Aubrey Hanbicki

List of Publications by Year
in descending order

70	6,248	117625	85541
papers	citations	34 h-index	71 g-index

71	71	71	6950
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Group-IV Ferromagnetic Semiconductor: MnxGe1-x. Science, 2002, 295, 651-654.	12.6	1,531
2	Efficient electrical spin injection from a magnetic metal/tunnel barrier contact into a semiconductor. Applied Physics Letters, 2002, 80, 1240-1242.	3.3	633
3	Analysis of the transport process providing spin injection through an Fe/AlGaAs Schottky barrier. Applied Physics Letters, 2003, 82, 4092-4094.	3.3	335
4	Electrical spin-injection into silicon from a ferromagnetic metal/tunnel barrier contact. Nature Physics, 2007, 3, 542-546.	16.7	330
5	Valley polarization and intervalley scattering in monolayer MoS₂. Applied Physics Letters, 2012, 101, 221907.	3.3	251
6	Electrical injection and detection of spin-polarized carriers in silicon in a lateral transport geometry. Applied Physics Letters, 2007, 91, .	3.3	231
7	Magnetoresistance of Mn:Ge ferromagnetic nanoclusters in a diluted magnetic semiconductor matrix. Applied Physics Letters, 2001, 78, 2739-2741.	3.3	184
8	Double Indirect Interlayer Exciton in a MoSe₂/WSe₂ van der Waals Heterostructure. ACS Nano, 2018, 12, 4719-4726.	14.6	160
9	Synthesis of Large-Area WS2 monolayers with Exceptional Photoluminescence. Scientific Reports, 2016, 6, 19159.	3.3	153
10	Largeâ€Area Synthesis of Continuous and Uniform MoS₂ Monolayer Films on Graphene. Advanced Functional Materials, 2014, 24, 6449-6454.	14.9	149
11	Nano-â€œSqueegeeâ€•for the Creation of Clean 2D Material Interfaces. ACS Applied Materials & Interfaces, 2018, 10, 10379-10387.	8.0	124
12	Comparison of Fe/Schottky and Fe/Al2O3 tunnel barrier contacts for electrical spin injection into GaAs. Applied Physics Letters, 2004, 84, 4334-4336.	3.3	122
13	Photoinduced Bandgap Renormalization and Exciton Binding Energy Reduction in WS₂. ACS Nano, 2017, 11, 12601-12608.	14.6	112
14	Charge Trapping and Exciton Dynamics in Large-Area CVD Grown MoS₂. Journal of Physical Chemistry C, 2016, 120, 5819-5826.	3.1	111
15	The Effect of Preparation Conditions on Raman and Photoluminescence of Monolayer WS2. Scientific Reports, 2016, 6, 35154.	3.3	107
16	A- and B-exciton photoluminescence intensity ratio as a measure of sample quality for transition metal dichalcogenide monolayers. APL Materials, 2018, 6, .	5.1	103
17	Optical polarization and intervalley scattering in single layers of MoS2 and MoSe2. Scientific Reports, 2016, 6, 25041.	3.3	102
18	Exchange bias of the interface spin system at the Fe/MgO interface. Nature Nanotechnology, 2013, 8, 438-444.	31.5	97

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19	Reduction of Spin Injection Efficiency by Interface Defect Spin Scattering inZnMnSe/AlGaAsâˆ¼GaAsSpin-Polarized Light-Emitting Diodes. Physical Review Letters, 2002, 89, 166602.	7.8	86
20	Determination of Interface Atomic Structure and Its Impact on Spin Transport UsingZ-Contrast Microscopy and Density-Functional Theory. Physical Review Letters, 2006, 96, 196101.	7.8	78
21	Quantifying electrical spin injection: Component-resolved electroluminescence from spin-polarized light-emitting diodes. Applied Physics Letters, 2001, 79, 3098-3100.	3.3	72
22	Optical control of charged exciton states in tungsten disulfide. Applied Physics Letters, 2015, 106, .	3.3	72
23	Anomalous temperature-dependent spin-valley polarization in monolayer WS2. Scientific Reports, 2016, 6, 18885.	3.3	57
24	Understanding Variations in Circularly Polarized Photoluminescence in Monolayer Transition Metal Dichalcogenides. ACS Nano, 2017, 11, 7988-7994.	14.6	56
25	Electrical spin injection from an n-type ferromagnetic semiconductor into a IIIâ€“V device heterostructure. Nature Materials, 2004, 3, 799-803.	27.5	49
26	Chemical vapor sensing of two-dimensional MoS2 field effect transistor devices. Solid-State Electronics, 2014, 101, 2-7.	1.4	47
27	Evidence for Chemical Vapor Induced 2H to 1T Phase Transition in MoX2 (Xâ€‰=â€‰Se, S) Transition Metal Dichalcogenide Films. Scientific Reports, 2017, 7, 3836.	3.3	47
28	Spatially Selective Enhancement of Photoluminescence in MoS‹sub›2‹/sub› by Exciton-Mediated Adsorption and Defect Passivation. ACS Applied Materials & Interfaces, 2019, 11, 16147-16155.	8.0	47
29	Resonant optical Stark effect in monolayer WS2. Nature Communications, 2019, 10, 5539.	12.8	46
30	Continuous Wave Sum Frequency Generation and Imaging of Monolayer and Heterobilayer Two-Dimensional Semiconductors. ACS Nano, 2020, 14, 708-714.	14.6	41
31	Ultrafast magnetization dynamics of epitaxial Fe films on AlGaAs (001). Applied Physics Letters, 2005, 86, 152512.	3.3	39
32	Electrical spin injection into Si: A comparison between Fe/Si Schottky and Fe/Al2O3 tunnel contacts. Applied Physics Letters, 2009, 94, 122106.	3.3	36
33	Spin injection across (110) interfaces: Feâ•GaAs(110) spin-light-emitting diodes. Applied Physics Letters, 2004, 85, 1544-1546.	3.3	35
34	Interface Magnetization Reversal and Anisotropy inFe/AlGaAs(001). Physical Review Letters, 2005, 95, 137202.	7.8	35
35	Information Processing With Pure Spin Currents in Silicon: Spin Injection, Extraction, Manipulation, and Detection. IEEE Transactions on Electron Devices, 2009, 56, 2343-2347.	3.0	34
36	Optical detection of spin Hall effect in metals. Applied Physics Letters, 2014, 104, 172402.	3.3	32

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37	Dynamics of chemical vapor sensing with MoS₂using 1T/2H phase contacts/channel. Nanoscale, 2016, 8, 11445-11453.	5.6	32
38	Epitaxial growth of an n-type ferromagnetic semiconductor CdCr2Se4 on GaAs(001) and GaP(001). Applied Physics Letters, 2002, 81, 1471-1473.	3.3	30
39	Epitaxial growth of the diluted magnetic semiconductors CryGe1â^'y and CryMnxGe1â^'xâ^'y. Applied Physics Letters, 2004, 84, 1725-1727.	3.3	27
40	Prominent room temperature valley polarization in WS2/graphene heterostructures grown by chemical vapor deposition. Applied Physics Letters, 2020, 116, .	3.3	25
41	Contributions to Hanle lineshapes in Fe/GaAs nonlocal spin valve transport. Applied Physics Letters, 2009, 94, 102511.	3.3	24
42	Intershell Exchange and Sequential Electrically Injected Spin Populations of InAs Quantum-Dot Shell States. Physical Review Letters, 2008, 101, 227203.	7.8	23
43	Nonvolatile reprogrammable logic elements using hybrid resonant tunneling diodeâ€“giant magnetoresistance circuits. Applied Physics Letters, 2001, 79, 1190-1192.	3.3	21
44	High room temperature optical polarization due to spin-valley coupling in monolayer WS2. AIP Advances, 2016, 6, .	1.3	21
45	Influence of steps on the interaction between adsorbed hydrogen atoms and a nickel surface. Journal of Chemical Physics, 1999, 111, 9053-9057.	3.0	19
46	Control of magnetic contrast with nonlinear magneto-plasmonics. Scientific Reports, 2014, 4, 6191.	3.3	19
47	Hydrogen-induced structural changes on NiAl(110). Surface Science, 1996, 365, L639-L646.	1.9	18
48	Comment on â€œFerromagnetism in Cr-doped Geâ€•[Appl. Phys. Lett. 81, 3606 (2002)]. Applied Physics Letters, 2003, 83, 2716-2717.	3.3	18
49	Anisotropic exchange coupling and stress-induced uniaxial magnetic anisotropy in Fe/GaAs(001). Physical Review B, 2012, 85, .	3.2	18
50	Nonlinear magneto-plasmonics. Optical Materials Express, 2015, 5, 2597.	3.0	18
51	Graphene and monolayer transition-metal dichalcogenides: properties and devices. Journal of Materials Research, 2016, 31, 845-877.	2.6	15
52	Epitaxial growth and electrical spin injection from Fe(1â^'x)Gax (001) films on AlGaAsâ•GaAs (001) heterostructures. Applied Physics Letters, 2007, 91, 122515.	3.3	14
53	2D Monolayers for Superior Transparent Electromagnetic Interference Shielding. ACS Nano, 2022, 16, 9498-9509.	14.6	13
54	Inelastic multiphonon helium scattering from a stepped Ni(977) surface. Journal of Chemical Physics, 1998, 109, 6947-6955.	3.0	12

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55	Effect of Sn Doping on Surface States of Bi₂Se₃ Thin Films. Journal of Physical Chemistry C, 2020, 124, 27082-27088.	3.1	12
56	Electrical spin injection into the InAsâˆ•GaAs wetting layer. Applied Physics Letters, 2007, 91, .	3.3	11
57	Spinâ€“orbit coupling proximity effect in MoS2/Fe3GeTe2 heterostructures. Applied Physics Letters, 2022, 120, .	3.3	11
58	A graphene solution to conductivity mismatch: Spin injection from ferromagnetic metal/graphene tunnel contacts into silicon. Journal of Applied Physics, 2013, 113, .	2.5	10
59	Surface plasmon-enhanced transverse magnetic second-harmonic generation. Optics Express, 2013, 21, 28842.	3.4	10
60	Band offsets at CdCr2Se4â€“(AlGa)As and CdCr2Se4â€“ZnSe interfaces. Applied Physics Letters, 2003, 82, 1422-1424.	3.3	9
61	Synthesis, solid-state NMR, and magnetic characterization of h-GaN containing magnetic ions. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2437-2440.	0.8	9
62	Optical polarization of excitons and trions under continuous and pulsed excitation in single layers of WSe₂. Nanoscale, 2017, 9, 17422-17428.	5.6	9
63	Chemical vapor sensing with CVD-grown monolayer MoSe2 using photoluminescence modulation. Applied Physics Letters, 2018, 113, 163106.	3.3	9
64	Synthesis of High-Quality Monolayer MoS₂ by Direct Liquid Injection. ACS Applied Materials & Interfaces, 2020, 12, 9580-9588.	8.0	9
65	Bias-controlled hole degeneracy and implications for quantifying spin polarization. Applied Physics Letters, 2005, 87, 122503.	3.3	8
66	Room-Temperature Spin Transport in Cd₃As₂. ACS Nano, 2021, 15, 5459-5466.	14.6	8
67	Response to â€œComment on â€˜Efficient electrical spin injection from a magnetic metal/tunnel barrier contact into a semiconductorâ€™â€ŠâŠ•[Appl. Phys. Lett. 81, 2130 (2002)]. Applied Physics Letters, 2002, 81, 2131-2132.	3.3	6
68	Rational Design of Interfacial Structure:â€‰Adsorbate-Mediated Templating. Journal of Physical Chemistry B, 1999, 103, 9805-9808.	2.6	4
69	Gate-tunable giant tunneling electroresistance in van der Waals ferroelectric tunneling junctions. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 283, 115829.	3.5	4
70	Nonlocal Measurement as a Probe of the Spin Hall Effect in Topological Insulators. Physical Review Applied, 2021, 16, .	3.8	2