

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	Phonon-Enhanced Mid-Infrared CO ₂ Gas Sensing Using Boron Nitride Nanoresonators. ACS Photonics, 2022, 9, 34-42.	3.2	17
2	Theory of drift-enabled control in nonlocal magnon transport. Journal of Physics Condensed Matter, 2022, 34, 295801.	0.7	3
3	Current-driven dynamics and ratchet effect of skyrmion bubbles in a ferrimagnetic insulator. Nature Nanotechnology, 2022, 17, 834-841.	15.6	39
4	Enhanced Light-Matter Interaction in ¹⁰ B Monoisotopic Boron Nitride Infrared Nanoresonators. Advanced Optical Materials, 2021, 9, 2001958.	3.6	24
5	Control of Nonlocal Magnon Spin Transport via Magnon Drift Currents. Physical Review Letters, 2021, 126, 257201.	2.9	30
6	Hyperspectral Nanoimaging of van der Waals Polaritonic Crystals. Nano Letters, 2021, 21, 7109-7115.	4.5	13
7	Training the Polarization in Integrated La 0.15 Bi 0.85 FeO ₃ -Based Devices. Advanced Materials, 2021, , 2104688.	11.1	5
8	Collective near-field coupling and nonlocal phenomena in infrared-phononic metasurfaces for nano-light canalization. Nature Communications, 2020, 11, 3663.	5.8	70
9	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
10	Differences in the magnon diffusion length for electrically and thermally driven magnon currents in $Y_3Fe_5O_{12}$. Physical Review B, 2020, 102, 044411.	1.1	17
11	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
12	Launching of hyperbolic phonon-polaritons in h-BN slabs by resonant metal plasmonic antennas. Nature Communications, 2019, 10, 3242.	5.8	56
13	High-speed domain wall racetracks in a magnetic insulator. Nature Communications, 2019, 10, 4750.	5.8	114
14	Spin Hall magnetoresistance in a low-dimensional Heisenberg ferromagnet. Physical Review B, 2019, 100, .	1.1	21
15	Deeply subwavelength phonon-polaritonic crystal made of a van der Waals material. Nature Communications, 2019, 10, 42.	5.8	51
16	Infrared hyperbolic metasurface based on nanostructured van der Waals materials. Science, 2018, 359, 892-896.	6.0	344
17	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
18	Interface-Assisted Sign Inversion of Magnetoresistance in Spin Valves Based on Novel Lanthanide Quinoline Molecules. Advanced Functional Materials, 2018, 28, 1702099.	7.8	35

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19	Anomalous Hall-like transverse magnetoresistance in Au thin films on Y3Fe5O12. Applied Physics Letters, 2018, 113, .	1.5	18
20	In-plane anisotropic and ultra-low-loss polaritons in a natural van der Waals crystal. Nature, 2018, 562, 557-562.	13.7	506
21	Synthetic Antiferromagnetic Coupling Between Ultrathin Insulating Garnets. Physical Review Applied, 2018, 10, .	1.5	34
22	Addressing Vibrational Excitations in Van der Waals Materials and Molecular Layers Within Electron Energy Loss Spectroscopy. Microscopy and Microanalysis, 2018, 24, 408-409.	0.2	0
23	Unveiling the mechanisms of the spin Hall effect in Ta. Physical Review B, 2018, 98, .	1.1	56
24	Multiphase magnetic deflagrations in a Nd5Ge3single crystal. New Journal of Physics, 2017, 19, 023031.	1.2	0
25	Optical Nanoimaging of Hyperbolic Surface Polaritons at the Edges of van der Waals Materials. Nano Letters, 2017, 17, 228-235.	4.5	107
26	Nanoimaging of resonating hyperbolic polaritons in linear boron nitride antennas. Nature Communications, 2017, 8, 15624.	5.8	121
27	Effect of Temperature on Magnetic Solitons Induced by Spin-Transfer Torque. Physical Review Applied, 2017, 7, .	1.5	15
28	Probing low-energy hyperbolic polaritons in van der Waals crystals with an electron microscope. Nature Communications, 2017, 8, 95.	5.8	111
29	A molecular spin-photovoltaic device. Science, 2017, 357, 677-680.	6.0	147
30	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
31	Tunable Sign Change of Spin Hall Magnetoresistance in Pt/NiO Structures. Physical Review Letters, 2017, 118, 147202.	2.9	109
32	Acoustic terahertz graphene plasmons revealed by photocurrent nanoscopy. Nature Nanotechnology, 2017, 12, 31-35.	15.6	257
33	Absence of detectable current-induced magneto-optical Kerr effects in Pt, Ta, and W. Applied Physics Letters, 2016, 109, .	1.5	22
34	Nanofocusing of Hyperbolic Phonon Polaritons in a Tapered Boron Nitride Slab. ACS Photonics, 2016, 3, 924-929.	3.2	44
35	Spin Hall Magnetoresistance as a Probe for Surface Magnetization in $\text{Pt}/\text{Co}/\text{O}$ Structures. Physical Review Applied, 2016, 6, .	1.5	34
36	Competing effects at Pt/YIG interfaces: Spin Hall magnetoresistance, magnon excitations, and magnetic frustration. Physical Review B, 2016, 94, .	1.1	58

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37	Real-space mapping of tailored sheet and edge plasmons in graphene nanoresonators. Nature Photonics, 2016, 10, 239-243.	15.6	167
38	Hanle Magnetoresistance in Thin Metal Films with Strong Spin-Orbit Coupling. Physical Review Letters, 2016, 116, 016603.	2.9	133
39	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
40	Modulation of pure spin currents with a ferromagnetic insulator. Physical Review B, 2015, 91, .	1.1	30
41	Gate- Controlled Energy Barrier at a Graphene/Molecular Semiconductor Junction. Advanced Functional Materials, 2015, 25, 2972-2979.	7.8	58
42	Spin reversal in Fe under fast pulsed magnetic fields. New Journal of Physics, 2015, 17, 073006.	1.2	3
43	Gate-tunable diode and photovoltaic effect in an organic 2D layered material junction. Nanoscale, 2015, 7, 15442-15449.	2.8	84
44	Partial spin reversal in magnetic deflagration. Physical Review B, 2014, 89, .	1.1	6
45	Controlling graphene plasmons with resonant metal antennas and spatial conductivity patterns. Science, 2014, 344, 1369-1373.	6.0	292
46	Spin Hall magnetoresistance at Pt/CoFe ₂ O ₄ interfaces and texture effects. Applied Physics Letters, 2014, 105, .	1.5	105
47	Onset of a Propagating Self-Sustained Spin Reversal Front in a Magnetic System. Physical Review Letters, 2013, 110, 207203.	2.9	16
48	The role of temperature in the magnetic irreversibility of type-I Pb superconductors. Journal of Physics Condensed Matter, 2012, 24, 485701.	0.7	1
49	Anisotropic magnetic deflagration in single crystals of Gd ₅ Ge ₄ . Physical Review B, 2012, 85, .	1.1	7
50	Quantum depinning of the magnetic vortex core in micron-size permalloy disks. Physical Review B, 2012, 85, .	1.1	13
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	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
53	Magnetic deflagration in Gd ₅ Ge ₄ . Physical Review B, 2010, 81, .	1.1	29
54	Rotating magnetic field experiments in a pure superconducting Pb sphere. Physical Review B, 2009, 80, .	1.1	6

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55	Topological magnetic irreversibility in superconducting Pb samples of various shapes. Physical Review B, 2008, 78, .	1.1	13