocal directional dichroism of a chiral magnet in the visible range. <i>Npj Quantum Materials</i> , 2020, 5, .	1.8	24
57	Optical and electrical spin injection and spin transport in hybrid Fe/GaAs devices. <i>Journal of Applied Physics</i> , 2007, 101, 081716.	1.1	20
58	Dative Epitaxy of Commensurate Monocrystalline Covalent van der Waals Moir� Supercrystal. <i>Advanced Materials</i> , 2022, 34, e2200117.	11.1	20
59	Quantized Electronic Doping towards Atomically Controlled "Charge-Engineered" Semiconductor Nanocrystals. <i>Nano Letters</i> , 2019, 19, 1307-1317.	4.5	17
60	Detection of thermodynamic "valley noise" in monolayer semiconductors: Access to intrinsic valley relaxation time scales. <i>Science Advances</i> , 2019, 5, eaau4899.	4.7	17
61	Spontaneous Valley Polarization of Interacting Carriers in a Monolayer Semiconductor. <i>Physical Review Letters</i> , 2020, 125, 147602.	2.9	17
62	Intrinsic and Extrinsic Exciton Recombination Pathways in AgInS ₂ Colloidal Nanocrystals. <i>Energy Material Advances</i> , 2021, 2021, .	4.7	15
63	Many-Body Exciton and Intervalley Correlations in Heavily Electron-Doped WSe ₂ Monolayers. <i>Nano Letters</i> , 2022, 22, 426-432.	4.5	13
64	Spin noise spectroscopy to probe quantum states of ultracold fermionic atom gases. <i>Physical Review A</i> , 2006, 74, .	1.0	12
65	Higher-order spin-noise spectroscopy of atomic spins in fluctuating external fields. <i>Physical Review A</i> , 2016, 93, .	1.0	11
66	Observation of cyclotron resonance and measurement of the hole mass in optimally doped $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$. <i>Physical Review B</i> , 2021, 103, .		
67	Broadband Spectroscopy of Thermodynamic Magnetization Fluctuations through a Ferromagnetic Spin-Reorientation Transition. <i>Physical Review X</i> , 2018, 8, .	2.8	10
68	Exploiting Functional Impurities for Fast and Efficient Incorporation of Manganese into Quantum Dots. <i>Journal of the American Chemical Society</i> , 2020, 142, 18160-18173.	6.6	10
69	Field-Induced Magnetic Monopole Plasma in Artificial Spin Ice. <i>Physical Review X</i> , 2021, 11, .	2.8	9
70	Enhanced Emission from Bright Excitons in Asymmetrically Strained Colloidal CdSe/Cd _x Zn _{1-x} Se Quantum Dots. <i>ACS Nano</i> , 2021, 15, 14444-14452.	7.3	9
71	Nonreciprocal directional dichroism at telecom wavelengths. <i>Npj Quantum Materials</i> , 2022, 7, .	1.8	9
72	Magnetoreflexion spectroscopy of monolayer transition-metal dichalcogenide semiconductors in pulsed magnetic fields. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016, 34, 04J102.	0.6	7

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73	Dual-Emitting Dot-in-Bulk CdSe/CdS Nanocrystals with Highly Emissive Core- and Shell-Based Trions Sharing the Same Resident Electron. Nano Letters, 2019, 19, 8846-8854.	4.5	6
74	Magnetic field dependent thermodynamic properties of square and quadrupolar artificial spin ice. Physical Review B, 2022, 105, .	1.1	4
75	Optical and Magneto-Optical Properties of Donor-Bound Excitons in Vacancy-Engineered Colloidal Nanocrystals. Nano Letters, 2021, 21, 6211-6219.	4.5	2
76	Optical Detection of Long Electron Spin Transport Lengths in a Monolayer Semiconductor. Physical Review Letters, 2022, 129, .	2.9	2
77	GaN/AlGaIn 2DEGs in the quantum regime: Magneto-transport and photoluminescence to 60 tesla. Applied Physics Letters, 2020, 117, 262105.	1.5	1
78	Measuring random spin fluctuations for perturbation-free probes of spin dynamics and magnetic resonance (Invited Paper). , 2005, , .		0
79	Optical and Electrical Detection of Spin-Polarized Transport. , 2006, , .		0