

Saul Velez

List of Publications by Year in descending order

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55
papers

3,774
citations

172207

29
h-index

174990

52
g-index

55
all docs

55
docs citations

55
times ranked

4684
citing authors

#	ARTICLE	IF	CITATIONS
1	In-plane anisotropic and ultra-low-loss polaritons in a natural van der Waals crystal. Nature, 2018, 562, 557-562.	13.7	506
2	Infrared hyperbolic metasurface based on nanostructured van der Waals materials. Science, 2018, 359, 892-896.	6.0	344
3	Controlling graphene plasmons with resonant metal antennas and spatial conductivity patterns. Science, 2014, 344, 1369-1373.	6.0	292
4	Acoustic terahertz graphene plasmons revealed by photocurrent nanoscopy. Nature Nanotechnology, 2017, 12, 31-35.	15.6	257
5	Boron nitride nanoresonators for phonon-enhanced molecular vibrational spectroscopy at the strong coupling limit. Light: Science and Applications, 2018, 7, 17172-17172.	7.7	257
6	Real-space mapping of tailored sheet and edge plasmons in graphene nanoresonators. Nature Photonics, 2016, 10, 239-243.	15.6	167
7	A molecular spin-photovoltaic device. Science, 2017, 357, 677-680.	6.0	147
8	Hanle Magnetoresistance in Thin Metal Films with Strong Spin-Orbit Coupling. Physical Review Letters, 2016, 116, 016603.	2.9	133
9	Nanoimaging of resonating hyperbolic polaritons in linear boron nitride antennas. Nature Communications, 2017, 8, 15624.	5.8	121
10	High-speed domain wall racetracks in a magnetic insulator. Nature Communications, 2019, 10, 4750.	5.8	114
11	Probing low-energy hyperbolic polaritons in van der Waals crystals with an electron microscope. Nature Communications, 2017, 8, 95.	5.8	111
12	Tunable Sign Change of Spin Hall Magnetoresistance in Pt/NiO Structures. Physical Review Letters, 2017, 118, 147202.	2.9	109
13	Optical Nanoimaging of Hyperbolic Surface Polaritons at the Edges of van der Waals Materials. Nano Letters, 2017, 17, 228-235.	4.5	107
14	Spin Hall magnetoresistance at Pt/CoFe ₂ O ₄ interfaces and texture effects. Applied Physics Letters, 2014, 105, .	1.5	105
15	Gate-tunable diode and photovoltaic effect in an organic 2D layered material junction. Nanoscale, 2015, 7, 15442-15449.	2.8	84
16	Collective near-field coupling and nonlocal phenomena in infrared-phononic metasurfaces for nano-light canalization. Nature Communications, 2020, 11, 3663.	5.8	70
17	Gate-Controlled Energy Barrier at a Graphene/Molecular Semiconductor Junction. Advanced Functional Materials, 2015, 25, 2972-2979.	7.8	58
18	Competing effects at Pt/YIG interfaces: Spin Hall magnetoresistance, magnon excitations, and magnetic frustration. Physical Review B, 2016, 94, .	1.1	58

#	ARTICLE	IF	CITATIONS
19	Unveiling the mechanisms of the spin Hall effect in Ta. Physical Review B, 2018, 98, .	1.1	56
20	Launching of hyperbolic phonon-polaritons in h-BN slabs by resonant metal plasmonic antennas. Nature Communications, 2019, 10, 3242.	5.8	56
21	Deeply subwavelength phonon-polaritonic crystal made of a van der Waals material. Nature Communications, 2019, 10, 42.	5.8	51
22	Nanofocusing of Hyperbolic Phonon Polaritons in a Tapered Boron Nitride Slab. ACS Photonics, 2016, 3, 924-929.	3.2	44
23	Current-driven dynamics and ratchet effect of skyrmion bubbles in a ferrimagnetic insulator. Nature Nanotechnology, 2022, 17, 834-841.	15.6	39
24	Interface-Assisted Sign Inversion of Magnetoresistance in Spin Valves Based on Novel Lanthanide Quinoline Molecules. Advanced Functional Materials, 2018, 28, 1702099.	7.8	35
25	Spin Hall Magnetoresistance as a Probe for Surface Magnetization in $\text{Pt}/\text{Co}/\text{O}$. Physical Review Applied, 2016, 6, .	1.5	34
26	Synthetic Antiferromagnetic Coupling Between Ultrathin Insulating Garnets. Physical Review Applied, 2018, 10, .	1.5	34
27	Modulation of pure spin currents with a ferromagnetic insulator. Physical Review B, 2015, 91, .	1.1	30
28	Thermally driven long-range magnon spin currents in yttrium iron garnet due to intrinsic spin Seebeck effect. Physical Review B, 2017, 96, .	1.1	30
29	Control of Nonlocal Magnon Spin Transport via Magnon Drift Currents. Physical Review Letters, 2021, 126, 257201.	2.9	30
30	Magnetic deflagration in Gd_5Si_4 . Physical Review B, 2010, 81, .	1.1	29
31	Nanoscale Guiding of Infrared Light with Hyperbolic Volume and Surface Polaritons in van der Waals Material Ribbons. Advanced Materials, 2020, 32, e1906530.	11.1	29
32	Enhanced Light-Matter Interaction in ^{10}B Monoisotopic Boron Nitride Infrared Nanoresonators. Advanced Optical Materials, 2021, 9, 2001958.	3.6	24
33	Absence of detectable current-induced magneto-optical Kerr effects in Pt, Ta, and W. Applied Physics Letters, 2016, 109, .	1.5	22
34	Spin Hall magnetoresistance in a low-dimensional Heisenberg ferromagnet. Physical Review B, 2019, 100, .	1.1	21
35	Anomalous Hall-like transverse magnetoresistance in Au thin films on $\text{Y}_3\text{Fe}_5\text{O}_{12}$. Applied Physics Letters, 2018, 113, .	1.5	18
36	Differences in the magnon diffusion length for electrically and thermally driven magnon currents in $\text{Y}_3\text{Fe}_5\text{O}_{12}$. Physical Review Applied, 2016, 6, .	1.1	17

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37	Phonon-Enhanced Mid-Infrared CO ₂ Gas Sensing Using Boron Nitride Nanoresonators. ACS Photonics, 2022, 9, 34-42.	3.2	17
38	Onset of a Propagating Self-Sustained Spin Reversal Front in a Magnetic System. Physical Review Letters, 2013, 110, 207203.	2.9	16
39	Effect of Temperature on Magnetic Solitons Induced by Spin-Transfer Torque. Physical Review Applied, 2017, 7, .	1.5	15
40	Topological magnetic irreversibility in superconducting Pb samples of various shapes. Physical Review B, 2008, 78, .	1.1	13
41	Quantum depinning of the magnetic vortex core in micron-size permalloy disks. Physical Review B, 2012, 85, .	1.1	13
42	Hyperspectral Nanoimaging of van der Waals Polaritonic Crystals. Nano Letters, 2021, 21, 7109-7115.	4.5	13
43	Quantum tunneling of the interfaces between normal-metal and superconducting regions of a type-I Pb superconductor. Physical Review B, 2011, 83, .	1.1	8
44	Anisotropic magnetic deflagration in single crystals of Gd ₅ Ge ₄ . Physical Review B, 2012, 85, .	1.1	7
45	Systematic study of nonmagnetic resistance changes due to electrical pulsing in single metal layers and metal/antiferromagnet bilayers. Journal of Applied Physics, 2020, 128, .	1.1	7
46	Rotating magnetic field experiments in a pure superconducting Pb sphere. Physical Review B, 2009, 80, .	1.1	6
47	Partial spin reversal in magnetic deflagration. Physical Review B, 2014, 89, .	1.1	6
48	Training the Polarization in Integrated La _{0.15} Bi _{0.85} FeO ₃ -Based Devices. Advanced Materials, 2021, , 2104688.	11.1	5
49	Spin reversal in Fe ₈ under fast pulsed magnetic fields. New Journal of Physics, 2015, 17, 073006.	1.2	3
50	Theory of drift-enabled control in nonlocal magnon transport. Journal of Physics Condensed Matter, 2022, 34, 295801.	0.7	3
51	Magnetic field dependence of the quantum tunneling of normal-superconductor interfaces in a type-I Pb superconductor. Physical Review B, 2012, 85, .	1.1	2
52	The role of temperature in the magnetic irreversibility of type-I Pb superconductors. Journal of Physics Condensed Matter, 2012, 24, 485701.	0.7	1
53	Energy Barriers: Gate-Controlled Energy Barrier at a Graphene/Molecular Semiconductor Junction (Adv. Funct. Mater. 20/2015). Advanced Functional Materials, 2015, 25, 3103-3103.	7.8	0
54	Multiphase magnetic deflagrations in a Nd ₅ Ge ₃ single crystal. New Journal of Physics, 2017, 19, 023031.	1.2	0

#	ARTICLE	IF	CITATIONS
55	Addressing Vibrational Excitations in Van der Waals Materials and Molecular Layers Within Electron Energy Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 408-409.	0.2	0