Felix Casanova

List of Publications by Year in Descending Order

140 papers	6,072 citations	45 h-index	74 g-index
150 ext. papers	7,102 ext. citations	8.9 avg, IF	5.72 L-index

#	Paper	IF	Citations
140	Exchange bias in molecule/Fe GeTe van der Waals heterostructures via spinterface effects.. *Advanced Materials*, **2022**, e2200474	24	5
139	Gate-tuneable and chirality-dependent charge-to-spin conversion in tellurium nanowires.. *Nature Materials*, **2022**,	27	4
138	Microcavity phonon polaritons from the weak to the ultrastrong phonon-photon coupling regime. *Nature Communications*, **2021**, 12, 6206	17.4	5
137	Disentangling Spin, Anomalous, and Planar Hall Effects in Ferromagnet/Heavy-Metal Nanostructures. *Physical Review Applied*, **2021**, 15,	4.3	1
136	Electrical Control of Valley-Zeeman Spin-Orbit-Coupling-Induced Spin Precession at Room Temperature. *Physical Review Letters*, **2021**, 127, 047202	7.4	5
135	Real-space observation of vibrational strong coupling between propagating phonon polaritons and organic molecules. *Nature Photonics*, **2021**, 15, 197-202	33.9	26
134	Tailoring Superconductivity in Large-Area SingleLayer NbSe via Self-Assembled Molecular Adlayers. *Nano Letters*, **2021**, 21, 136-143	11.5	7
133	Enhanced Light/Matter Interaction in 10B Monoisotopic Boron Nitride Infrared Nanoresonators. *Advanced Optical Materials*, **2021**, 9, 2001958	8.1	11
132	Hyperspectral Nanoimaging of van der Waals Polaritonic Crystals. *Nano Letters*, **2021**, 21, 7109-7115	11.5	3
131	Differences in the magnon diffusion length for electrically and thermally driven magnon currents in Y3Fe5O12. *Physical Review B*, **2020**, 101,	3.3	6
130	Tuning ambipolarity in a polymer field effect transistor using graphene electrodes. *Journal of Materials Chemistry C*, **2020**, 8, 8120-8124	7.1	1
129	Spin Hall Effect in Bilayer Graphene Combined with an Insulator up to Room Temperature. *Nano Letters*, **2020**, 20, 4573-4579	11.5	8
128	Gate tunability of highly efficient spin-to-charge conversion by spin Hall effect in graphene proximitized with WSe2. *APL Materials*, **2020**, 8, 071103	5.7	14
127	Room-Temperature Operation of a p-Type Molecular Spin Photovoltaic Device on a Transparent Substrate. *Advanced Materials*, **2020**, 32, e1906908	24	9
126	Absence of evidence of spin transport through amorphous Y3Fe5O12. *Applied Physics Letters*, **2020**, 116, 032401	3.4	5
125	Nanoscale Guiding of Infrared Light with Hyperbolic Volume and Surface Polaritons in van der Waals Material Ribbons. *Advanced Materials*, **2020**, 32, e1906530	24	17
124	Spin/Orbit magnetic state readout in scaled ferromagnetic/heavy metal nanostructures. *Nature Electronics*, **2020**, 3, 309-315	28.4	18

123	Quantification of interfacial spin-charge conversion in hybrid devices with a metal/insulator interface. *Applied Physics Letters*, **2020**, 117, 142405	3.4	3
122	Collective near-field coupling and nonlocal phenomena in infrared-phononic metasurfaces for nano-light canalization. *Nature Communications*, **2020**, 11, 3663	17.4	35
121	Strong Interfacial Exchange Field in a Heavy Metal/Ferromagnetic Insulator System Determined by Spin Hall Magnetoresistance. *Nano Letters*, **2020**, 20, 6815-6823	11.5	3
120	Interfacial mechanism in the anomalous Hall effect of Co/Bi2O3 bilayers. *Physical Review B*, **2019**, 100,	3.3	4
119	On the Role of Interfaces on Spin Transport in Magnetic Insulator/Normal Metal Heterostructures. *Advanced Materials Interfaces*, **2019**, 6, 1900475	4.6	10
118	Molecular spectroscopy in a solid-state device. *Materials Horizons*, **2019**, 6, 1663-1668	14.4	3
117	Tuning the charge flow between Marcus regimes in an organic thin-film device. *Nature Communications*, **2019**, 10, 2089	17.4	20
116	Spin fluctuations, geometrical size effects, and zero-field topological order in textured MnSi thin films. *Physical Review B*, **2019**, 99,	3.3	2
115	Strain Effects on the Energy-Level Alignment at Metal/Organic Semiconductor Interfaces. *ACS Applied Materials & Interfaces*, **2019**, 11, 12717-12722	9.5	4
114	Top dielectric induced ambipolarity in an n-channel dual-gated organic field effect transistor. *Journal of Materials Chemistry C*, **2019**, 7, 10389-10393	7.1	4
113	Launching of hyperbolic phonon-polaritons in h-BN slabs by resonant metal plasmonic antennas. *Nature Communications*, **2019**, 10, 3242	17.4	33
112	Spin Hall magnetoresistance in a low-dimensional Heisenberg ferromagnet. *Physical Review B*, **2019** , 100,	3.3	11
111	Large Multidirectional Spin-to-Charge Conversion in Low-Symmetry Semimetal MoTe at Room Temperature. *Nano Letters*, **2019**, 19, 8758-8766	11.5	42
110	Deeply subwavelength phonon-polaritonic crystal made of a van der Waals material. *Nature Communications*, **2019**, 10, 42	17.4	25
109	Relation between spin Hall effect and anomalous Hall effect in 3d ferromagnetic metals. *Physical Review B*, **2019**, 99,	3.3	29
108	Room-Temperature Spin Hall Effect in Graphene/MoS van der Waals Heterostructures. *Nano Letters* , **2019**, 19, 1074-1082	11.5	116
107	Infrared hyperbolic metasurface based on nanostructured van der Waals materials. *Science*, **2018**, 359, 892-896	33.3	215
106	Boron nitride nanoresonators for phonon-enhanced molecular vibrational spectroscopy at the strong coupling limit. *Light: Science and Applications*, **2018**, 7, 17172	16.7	176

105	Interface-Assisted Sign Inversion of Magnetoresistance in Spin Valves Based on Novel Lanthanide Quinoline Molecules. *Advanced Functional Materials*, **2018**, 28, 1702099	15.6	26
104	Addressing Vibrational Excitations in Van der Waals Materials and Molecular Layers Within Electron Energy Loss Spectroscopy. *Microscopy and Microanalysis*, **2018**, 24, 408-409	0.5	
103	Unveiling the mechanisms of the spin Hall effect in Ta. *Physical Review B*, **2018**, 98,	3.3	35
102	Anomalous Hall-like transverse magnetoresistance in Au thin films on Y3Fe5O12. *Applied Physics Letters*, **2018**, 113, 222409	3.4	14
101	Synthetic Antiferromagnetic Coupling Between Ultrathin Insulating Garnets. *Physical Review Applied*, **2018**, 10,	4.3	24
100	Gate-tunable graphene-organic interface barrier for vertical transistor and logic inverter. *Applied Physics Letters*, **2018**, 113, 153301	3.4	6
99	Graphene as an electrode for solution-processed electron-transporting organic transistors. *Nanoscale*, **2017**, 9, 10178-10185	7.7	23
98	Optical Nanoimaging of Hyperbolic Surface Polaritons at the Edges of van der Waals Materials. *Nano Letters*, **2017**, 17, 228-235	11.5	80
97	Nanoimaging of resonating hyperbolic polaritons in linear boron nitride antennas. *Nature Communications*, **2017**, 8, 15624	17.4	91
96	Energy Level Alignment at Metal/Solution-Processed Organic Semiconductor Interfaces. *Advanced Materials*, **2017**, 29, 1606901	24	27
95	Spin diffusion length of Permalloy using spin absorption in lateral spin valves. *Applied Physics Letters*, **2017**, 111, 082407	3.4	18
94	Large room temperature spin-to-charge conversion signals in a few-layer graphene/Pt lateral heterostructure. *Nature Communications*, **2017**, 8, 661	17.4	33
93	Photodoping-Driven Crossover in the Low-Frequency Noise of MoS2 Transistors. *Physical Review Applied*, **2017**, 7,	4.3	6
92	Probing low-energy hyperbolic polaritons in van der Waals crystals with an electron microscope. *Nature Communications*, **2017**, 8, 95	17.4	86
91	A molecular spin-photovoltaic device. *Science*, **2017**, 357, 677-680	33.3	101
90	Thermally driven long-range magnon spin currents in yttrium iron garnet due to intrinsic spin Seebeck effect. *Physical Review B*, **2017**, 96,	3.3	24
89	Tunable Sign Change of Spin Hall Magnetoresistance in Pt/NiO/YIG Structures. *Physical Review Letters*, **2017**, 118, 147202	7.4	89
88	Acoustic terahertz graphene plasmons revealed by photocurrent nanoscopy. *Nature Nanotechnology*, **2017**, 12, 31-35	28.7	178

87	Scale-invariant large nonlocality in polycrystalline graphene. *Nature Communications*, **2017**, 8, 2198	17.4	13
86	Tuning the spin Hall effect of Pt from the moderately dirty to the superclean regime. *Physical Review B*, **2016**, 94,	3.3	186
85	Spin Hall Magnetoresistance as a Probe for Surface Magnetization in Pt/CoFe2O4 Bilayers. *Physical Review Applied*, **2016**, 6,	4.3	25
84	Origin of inverse Rashba-Edelstein effect detected at the Cu/Bi interface using lateral spin valves. *Physical Review B*, **2016**, 93,	3.3	69
83	Absence of magnetic proximity effects in magnetoresistive Pt/CoFe2O4 hybrid interfaces. *Physical Review B*, **2016**, 93,	3.3	28
82	A two-dimensional spin field-effect switch. *Nature Communications*, **2016**, 7, 13372	17.4	133
81	Competing effects at Pt/YIG interfaces: Spin Hall magnetoresistance, magnon excitations, and magnetic frustration. *Physical Review B*, **2016**, 94,	3.3	48
80	Real-space mapping of tailored sheet and edge plasmons in graphene nanoresonators. *Nature Photonics*, **2016**, 10, 239-243	33.9	134
79	Modulation of spin accumulation by nanoscale confinement using electromigration in a metallic lateral spin valve. *Nanotechnology*, **2016**, 27, 095201	3.4	3
78	Spin injection and local magnetoresistance effects in three-terminal devices. *Journal Physics D: Applied Physics*, **2016**, 49, 133001	3	14
77	Hanle Magnetoresistance in Thin Metal Films with Strong Spin-Orbit Coupling. *Physical Review Letters*, **2016**, 116, 016603	7.4	94
76	Active Morphology Control for Concomitant Long Distance Spin Transport and Photoresponse in a Single Organic Device. *Advanced Materials*, **2016**, 28, 2609-15	24	46
75	Frequency driven inversion of tunnel magnetoimpedance and observation of positive tunnel magnetocapacitance in magnetic tunnel junctions. *Applied Physics Letters*, **2016**, 109, 052401	3.4	9
74	Spin doping using transition metal phthalocyanine molecules. *Nature Communications*, **2016**, 7, 13751	17.4	24
73	Absence of detectable current-induced magneto-optical Kerr effects in Pt, Ta, and W. *Applied Physics Letters*, **2016**, 109, 172402	3.4	15
72	Nanofocusing of Hyperbolic Phonon Polaritons in a Tapered Boron Nitride Slab. *ACS Photonics*, **2016**, 3, 924-929	6.3	38
71	Modulation of pure spin currents with a ferromagnetic insulator. *Physical Review B*, **2015**, 91,	3.3	28
70	Spin transport enhancement by controlling the Ag growth in lateral spin valves. *Journal Physics D: Applied Physics*, **2015**, 48, 215003	3	6

69	Gate-Controlled Energy Barrier at a Graphene/Molecular Semiconductor Junction. *Advanced Functional Materials*, **2015**, 25, 2972-2979	15.6	46
68	Effect of the interface resistance in non-local Hanle measurements. *Journal of Applied Physics*, **2015** , 117, 223911	2.5	7
67	Gate-tunable diode and photovoltaic effect in an organic-2D layered material p-n junction. *Nanoscale*, **2015**, 7, 15442-9	7.7	72
66	Direct observation of ultraslow hyperbolic polariton propagation with negative phase velocity. *Nature Photonics*, **2015**, 9, 674-678	33.9	203
65	Interfacial effects on the tunneling magnetoresistance in La0.7Sr0.3MnO3/MgO/Fe tunneling junctions. *Physical Review B*, **2015**, 92,	3.3	7
64	Ferromagnetics: Weak Delocalization in Graphene on a Ferromagnetic Insulating Film (Small 47/2015). *Small*, **2015**, 11, 6242-6242	11	1
63	Reliable determination of the Cu/n-Si Schottky barrier height by using in-device hot-electron spectroscopy. *Applied Physics Letters*, **2015**, 107, 183502	3.4	7
62	Cobalt phthalocyanine-based submicrometric field-effect transistors. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 607-611	1.6	1
61	Spin-Polarized Hopping Transport in Magnetically Tunable Rare-Earth Quinolines. *Advanced Electronic Materials*, **2015**, 1, 1500065	6.4	12
60	Weak Delocalization in Graphene on a Ferromagnetic Insulating Film. *Small*, **2015**, 11, 6295-301	11	7
59	Embedded purification for electron beam induced Pt deposition using MeCpPtMe3. *Nanotechnology*, **2015**, 26, 095303	3.4	24
58	Temperature dependence of spin diffusion length and spin Hall angle in Au and Pt. *Physical Review B*, **2015**, 91,	3.3	157
57	HfO2 based memory devices with rectifying capabilities. *Journal of Applied Physics*, **2014**, 115, 024501	2.5	9
56	Controlling graphene plasmons with resonant metal antennas and spatial conductivity patterns. *Science*, **2014**, 344, 1369-73	33.3	236
55	Resistive switching dependence on atomic layer deposition parameters in HfO2-based memory devices. *Journal of Materials Chemistry C*, **2014**, 2, 3204-3211	7.1	41
54	Spin Hall magnetoresistance at Pt/CoFe2O4 interfaces and texture effects. *Applied Physics Letters*, **2014**, 105, 142402	3.4	91
53	Impurity-assisted tunneling magnetoresistance under a weak magnetic field. *Physical Review Letters*, **2014**, 113, 146601	7.4	57
52	Determination of energy level alignment at metal/molecule interfaces by in-device electrical spectroscopy. *Nature Communications*, **2014**, 5, 4161	17.4	32

51	In situ electrical characterization of palladium-based single electron transistors made by electromigration technique. *AIP Advances*, **2014**, 4, 117126	1.5	6
50	Resistive switching phenomena in TiOx nanoparticle layers for memory applications. *Applied Physics Letters*, **2014**, 105, 143506	3.4	10
49	Flexible semi-transparent organic spin valve based on bathocuproine. *Applied Physics Letters*, **2014**, 105, 083302	3.4	22
48	Three-terminal resistive switching memory in a transparent vertical-configuration device. *Applied Physics Letters*, **2014**, 104, 013503	3.4	4
47	Simultaneous detection of the spin-Hall magnetoresistance and the spin-Seebeck effect in platinum and tantalum on yttrium iron garnet. *Physical Review B*, **2014**, 90,	3.3	73
46	Room-temperature air-stable spin transport in bathocuproine-based spin valves. *Nature Communications*, **2013**, 4,	17.4	57
45	Temperature dependence of spin polarization in ferromagnetic metals using lateral spin valves. *Physical Review B*, **2013**, 88,	3.3	51
44	Resistive switching in rectifying interfaces of metal-semiconductor-metal structures. *Applied Physics Letters*, **2013**, 103, 073114	3.4	13
43	Contribution of defects to the spin relaxation in copper nanowires. *Physical Review B*, **2013**, 87,	3.3	50
42	Tailoring palladium nanocontacts by electromigration. *Applied Physics Letters*, **2013**, 102, 193103	3.4	11
41	Experimental verification of the spectral shift between near- and far-field peak intensities of plasmonic infrared nanoantennas. *Physical Review Letters*, **2013**, 110, 203902	7.4	134
40	How reliable are Hanle measurements in metals in a three-terminal geometry?. *Applied Physics Letters*, **2013**, 102, 192406	3.4	39
39	Visualizing the near-field coupling and interference of bonding and anti-bonding modes in infrared dimer nanoantennas. *Optics Express*, **2013**, 21, 1270-80	3.3	49
38	Electronic transport in sub-micron square area organic field-effect transistors. *Applied Physics Letters*, **2013**, 102, 103301	3.4	1
37	Propagation and nanofocusing of infrared surface plasmons on tapered transmission lines: Influence of the substrate. *Optics Communications*, **2012**, 285, 3378-3382	2	4
36	C60/NiFe combination as a promising platform for molecular spintronics. *Organic Electronics*, **2012**, 13, 366-372	3.5	17
35	Non-conventional metallic electrodes for organic field-effect transistors. *Organic Electronics*, **2012**, 13, 2301-2306	3.5	9
34	C60-based hot-electron magnetic tunnel transistor. *Applied Physics Letters*, **2012**, 101, 102404	3.4	23

33	Resolving the electromagnetic mechanism of surface-enhanced light scattering at single hot spots. *Nature Communications*, **2012**, 3, 684	17.4	179
32	Controlling the role of nanopore morphology in capillary condensation. *Langmuir*, **2012**, 28, 6832-8	4	23
31	Spin-dependent Seebeck effect in non-local spin valve devices. *Applied Physics Letters*, **2012**, 100, 212401	3.4	47
30	A light-controlled resistive switching memory. *Advanced Materials*, **2012**, 24, 2496-500	24	122
29	Non-Hebbian learning implementation in light-controlled resistive memory devices. *PLoS ONE*, **2012**, 7, e52042	3.7	2
28	Real-space mapping of Fano interference in plasmonic metamolecules. *Nano Letters*, **2011**, 11, 3922-6	11.5	117
27	Nanofocusing of mid-infrared energy with tapered transmission lines. *Nature Photonics*, **2011**, 5, 283-287	33.9	179
26	Room-temperature spin transport in C60-based spin valves. *Advanced Materials*, **2011**, 23, 1609-13	24	133
25	Griffiths-like phase and magnetic correlations at high fields in Gd5Ge4. *Physical Review B*, **2011**, 83,	3.3	12
24	Surface enhanced spin-flip scattering in lateral spin valves. *Applied Physics Letters*, **2010**, 96, 022513	3.4	47
23	Control of spin injection by direct current in lateral spin valves. *Physical Review B*, **2009**, 79,	3.3	60
22	Commensurability effects in magnetic properties of superconducting Nb thin films with periodic submicrometric pores. *Physica B: Condensed Matter*, **2009**, 404, 2809-2811	2.8	4
21	Gas adsorption and capillary condensation in nanoporous alumina films. *Nanotechnology*, **2008**, 19, 315709	3.4	55
20	Effect of surface interactions on the hysteresis of capillary condensation in nanopores. *Europhysics Letters*, **2008**, 81, 26003	1.6	29
19	Reply to Comment on Nature and entropy content of the ordering transitions in RCo2 *Physical Review B*, **2007**, 75,	3.3	8
18	Direct observation of cooperative effects in capillary condensation: The hysteretic origin. *Applied Physics Letters*, **2007**, 91, 243103	3.4	38
17	Entropy change at the magnetostructural transition in. *Journal of Magnetism and Magnetic Materials*, **2006**, 301, 378-382	2.8	8
16	Acoustic emission across the magnetostructural transition of the giant magnetocaloric Gd5Si2Ge2. *Physical Review B*, **2006**, 73,	3.3	20

15	Nature and entropy content of the ordering transitions in RCo2. *Physical Review B*, **2006**, 73,	3.3	62
14	Direct observation of the magnetic-field-induced entropy change in Gd5(SixGe1-x)4 giant magnetocaloric alloys. *Applied Physics Letters*, **2005**, 86, 262504	3.4	49
13	Differential scanning calorimetry experiments in RCo2. *Journal of Magnetism and Magnetic Materials*, **2005**, 290-291, 682-685	2.8	8
12	Giant heat dissipation at the low-temperature reversible-irreversible transition in Gd5Ge4. *Physical Review B*, **2005**, 72,	3.3	25
11	Coexistence of short-range ferromagnetic and antiferromagnetic correlations in Ge-rich Gd5(SixGe1-x)4alloys. *Journal Physics D: Applied Physics*, **2005**, 38, 3343-3347	3	25
10	Effect of a magnetic field on the magnetostructural phase transition in Gd5(SixGe1-x)4. *Physical Review B*, **2004**, 69,	3.3	44
9	Magnetocaloric and shape-memory effects in Ni-Mn-Ga ferro-magnetic alloys. *European Physical Journal Special Topics*, **2004**, 115, 105-110		5
8	Dynamics of the first-order magnetostructural transition in Gd5(Si x Ge1-x)4. *European Physical Journal B*, **2004**, 40, 427-431	1.2	21
7	Magnetic field induced entropy change and magnetoelasticity in Ni-Mn-Ga alloys. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, E1595-E1596	2.8	4
6	A high-sensitivity differential scanning calorimeter with magnetic field for magnetostructural transitions. *Review of Scientific Instruments*, **2003**, 74, 4768-4771	1.7	59
5	Multiscale origin of the magnetocaloric effect in Ni-Mn-Ga shape-memory alloys. *Physical Review B*, **2003**, 68,	3.3	155
4	Change in entropy at a first-order magnetoelastic phase transition: Case study of Gd5(SixGe1-x)4 giant magnetocaloric alloys. *Journal of Applied Physics*, **2003**, 93, 8313-8315	2.5	15
3	Entropy change and magnetocaloric effect in Gd5(SixGe1-x)4. *Physical Review B*, **2002**, 66,	3.3	70
2	Scaling of the entropy change at the magnetoelastic transition in Gd5(SixGe1-x)4. *Physical Review B*, **2002**, 66,	3.3	65
1	Magnetic field induced entropy change and magnetoelasticity in Ni-Mn-Ga alloys. *Physical Review B*, **2002**, 66,	3.3	116