

Caspar H Van Der Wal

List of Publications by Year in descending order

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54
papers

4,422
citations

331538

21
h-index

206029

48
g-index

54
all docs

54
docs citations

54
times ranked

3546
citing authors

#	ARTICLE	IF	CITATIONS
1	Broadband single-mode planar waveguides in monolithic 4H-SiC. <i>Journal of Applied Physics</i> , 2022, 131, 025703.	1.1	1
2	Electromagnetically induced transparency in inhomogeneously broadened divacancy defect ensembles in SiC. <i>Journal of Applied Physics</i> , 2022, 131, 094401.	1.1	1
3	The role of device asymmetries and Schottky barriers on the helicity-dependent photoresponse of 2D phototransistors. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	3.9	8
4	Symmetry and control of spin-scattering processes in two-dimensional transition metal dichalcogenides. <i>Physical Review B</i> , 2021, 103, .	1.1	10
5	Hyperfine-mediated transitions between electronic spin-1/2 levels of transition metal defects in SiC. <i>New Journal of Physics</i> , 2021, 23, 083010.	1.2	5
6	Detecting Chirality in Two-Terminal Electronic Nanodevices. <i>Nano Letters</i> , 2020, 20, 6148-6154.	4.5	47
7	Characterization of low-resistance ohmic contacts to a two-dimensional electron gas in a GaAs/AlGaAs heterostructure. <i>EPJ Applied Physics</i> , 2020, 89, 20101.	0.3	0
8	Reply to "Comment on "Spin-dependent electron transmission model for chiral molecules in mesoscopic devices". <i>Physical Review B</i> , 2020, 101, .	1.1	10
9	Spin-relaxation times exceeding seconds for color centers with strong spin-orbit coupling in SiC. <i>New Journal of Physics</i> , 2020, 22, 103051.	1.2	15
10	Circuit-model analysis for spintronic devices with chiral molecules as spin injectors. <i>Physical Review B</i> , 2019, 99, .	1.1	3
11	Semiconductor channel-mediated photodoping in h-BN encapsulated monolayer MoSe ₂ phototransistors. <i>2D Materials</i> , 2019, 6, 025040.	2.0	12
12	Spin-dependent electron transmission model for chiral molecules in mesoscopic devices. <i>Physical Review B</i> , 2019, 99, .	1.1	68
13	Observation of bright and dark exciton transitions in monolayer MoSe ₂ by photocurrent spectroscopy. <i>2D Materials</i> , 2018, 5, 015004.	2.0	21
14	Identification and tunable optical coherent control of transition-metal spins in silicon carbide. <i>Npj Quantum Information</i> , 2018, 4, .	2.8	53
15	Two-laser dynamic nuclear polarization with semiconductor electrons: Feedback, suppressed fluctuations, and bistability near two-photon resonance. <i>Physical Review B</i> , 2018, 98, .	1.1	5
16	Symmetry regimes for circular photocurrents in monolayer MoSe ₂ . <i>Nature Communications</i> , 2018, 9, 3346.	5.8	53
17	Electronic properties of germanane field-effect transistors. <i>2D Materials</i> , 2017, 4, 021009.	2.0	97
18	Stabilizing nuclear spins around semiconductor electrons via the interplay of optical coherent population trapping and dynamic nuclear polarization. <i>Physical Review B</i> , 2016, 93, .	1.1	5

#	ARTICLE	IF	CITATIONS
19	All-optical coherent population trapping with defect spin ensembles in silicon carbide. Scientific Reports, 2015, 5, 10931.	1.6	28
20	On the annealing mechanism of AuGe/Ni/Au ohmic contacts to a two-dimensional electron gas in GaAs/Al _x Ga _{1-x} As heterostructures. Semiconductor Science and Technology, 2013, 28, 025006.	1.0	8
21	Odd and even Kondo effects from emergent localization in quantum point contacts. Nature, 2013, 501, 79-83.	13.7	65
22	Split-gate quantum point contacts with tunable channel length. Journal of Applied Physics, 2013, 113, 024507.	1.1	8
23	Public exhibit for demonstrating the quantum of electrical conductance. American Journal of Physics, 2011, 79, 856-860.	0.3	5
24	Polarization-preserving confocal microscope for optical experiments in a dilution refrigerator with high magnetic field. Review of Scientific Instruments, 2011, 82, 043105.	0.6	8
25	Spin-Dephasing Anisotropy for Electrons in a Diffusive Quasi-1D GaAs Wire. Journal of Superconductivity and Novel Magnetism, 2010, 23, 11-15.	0.8	12
26	Electromagnetically induced transparency with an ensemble of donor-bound electron spins in a semiconductor. Physical Review B, 2010, 82, .	1.1	14
27	Suppressed spin dephasing for two-dimensional and bulk electrons in GaAs wires due to engineered cancellation of spin-orbit interaction terms. Physical Review B, 2010, 81, .	1.1	16
28	Optical probing of spin dynamics of two-dimensional and bulk electrons in a GaAs/AlGaAs heterojunction system. New Journal of Physics, 2010, 12, 113040.	1.2	7
29	Towards quantum optics and entanglement with electron spin ensembles in semiconductors. Solid State Sciences, 2009, 11, 935-941.	1.5	4
30	Spin Accumulation and Spin Relaxation in a Large Open Quantum Dot. Physical Review Letters, 2008, 101, 056602.	2.9	23
31	Compact cryogenic Kerr microscope for time-resolved studies of electron spin transport in microstructures. Review of Scientific Instruments, 2008, 79, 123904.	0.6	6
32	Electrical detection of spin pumping: dc voltage generated by ferromagnetic resonance at ferromagnet/nonmagnet contact. Physical Review B, 2008, 78, .	1.1	28
33	Charge and spin dynamics in a two-dimensional electron gas. Journal of Physics Condensed Matter, 2007, 19, 295206.	0.7	8
34	The Influence of Device Geometry on Many-Body Effects in Quantum Point Contacts: Signatures of the 0.7 Anomaly, Exchange and Kondo. Journal of Superconductivity and Novel Magnetism, 2007, 20, 433-441.	0.8	24
35	Unified Description of Bulk and Interface-Enhanced Spin Pumping. Physical Review Letters, 2006, 96, 077201.	2.9	13
36	Large cone angle magnetization precession of an individual nanopatterned ferromagnet with dc electrical detection. Applied Physics Letters, 2006, 89, 232115.	1.5	70

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37	Microwave spectroscopy on magnetization reversal dynamics of nanomagnets with electronic detection. <i>Journal of Applied Physics</i> , 2006, 100, 024316.	1.1	25
38	On-chip detection of ferromagnetic resonance of a single submicron Permalloy strip. <i>Applied Physics Letters</i> , 2006, 89, 192506.	1.5	28
39	Electrical Detection of Spin Pumping due to the Precessing Magnetization of a Single Ferromagnet. <i>Physical Review Letters</i> , 2006, 97, 216603.	2.9	262
40	Capacitive Coupling of Atomic Systems to Mesoscopic Conductors. <i>Physical Review Letters</i> , 2004, 92, 063601.	2.9	135
41	Engineering decoherence in Josephson persistent-current qubits. <i>European Physical Journal B</i> , 2003, 31, 111-124.	0.6	95
42	Atomic Memory for Correlated Photon States. <i>Science</i> , 2003, 301, 196-200.	6.0	428
43	Quantum superposition of charge states on capacitively coupled superconducting islands. <i>Physical Review B</i> , 2003, 67, .	1.1	2
44	Toward nonclassical light storage via atomic-vapor Raman scattering. , 2003, , .		1
45	Engineering the quantum measurement process for the persistent current qubit. <i>Physica C: Superconductivity and Its Applications</i> , 2002, 368, 294-299.	0.6	11
46	Flux-based superconducting qubits for quantum computation. <i>Physica C: Superconductivity and Its Applications</i> , 2002, 372-376, 194-200.	0.6	14
47	Macroscopic Quantum Superposition in a Three-Josephson-Junction Loop. , 2001, , 25-34.		0
48	Quantum transitions of a small Josephson junction array. <i>Physica B: Condensed Matter</i> , 2000, 280, 243-244.	1.3	1
49	Quantum Superposition of Macroscopic Persistent-Current States. <i>Science</i> , 2000, 290, 773-777.	6.0	875
50	Controlled Single-Cooper-Pair Charging Effects in a Small Josephson Junction Array. , 1999, 12, 807-812.		10
51	Superconducting persistent-current qubit. <i>Physical Review B</i> , 1999, 60, 15398-15413.	1.1	597
52	Josephson Persistent-Current Qubit. <i>Science</i> , 1999, 285, 1036-1039.	6.0	1,160
53	Solid start for solid-state quantum bits. <i>Physics World</i> , 1999, 12, 21-22.	0.0	0
54	Decoherence of Flux Qubits Coupled to Electronic Circuits. <i>Advances in Solid State Physics</i> , 0, , 763-780.	0.8	17