

# Hailu Luo

## List of Publications by Citations

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139  
papers

4,463  
citations

34  
h-index

62  
g-index

162  
ext. papers

5,655  
ext. citations

3.5  
avg, IF

5.82  
L-index

#	Paper	IF	Citations
139	Recent advances in the spin Hall effect of light. <i>Reports on Progress in Physics</i> , <b>2017</b> , 80, 066401	14.4	231
138	Identifying graphene layers via spin Hall effect of light. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 251602	3.4	223
137	Experimental observation of the spin Hall effect of light on a nanometal film via weak measurements. <i>Physical Review A</i> , <b>2012</b> , 85,	2.6	186
136	Giant photonic spin Hall effect in momentum space in a structured metamaterial with spatially varying birefringence. <i>Light: Science and Applications</i> , <b>2015</b> , 4, e290-e290	16.7	171
135	Enhanced and switchable spin Hall effect of light near the Brewster angle on reflection. <i>Physical Review A</i> , <b>2011</b> , 84,	2.6	167
134	Generation of cylindrical vector vortex beams by two cascaded metasurfaces. <i>Optics Express</i> , <b>2014</b> , 22, 17207-15	3.3	141
133	Optical edge detection based on high-efficiency dielectric metasurface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 11137-11140	11.5	140
132	Structured thermal surface for radiative camouflage. <i>Nature Communications</i> , <b>2018</b> , 9, 273	17.4	134
131	Generation of arbitrary vector vortex beams on hybrid-order Poincaré sphere. <i>Photonics Research</i> , <b>2017</b> , 5, 15	6	124
130	Generation of arbitrary cylindrical vector beams on the higher order Poincaré sphere. <i>Optics Letters</i> , <b>2014</b> , 39, 5274-6	3	113
129	Hybrid-order Poincaré sphere. <i>Physical Review A</i> , <b>2015</b> , 91,	2.6	103
128	Generalized Spatial Differentiation from the Spin Hall Effect of Light and Its Application in Image Processing of Edge Detection. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	102
127	Realization of polarization evolution on higher-order Poincaré sphere with metasurface. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 191110	3.4	92
126	Generation of perfect vortex and vector beams based on Pancharatnam-Berry phase elements. <i>Scientific Reports</i> , <b>2017</b> , 7, 44096	4.9	88
125	Enhancing or suppressing the spin Hall effect of light in layered nanostructures. <i>Physical Review A</i> , <b>2011</b> , 84,	2.6	88
124	Photonic spin Hall effect in metasurfaces: a brief review. <i>Nanophotonics</i> , <b>2017</b> , 6, 51-70	6.3	80
123	Spin Hall effect of a light beam in left-handed materials. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	72

122	Generation of Airy vortex and Airy vector beams based on the modulation of dynamic and geometric phases. <i>Optics Letters</i> , <b>2015</b> , 40, 3193-6	3	71
121	Determination of magneto-optical constant of Fe films with weak measurements. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 131111	3.4	68
120	Observation of the Goos-Hñchen shift in graphene via weak measurements. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 031105	3.4	67
119	Precision Measurement of the Optical Conductivity of Atomically Thin Crystals via the Photonic Spin Hall Effect. <i>Physical Review Applied</i> , <b>2020</b> , 13,	4.3	67
118	Quantized photonic spin Hall effect in graphene. <i>Physical Review A</i> , <b>2017</b> , 95,	2.6	66
117	Broadband Photonic Spin Hall Meta-Lens. <i>ACS Nano</i> , <b>2018</b> , 12, 82-88	16.7	60
116	Photonic spin Hall effect in topological insulators. <i>Physical Review A</i> , <b>2013</b> , 88,	2.6	58
115	Photonic spin Hall effect on the surface of anisotropic two-dimensional atomic crystals. <i>Photonics Research</i> , <b>2018</b> , 6, 511	6	56
114	Photonic spin Hall effect in dielectric metasurfaces with rotational symmetry breaking. <i>Optics Letters</i> , <b>2015</b> , 40, 756-9	3	49
113	Spatial differential operation and edge detection based on the geometric spin Hall effect of light. <i>Optics Letters</i> , <b>2020</b> , 45, 877-880	3	46
112	Ultrasensitive and real-time detection of chemical reaction rate based on the photonic spin Hall effect. <i>APL Photonics</i> , <b>2020</b> , 5, 016105	5.2	43
111	Enhancing and tuning absorption properties of microwave absorbing materials using metamaterials. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 261115	3.4	43
110	Spin Hall effect of light in photon tunneling. <i>Physical Review A</i> , <b>2010</b> , 82,	2.6	38
109	Observation of spin Hall effect in photon tunneling via weak measurements. <i>Scientific Reports</i> , <b>2014</b> , 4, 7388	4.9	37
108	Giant quantized Goos-Hñchen effect on the surface of graphene in the quantum Hall regime. <i>Physical Review A</i> , <b>2017</b> , 96,	2.6	35
107	Modified weak measurements for the detection of the photonic spin Hall effect. <i>Physical Review A</i> , <b>2015</b> , 91,	2.6	35
106	Realization of tunable spin-dependent splitting in intrinsic photonic spin Hall effect. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 151101	3.4	34
105	Bifocal Optical-Vortex Lens with Sorting of the Generated Nonseparable Spin-Orbital Angular-Momentum States. <i>Physical Review Applied</i> , <b>2017</b> , 7,	4.3	33

104	Propagation model for vector beams generated by metasurfaces. <i>Optics Express</i> , <b>2016</b> , 24, 21177-89	3-3	33
103	Optimal preselection and postselection in weak measurements for observing photonic spin Hall effect. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 051130	3-4	32
102	Metasurface enabled quantum edge detection. <i>Science Advances</i> , <b>2020</b> , 6,	14-3	32
101	Realization of tunable photonic spin Hall effect by tailoring the Pancharatnam-Berry phase. <i>Scientific Reports</i> , <b>2014</b> , 4, 5557	4-9	31
100	Higher-order laser mode converters with dielectric metasurfaces. <i>Optics Letters</i> , <b>2015</b> , 40, 5506-9	3	31
99	Optical integration of Pancharatnam-Berry phase lens and dynamical phase lens. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 101102	3-4	30
98	Goos-Hänchen effect enabled optical differential operation and image edge detection. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 211103	3-4	29
97	Electrically driven generation of arbitrary vector vortex beams on the hybrid-order Poincaré sphere. <i>Optics Letters</i> , <b>2018</b> , 43, 3570-3573	3	29
96	Observation of photonic spin Hall effect with phase singularity at dielectric metasurfaces. <i>Optics Express</i> , <b>2015</b> , 23, 1767-74	3-3	29
95	Amphoteric refraction at the interface between isotropic and anisotropic media. <i>Optics Communications</i> , <b>2005</b> , 254, 353-360	2	29
94	Polarization evolution of vector beams generated by q-plates. <i>Photonics Research</i> , <b>2017</b> , 5, 64	6	28
93	Goos-Hänchen and Imbert-Fedorov shifts of vortex beams at airy-left-handed-material interfaces. <i>Physical Review A</i> , <b>2012</b> , 85,	2.6	27
92	Wavelength-independent optical fully differential operation based on the spin-orbit interaction of light. <i>APL Photonics</i> , <b>2020</b> , 5, 036105	5.2	26
91	Strong spin-orbit interaction of light on the surface of atomically thin crystals. <i>Physical Review A</i> , <b>2017</b> , 95,	2.6	26
90	Polarization-independent low-pass spatial filters based on one-dimensional photonic crystals containing negative-index materials. <i>Applied Physics B: Lasers and Optics</i> , <b>2009</b> , 94, 641-646	1.9	26
89	Reversed propagation dynamics of Laguerre-Gaussian beams in left-handed materials. <i>Physical Review A</i> , <b>2008</b> , 77,	2.6	25
88	Precise identification of graphene layers at the air-prism interface via a pseudo-Brewster angle. <i>Optics Letters</i> , <b>2017</b> , 42, 4135-4138	3	24
87	Wavelength-locked vectorial fiber laser manipulated by Pancharatnam-Berry phase. <i>Optics Express</i> , <b>2017</b> , 25, 30-38	3-3	23

86	Construct a polarizing beam splitter by an anisotropic metamaterial slab. <i>Applied Physics B: Lasers and Optics</i> , <b>2007</b> , 87, 283-287	1.9	23
85	Ultrasensitive detection of ion concentration based on photonic spin Hall effect. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 251102	3.4	23
84	Goos-Hñchen and Imbert-Fedorov effects in Weyl semimetals. <i>Physical Review A</i> , <b>2019</b> , 99,	2.6	22
83	Radial spin Hall effect of light. <i>Physical Review A</i> , <b>2016</b> , 93,	2.6	22
82	Steering far-field spin-dependent splitting of light by inhomogeneous anisotropic media. <i>Physical Review A</i> , <b>2012</b> , 86,	2.6	22
81	ABCD matrix formalism for propagation of Gaussian beam through left-handed material slab system. <i>Optics Communications</i> , <b>2009</b> , 282, 2670-2675	2	22
80	Transitional Goos-Hñchen effect due to the topological phase transitions. <i>Optics Express</i> , <b>2018</b> , 26, 23705-23713	5.3	21
79	Superluminal group velocity in an anisotropic metamaterial. <i>Europhysics Letters</i> , <b>2006</b> , 74, 1081-1087	1.6	20
78	Two-dimensional optical spatial differentiation and high-contrast imaging. <i>National Science Review</i> , <b>2021</b> , 8, nwa176	10.8	20
77	Observation of tiny polarization rotation rate in total internal reflection via weak measurements. <i>Photonics Research</i> , <b>2017</b> , 5, 92	6	19
76	Weak measurements of a large spin angular splitting of light beam on reflection at the Brewster angle. <i>Optics Express</i> , <b>2012</b> , 20, 16003-9	3.3	19
75	Rotational Doppler effect in left-handed materials. <i>Physical Review A</i> , <b>2008</b> , 78,	2.6	19
74	Construction of a polarization insensitive lens from a quasi-isotropic metamaterial slab. <i>Physical Review E</i> , <b>2007</b> , 75, 026601	2.4	19
73	Role of transverse-momentum currents in the optical Magnus effect in free space. <i>Physical Review A</i> , <b>2010</b> , 81,	2.6	18
72	Revisiting the anomalous spin-Hall effect of light near the Brewster angle. <i>Physical Review A</i> , <b>2021</b> , 103,	2.6	18
71	Spin-dependent manipulating of vector beams by tailoring polarization. <i>Scientific Reports</i> , <b>2016</b> , 6, 34276	4.9	17
70	Spatiotemporal electromagnetic soliton and spatial ring formation in nonlinear metamaterials. <i>Physical Review A</i> , <b>2010</b> , 81,	2.6	17
69	Realization of spin-dependent splitting with arbitrary intensity patterns based on all-dielectric metasurfaces. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 041107	3.4	16

68	Measurements of Pancharatnam-Berry phase in mode transformations on hybrid-order Poincaré sphere. <i>Optics Letters</i> , <b>2017</b> , 42, 3447-3450	3	15
67	Focusing and phase compensation of paraxial beams by a left-handed material slab. <i>Optics Communications</i> , <b>2006</b> , 266, 327-331	2	15
66	Optical analog computing of two-dimensional spatial differentiation based on the Brewster effect. <i>Optics Letters</i> , <b>2020</b> , 45, 6867-6870	3	15
65	Graphene Q-Switched Vectorial Fiber Laser With Switchable Polarized Output. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2017</b> , 23, 26-32	3.8	14
64	Generation of optical beams with desirable orbital angular momenta by transformation media. <i>Physical Review A</i> , <b>2012</b> , 85,	2.6	14
63	Enhanced and Tunable Spin Hall Effect of Light upon Reflection of One-Dimensional Photonic Crystal with a Defect Layer. <i>Chinese Physics Letters</i> , <b>2012</b> , 29, 074209	1.8	14
62	Wave propagation in an anisotropic metamaterial with single-sheeted hyperboloid dispersion relation. <i>Applied Physics A: Materials Science and Processing</i> , <b>2007</b> , 87, 245-249	2.6	14
61	Brewster angle for anisotropic materials from the extinction theorem. <i>Applied Physics A: Materials Science and Processing</i> , <b>2007</b> , 87, 297-303	2.6	14
60	Weak-value amplification for Weyl-point separation in momentum space. <i>New Journal of Physics</i> , <b>2018</b> , 20, 103050	2.9	14
59	Vortex generation in the spin-orbit interaction of a light beam propagating inside a uniaxial medium: origin and efficiency. <i>Optics Express</i> , <b>2020</b> , 28, 27258-27267	3.3	13
58	Giant photonic spin Hall effect near the Dirac points. <i>Physical Review A</i> , <b>2020</b> , 101,	2.6	11
57	Geometric phase Doppler effect: when structured light meets rotating structured materials. <i>Optics Express</i> , <b>2017</b> , 25, 11564-11573	3.3	11
56	Large in-plane asymmetric spin angular shifts of a light beam near the critical angle. <i>Optics Letters</i> , <b>2019</b> , 44, 207-210	3	11
55	Manipulating the spin-dependent splitting by geometric Doppler effect. <i>Optics Express</i> , <b>2015</b> , 23, 16682-16693	3.3	10
54	Measurement of the optical constants of monolayer MoS <sub>2</sub> via the photonic spin Hall effect. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 111104	3.4	10
53	Generation of perfect vector beams based on the combined modulation of dynamic and geometric phases. <i>Optics Communications</i> , <b>2019</b> , 446, 191-195	2	9
52	Generation of pure Laguerre-Gaussian vector beams on the higher-order Poincaré sphere by hollow Gaussian beams through dielectric metasurfaces. <i>Optics Communications</i> , <b>2019</b> , 439, 27-33	2	8
51	A spin controlled wavefront shaping metasurface with low dispersion in visible frequencies. <i>Nanoscale</i> , <b>2019</b> , 11, 17111-17119	7.7	8

50	Photonic spin filter with dielectric metasurfaces. <i>Optics Express</i> , <b>2015</b> , 23, 33079-86	3.3	8
49	Spin-to-orbital angular momentum conversion in spin Hall effect of light. <i>Optics Communications</i> , <b>2012</b> , 285, 864-871	2	8
48	Spin Hall effect of a light beam in anisotropic metamaterials. <i>Chinese Physics B</i> , <b>2012</b> , 21, 124201	1.2	8
47	Focusing of vectorial fields by a slab of indefinite media. <i>Journal of Optics</i> , <b>2009</b> , 11, 105103		8
46	Atomic population oscillations between two coupled Bose-Einstein condensates with time-dependent nonlinear interaction. <i>Chinese Physics B</i> , <b>2007</b> , 16, 650-659		8
45	Weak-value amplification for the optical signature of topological phase transitions. <i>Photonics Research</i> , <b>2020</b> , 8, B47	6	8
44	Dielectric metasurfaces for quantum weak measurements. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 161115	3.4	7
43	Three-dimensional spin Hall effect of light in tight focusing. <i>Physical Review A</i> , <b>2020</b> , 101,	2.6	7
42	Orbit-orbit interaction and photonic orbital Hall effect in reflection of a light beam. <i>Chinese Physics B</i> , <b>2014</b> , 23, 064215	1.2	7
41	General features of spatiotemporal instability induced by arbitrary high-order nonlinear dispersions in metamaterials. <i>Journal of Modern Optics</i> , <b>2010</b> , 57, 876-884	1.1	7
40	. <i>Journal of the European Optical Society-Rapid Publications</i> , <b>2012</b> , 7,	2.5	7
39	Improved Microwave Absorption of Carbonyl Iron Powder by the Array of Subwavelength Metallic Cut Wires. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2010</b> , 16, 441-445	3.8	7
38	Low-pass rugate spatial filters for beam smoothing. <i>Optics Communications</i> , <b>2010</b> , 283, 2665-2668	2	7
37	Spatial Chaos of Bose-Einstein Condensates in a Cigar-Shaped Trap. <i>Communications in Theoretical Physics</i> , <b>2007</b> , 48, 107-111	2.4	7
36	Generation of cylindrical vector beams based on metasurface. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2014</b> , 63, 094203	0.6	7
35	Metamaterial-based polarization control plate for producing incoherent laser irradiation. <i>Applied Optics</i> , <b>2012</b> , 51, 4749-53	1.7	5
34	Anomalous wave propagation in quasiisotropic media. <i>Optics Communications</i> , <b>2006</b> , 267, 271-277	2	5
33	Vortex mode decomposition of the topology-induced phase transitions in spin-orbit optics. <i>Physical Review A</i> , <b>2021</b> , 104,	2.6	5

32	Compact photonic spin filters. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 181104	3.4	5
31	Computing metasurfaces for all-optical image processing: a brief review. <i>Nanophotonics</i> , <b>2022</b> , 11, 1083-1108	4.3	5
30	Omnidirectional and tunable symmetrical confined states in photonic quantum-well structures with single-negative materials. <i>Optik</i> , <b>2011</b> , 122, 724-727	2.5	4
29	Enhanced optical spatial differential operations via strong spin-orbit interactions in an anisotropic epsilon-near-zero slab. <i>Physical Review A</i> , <b>2021</b> , 104,	2.6	4
28	Realization of ultra-small stress birefringence detection with weak-value amplification technique. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 161104	3.4	4
27	The role of dispersion in the propagation of rotating beams in left-handed materials. <i>Optics Express</i> , <b>2009</b> , 17, 5645-55	3.3	3
26	Realization of tunable edge-enhanced images based on computing metasurfaces.. <i>Optics Letters</i> , <b>2022</b> , 47, 925-928	3	3
25	Photonic spin Hall effect in twisted few-layer anisotropic two-dimensional atomic crystals. <i>Physical Review A</i> , <b>2022</b> , 105,	2.6	3
24	Spin hall effect of light in graphene <b>2012</b> ,		2
23	Switching the direction of spin accumulation in the spin Hall effect of light by adjusting the optical axis of an uniaxial crystal. <i>Chinese Physics B</i> , <b>2013</b> , 22, 034101	1.2	2
22	Doppler effect of Laguerre-Gaussian beams propagating in left-handed materials <b>2008</b> ,		2
21	Polarization-sensitive propagation in an anisotropic metamaterial with double-sheeted hyperboloid dispersion relation. <i>Optics Communications</i> , <b>2008</b> , 281, 501-507	2	2
20	Steering Asymmetric Spin Splitting in Photonic Spin Hall Effect by Orbital Angular Momentum. <i>Guangxue Xuebao/Acta Optica Sinica</i> , <b>2013</b> , 33, 1126002	0.8	2
19	Beam shifts in two-dimensional atomic crystals. <i>Journal Physics D: Applied Physics</i> ,	3	2
18	Polarization evolution on the higher-order Poincaré sphere via photonic Dirac points. <i>Physical Review A</i> , <b>2021</b> , 104,	2.6	2
17	Nonspecular effects in the vicinity of a photonic Dirac point. <i>Physical Review A</i> , <b>2021</b> , 103,	2.6	2
16	Large cross-polarization rotation of light on graphene. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 081104	3.4	2
15	Multiple-weak-value quantum measurement for precision estimation of time delay. <i>Physical Review A</i> , <b>2022</b> , 105,	2.6	2



14	Highly Efficient Vectorial Fiber Laser With Switchable Output. <i>IEEE Photonics Technology Letters</i> , <b>2017</b> , 29, 1852-1855	2.2	1
13	Flexible generation of vector beams based on the noncommutation of Pancharatnam-Berry phase elements. <i>Optics Communications</i> , <b>2019</b> , 443, 156-159	2	1
12	Photonic spin Hall effect for precision metrology <b>2014</b> ,		1
11	Focal Shift of Paraxial Gaussian Beams in a Left-Handed Material Slab Lens. <i>Chinese Physics Letters</i> , <b>2010</b> , 27, 077801	1.8	1
10	Examining the optical model of graphene via the photonic spin Hall effect.. <i>Optics Letters</i> , <b>2022</b> , 47, 846-849	3.49	1
9	All-optical differentiator in frequency domain. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 011102	3.4	1
8	Spin-orbit interaction of a light beam under normal incidence at a sharp interface and its enhancement. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2020</b> , 69, 034202	0.6	1
7	Conversion of cylindrical vector beams on the higher-order Poincar sphere. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2014</b> , 63, 154203	0.6	1
6	Spin-photonic devices based on optical integration of Pancharatnam-Berry phase elements <b>2016</b> ,		1
5	Anomalous Propagation of Electromagnetic Waves in Anisotropic Media with a Unique Dispersion Relation. <i>Chinese Physics Letters</i> , <b>2006</b> , 23, 3084-3087	1.8	0
4	Anomalous Positive Refraction in an Anisotropic Left-Handed Medium. <i>Chinese Physics Letters</i> , <b>2005</b> , 22, 2069-2072	1.8	0
3	Realization of photonic spin Hall effect by breaking the rotation symmetry of optical field in light-matter interaction. <i>Optics Communications</i> , <b>2018</b> , 427, 238-243	2	
2	Integral Equation Method for Electromagnetic Wave Propagation in Stratified Anisotropic Dielectric-Magnetic Materials. <i>Communications in Theoretical Physics</i> , <b>2010</b> , 54, 879-885	2.4	
1	Cross polarization effects of vortex beam in reflection. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2013</b> , 62, 174202	0.6	