

Makoto Kohda

List of Publications by Year in descending order

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121
papers

1,898
citations

257450

24
h-index

289244

40
g-index

122
all docs

122
docs citations

122
times ranked

1731
citing authors

#	ARTICLE	IF	CITATIONS
1	A Spin Esaki Diode. Japanese Journal of Applied Physics, 2001, 40, L1274-L1276.	1.5	125
2	Gate-controlled persistent spin helix state in (In,Ga)As quantum wells. Physical Review B, 2012, 86, .	3.2	116
3	Direct determination of spin-orbit interaction coefficients and realization of the persistent spin helix symmetry. Nature Nanotechnology, 2014, 9, 703-709.	31.5	97
4	Coercivity change in an FePt thin layer in a Hall device by voltage application. Applied Physics Letters, 2011, 98, .	3.3	96
5	All-Electrical Detection of the Relative Strength of Rashba and Dresselhaus Spin-Orbit Interaction in Quantum Wires. Physical Review Letters, 2008, 101, 266401.	7.8	79
6	Spin-orbit induced electronic spin separation in semiconductor nanostructures. Nature Communications, 2012, 3, 1082.	12.8	68
7	Enhancement of Spin Lifetime in Gate-Fitted InGaAs Narrow Wires. Physical Review Letters, 2009, 102, 226601.	7.8	60
8	Manipulation of mobile spin coherence using magnetic-field-free electron spin resonance. Nature Physics, 2013, 9, 280-283.	16.7	57
9	Experimental Demonstration of Spin Geometric Phase: Radius Dependence of Time-Reversal Aharonov-Casher Oscillations. Physical Review Letters, 2012, 108, 086801.	7.8	53
10	Observation of the Dzyaloshinskii-Moriya Spin Relaxation in Single-Crystalline Pt Thin Films. Physical Review Letters, 2016, 116, 256802.	7.8	50
11	Acoustically Induced Spin-Orbit Interactions Revealed by Two-Dimensional Imaging of Spin Transport in GaAs. Physical Review Letters, 2011, 106, 216602.	7.8	48
12	Physics and application of persistent spin helix state in semiconductor heterostructures. Semiconductor Science and Technology, 2017, 32, 073002.	2.0	48
13	Drift transport of helical spin coherence with tailored spin-orbit interactions. Nature Communications, 2016, 7, 10722.	12.8	43
14	Bias voltage dependence of the electron spin injection studied in a three-terminal device based on a (Ga,Mn)As/n-GaAs Esaki diode. Applied Physics Letters, 2006, 89, 012103.	3.3	39
15	Disentangling of Spin-Orbit Torques in Pt/Co Bilayers with the Presence of Spin Hall Effect and Rashba-Edelstein Effect. Physical Review Applied, 2020, 13, .	3.8	38
16	Manipulating Spin-Orbit Interaction in Semiconductors. Journal of the Physical Society of Japan, 2008, 77, 031008.	1.6	37
17	Proposal of spin complementary field effect transistor. Applied Physics Letters, 2012, 100, 113502.	3.3	35
18	Control of magnetic anisotropy in Pt/Co system using ionic liquid gating. Applied Physics Express, 2016, 9, 063007.	2.4	35

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19	Platinum thickness dependence and annealing effect of the spin-Seebeck voltage in platinum/yttrium iron garnet structures. Applied Physics Express, 2014, 7, 093001.	2.4	33
20	Weak antilocalization induced by Rashba spin-orbit interaction in layered III-VI compound semiconductor GaSe thin films. Physical Review B, 2017, 96, .	3.2	32
21	Current-Controlled Spin Precession of Quasistationary Electrons in a Cubic Spin-Orbit Field. Physical Review Letters, 2016, 116, 196802.	7.8	30
22	Shot Noise Induced by Nonequilibrium Spin Accumulation. Physical Review Letters, 2015, 114, 016601.	7.8	28
23	Efficient spin-orbit torque in magnetic trilayers using all three polarizations of a spin current. Nature Electronics, 2022, 5, 217-223.	26.0	28
24	Gate-controlled switching between persistent and inverse persistent spin helix states. Applied Physics Letters, 2016, 108, .	3.3	26
25	Observation of spin wave modes depending on a tunable periodic magnetic field. Applied Physics Letters, 2011, 98, 172508.	3.3	24
26	Magnetic interaction of submicron-sized ferromagnetic rings in one-dimensional array. Applied Physics Letters, 2006, 89, 122508.	3.3	23
27	Electrical manipulation of spins in the Rashba two dimensional electron gas systems. Journal of Applied Physics, 2009, 105, 122402.	2.5	23
28	Dynamic nuclear spin polarization in an all-semiconductor spin injection device with (Ga,Mn)As/GaAs spin Esaki diode. Applied Physics Letters, 2012, 101, .	3.3	22
29	Enhancement of spin current generation in epitaxial \hat{x} -Ta/CoFeB bilayer. Physical Review B, 2019, 99, .	3.2	22
30	Crystal orientation dependence of spin-orbit torques in Co/Pt bilayers. Applied Physics Letters, 2019, 114, .	3.3	21
31	Effect of n+-GaAs thickness and doping density on spin injection of GaMnAs/n+-GaAs Esaki tunnel junction. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 32, 438-441.	2.7	20
32	Enhancement of spin-orbit interaction and the effect of interface diffusion in quaternary InGaAsP/InGaAs heterostructures. Physical Review B, 2010, 81, .	3.2	20
33	Giant enhancement of spin detection sensitivity in (Ga,Mn)As/GaAs Esaki diodes. Physical Review B, 2014, 89, .	3.2	20
34	Transition of a two-dimensional spin mode to a helical state by lateral confinement. Physical Review B, 2015, 92, .	3.2	19
35	All-optical evaluation of spin-orbit interaction based on diffusive spin motion in a two-dimensional electron gas. Applied Physics Letters, 2015, 107, .	3.3	17
36	Current direction dependent spin Hall magnetoresistance in epitaxial Pt/Co bilayers on MgO(110). Physical Review B, 2020, 101, .	3.2	14

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37	Voltage-induced coercivity change in FePt/MgO stacks with different FePt thicknesses. Journal Physics D: Applied Physics, 2013, 46, 285002.	2.8	13
38	Spin-momentum locked spin manipulation in a two-dimensional Rashba system. Scientific Reports, 2019, 9, 1909.	3.3	13
39	Anisotropic Spin-Orbit Torque through Crystal-Orientation Engineering in Epitaxial $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" \rangle \langle \text{mml:mi} \rangle \text{Pt} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$. Physical Review Applied, 2021, 15, .	3.8	13
40	Shot noise suppression in InGaAs/InGaAsP quantum channels. Applied Physics Letters, 2012, 100, .	3.3	12
41	Drift-Induced Enhancement of Cubic Dresselhaus Spin-Orbit Interaction in a Two-Dimensional Electron Gas. Physical Review Letters, 2017, 119, 187703.	7.8	12
42	Enhanced longevity of the spin helix in low-symmetry quantum wells. Physical Review B, 2020, 101, .	3.2	12
43	Anomalous Spin-Orbit Field via the Rashba-Ederstein Effect at the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi mathvariant="normal" \rangle} W \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo} \rangle / \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{Pt} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ interface. Physical Review Applied, 2020, 12, .	3.8	12
44	Semiclassical approach for spin dephasing in a quasi-one-dimensional channel. Physical Review B, 2012, 85, .	3.2	10
45	Structural and magnetic properties of $\langle i \rangle L \langle /i \rangle$ 1-FePd/MgO films on GaAs and InP lattice mismatched substrates. Applied Physics Letters, 2013, 102, .	3.3	10
46	Control of spin relaxation anisotropy by spin-orbit-coupled diffusive spin motion. Physical Review B, 2021, 103, .	3.2	10
47	Origin of spin-orbit torque in single-layer CoFeB investigated via in-plane harmonic Hall measurements. AIP Advances, 2021, 11, 025033.	1.3	10
48	Robustness of a persistent spin helix against a cubic Dresselhaus field in (001) and (110) oriented two-dimensional electron gases. Physical Review B, 2018, 98, .	3.2	9
49	Temperature-dependent spin Hall effect tunneling spectroscopy in platinum. Applied Physics Letters, 2019, 115, .	3.3	9
50	Gate controlled crossover from weak localization to weak antilocalization in a narrow gap In _{0.8} Ga _{0.2} As/InP heterostructure. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4239-4242.	0.8	8
51	Quantum well thickness dependence of spin orbit interaction in gated InP/In _{0.8} Ga _{0.2} As/In _{0.52} Al _{0.48} As asymmetric quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1194-1196.	2.7	8
52	High Remanent Magnetization of L10-Ordered FePt Thin Film on MgO/(001) GaAs. Japanese Journal of Applied Physics, 2008, 47, 3269-3271.	1.5	8
53	Enhancement of electric field modulation of coercivity in Pt $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" \rangle \langle \text{mml:mi} \rangle \text{Co} \langle \text{mml:mi} \rangle \text{Al-O}$ structures by tuning Co surface oxidation. Journal Physics D: Applied Physics, 2016, 49, 03LT01.	2.8	8
54	Transient diffusive spin dynamics in intrinsic InGaAs/InAlAs multiple quantum wells. Applied Physics Letters, 2019, 115, 172406.	3.3	8

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55	Different spin relaxation mechanisms between epitaxial and polycrystalline Ta thin films. Applied Physics Express, 2017, 10, 023003.	2.4	8
56	Enhancement of spin-orbit interaction of Cu thin films by oxidation treatment. Applied Physics Express, 2018, 11, 033001.	2.4	7
57	Simultaneous evaluation of drift- and diffusion-induced spin-orbit fields in a (001) GaAs/AlGaAs two-dimensional electron gas. Applied Physics Letters, 2019, 115, 052402.	3.3	7
58	Phase velocity of drifting spin wave packets in semiconductor two-dimensional electron gas. Applied Physics Express, 2019, 12, 013001.	2.4	7
59	Magnitude and sign control of lithography-induced uniaxial anisotropy in ultra-thin (Ga,Mn)As wires. Applied Physics Letters, 2011, 98, 083101.	3.3	6
60	Effect of optical waveguide on photoluminescence polarization in layered material GaSe with millimeter scale. Japanese Journal of Applied Physics, 2018, 57, 020308.	1.5	6
61	Full spin-orbit coefficient in III-V semiconductor wires based on the anisotropy of weak localization under in-plane magnetic field. Physical Review B, 2021, 103, .	3.2	6
62	Spin injection with three terminal device based on (Ga,Mn)As/n+-GaAs tunnel junction. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4164-4167.	0.8	5
63	Anisotropy and Damping in $\text{Co}_{2}\text{FeAl}_{0.5}\text{Si}_{0.5}$ via Electrical Detection of Ferromagnetic Resonance. Japanese Journal of Applied Physics, 2012, 51, 083001.	1.5	5
64	MgO Layer Thickness Dependence of Structure and Magnetic Properties of $\text{L1}_{0}\text{-FePt/MgO/GaAs}$ Structures. Japanese Journal of Applied Physics, 2012, 51, 02BM05.	1.5	5
65	Effect of cubic Dresselhaus spin-orbit interaction in a persistent spin helix state including phonon scattering in semiconductor quantum wells. Applied Physics Letters, 2015, 107, .	3.3	5
66	In-plane tunneling anisotropic magnetoresistance in (Ga,Mn)As/GaAs Esaki diodes in the regime of the excess current. Applied Physics Letters, 2015, 106, 262402.	3.3	5
67	Evaluation of spin-orbit torque in a $\text{L1}_{0}\text{-FePt}$ single layer and a $\text{L1}_{0}\text{-FePt/Pt}$ bilayer. Japanese Journal of Applied Physics, 2019, 58, 060915.	1.5	5
68	Detection of both optical polarization and coherence transfers to excitonic valley states in CVD-grown monolayer MoS_{2} . Applied Physics Express, 2019, 12, 063005.	2.4	5
69	Thickness dependence of spin-orbit torques in Pt/Co structures on epitaxial substrates. APL Materials, 2022, 10, .	5.1	5
70	Lateral and Vertical Magnetic Interactions in Submicron-Sized Fe Ring Arrays and Fe/Au/Fe Trilayer Ring Structures. Japanese Journal of Applied Physics, 2007, 46, 2164-2166.	1.5	4
71	Rashba spin-orbit interaction of $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}/\text{In}_{0.7}\text{Ga}_{0.3}\text{As}/\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ shallow two-dimensional electron gas by surface etching. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 322-325.	0.8	4
72	Chirality determination of ferromagnetic disk by local Hall effect. Applied Physics Letters, 2013, 103, 122408.	3.3	4

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73	Platinum layer thickness dependence of spin-Hall induced effective magnetic field in Pt/Co/Pt structures. Japanese Journal of Applied Physics, 2014, 53, 04EM06.	1.5	4
74	Electric-field-induced on/off switching of the Faraday effect. Applied Physics Express, 2017, 10, 123201.	2.4	4
75	Intravalley scattering probed by excitation energy dependence of valley polarization in monolayer MoS ₂ . Journal Physics D: Applied Physics, 2021, 54, 485304.	2.8	4
76	Control of interlayer magnetostatic coupling in submicron-sized Fe ²⁺ •Au ²⁺ •Fe rings. Applied Physics Letters, 2008, 92, 032502.	3.3	3
77	Suppression of stray field between adjacent rings in one-dimensional ferromagnetic ring arrays. Journal of Applied Physics, 2008, 103, 07A714.	2.5	3
78	Electrical Detection of Propagating Spin Waves Controlled by a Local Magnetic Field Induced by a DC Current. Japanese Journal of Applied Physics, 2010, 49, 04DM01.	1.5	3
79	Comparison of electrical and optical detection of spin injection in L10-FePt/MgO/GaAs hybrid structures. Journal Physics D: Applied Physics, 2015, 48, 164003.	2.8	3
80	Detection of Spin Transfer from Metal to Molecule by Magnetoresistance Measurement. Nano Letters, 2020, 20, 75-80.	9.1	3
81	Distinguishing persistent effects in an undoped GaAs/AlGaAs quantum well by top-gate-dependent illumination. Journal of Applied Physics, 2021, 129, 234301.	2.5	3
82	Room-temperature spin-orbit magnetic fields in slightly misoriented (110) InGaAs/InAlAs multiple quantum wells. Applied Physics Letters, 2021, 119, 032405.	3.3	3
83	Relative Vortex State Control in a Co/Cu/Co Pseudo-Spin-Valve Ring. Japanese Journal of Applied Physics, 2012, 51, 04DM04.	1.5	3
84	Local Hall measurement of magnetization reversal and magnetic interaction in Fe/Au/Fe trilayer rings. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 294-297.	0.8	2
85	Width and temperature dependence of lithography-induced magnetic anisotropy in (Ga,Mn)As wires. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2685-2689.	2.7	2
86	Spin-Orbit Interaction in an In _{0.53} Ga _{0.47} As/In _{0.7} Ga _{0.3} As Shallow Two-Dimensional Electron Gas Located 5 nm below InP Surface Barrier. Japanese Journal of Applied Physics, 2010, 49, 04DM02.	1.5	2
87	Suppression of Aharonov-Casher spin interference in an InGaAs ring array. Journal of Physics: Conference Series, 2011, 302, 012002.	0.4	2
88	Relative Vortex State Control in a Co/Cu/Co Pseudo-Spin-Valve Ring. Japanese Journal of Applied Physics, 2012, 51, 04DM04.	1.5	2
89	Layer thickness dependence of spin orbit torques and fields in Pt/Co/AlO trilayer structures. Japanese Journal of Applied Physics, 2015, 54, 04DM05.	1.5	2
90	Bias dependence of spin injection/transport properties of a perpendicularly magnetized FePt/MgO/GaAs structure. Applied Physics Express, 2016, 9, 043002.	2.4	2

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91	Spin-orbit parameters derivation using single-frequency analysis of InGaAs multiple quantum wells in transient spin dynamics regime. Journal of Applied Physics, 2020, 127, 153901.	2.5	2
92	MgO Layer Thickness Dependence of Structure and Magnetic Properties of L10-FePt/MgO/GaAs Structures. Japanese Journal of Applied Physics, 2012, 51, 02BM05.	1.5	2
93	Anisotropic spin dynamics in semiconductor narrow wires from the interplay between spin-orbit interaction and planar magnetic field. Physical Review B, 2022, 105, .	3.2	2
94	Dyakonov-Perel and Elliot-Yafet spin relaxation rates in InGaAs/InAlAs multiple quantum wells at room temperature. Applied Physics Express, 2022, 15, 043001.	2.4	2
95	Comparison of Gate Sensitivity for Spin Interference Effect between Al ₂ O ₃ and SiO ₂ Gate Insulators on InGaAs Based Mesoscopic Ring Arrays. ECS Transactions, 2008, 16, 39-49.	0.5	1
96	Enhancement of Rashba Spin-Orbit Interaction Due to Wave Function Engineering. Journal of Superconductivity and Novel Magnetism, 2010, 23, 49-52.	1.8	1
97	Anisotropic spin splitting in InGaAs wire structures. Physics Procedia, 2010, 3, 1255-1259.	1.2	1
98	Anisotropic Weak Anti-Localization under In-Plane Magnetic Field and Control of Dimensionality via Spin Precession Length. Japanese Journal of Applied Physics, 2012, 51, 04DM01.	1.5	1
99	Electrical determination of relative chirality direction in a Co/Cu/Co ferromagnetic ring. Applied Physics Letters, 2012, 101, 062409.	3.3	1
100	Spatial variation of dynamic nuclear spin polarization probed by the non-local Hanle effect. Applied Physics Letters, 2018, 112, 132403.	3.3	1
101	Temperature and laser energy dependence of the electron g-factor in intrinsic InGaAs/InAlAs multiple quantum wells. Applied Physics Letters, 2019, 115, 012404.	3.3	1
102	Spin accumulation in photo-induced potential dimples generated in semiconductors. Communications Physics, 2020, 3, .	5.3	1
103	Reliable modeling of weak antilocalization for accurate spin-lifetime extraction. Physical Review B, 2021, 104, .	3.2	1
104	Magnetoresistance oscillations induced by spin orbit interaction and intersubband scattering in a gated InP/In _{0.8} Ga _{0.2} As/In _{0.52} Al _{0.48} As heterostructure. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4243-4246.	0.8	0
105	Proposal for electrical detection of spin separation with in-plane magnetic field in mesoscopic Stern-Gerlach spin filter. , 2010, , .		0
106	Experimental demonstration of resonant spin-orbit interaction effect. Physics Procedia, 2010, 3, 1261-1266.	1.2	0
107	Electrical spin manipulation with Al ₂ O ₃ gate insulator in InGaAs based mesoscopic ring arrays. Physics Procedia, 2010, 3, 1317-1320.	1.2	0
108	Anisotropic spin transport affected by competition between spin orbit interaction and Zeeman effect in an InGaAs based wire. Journal of Physics: Conference Series, 2011, 334, 012062.	0.4	0

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109	Shot noise at the quantum point contact in InGaAs heterostructure. , 2013, , .		0
110	Perpendicular Magnetic Anisotropy in Pt/Co/AlO Trilayer Structures Depending on AlO Thickness and Fabrication Method. Key Engineering Materials, 2014, 616, 247-251.	0.4	0
111	Spin coherence enhanced by in-plane electric field-induced spin-orbit interaction. , 2016, , .		0
112	Determination of the bulk Dresselhaus spin-orbit interaction parameter in an InGaAs quantum well. , 2016, , .		0
113	Irradiation Effects on Induced Electron Conductivity in an un-doped GaAs/AlGaAs Quantum Well Hall Bar. , 2019, , .		0
114	Ballistic spin locking in a two-dimensional Rashba system. , 2019, , .		0
115	Simultaneous extraction of Rashba and Dresselhaus spin-orbit coefficients in GaAs/AlGaAs (110) two-dimensional electron gas. , 2019, , .		0
116	Room-temperature perpendicular magnetic anisotropy of Pt/Co/AlOx trilayers on SrTiO3 (001). AIP Advances, 2020, 10, 105010.	1.3	0
117	Spintronic Terahertz Emission and Magnetic Anisotropy of Epitaxial Platinum Heterostructures on MgO(110) Substrate. , 2021, , .		0
118	EFFECT OF THE ARRAY DISTANCE ON THE MAGNETIZATION CONFIGURATION OF SUBMICORN-SIZED FERROMAGNETIC RINGS. , 2008, , .		0
119	Anisotropic Weak Anti-Localization under In-Plane Magnetic Field and Control of Dimensionality via Spin Precession Length. Japanese Journal of Applied Physics, 2012, 51, 04DM01.	1.5	0
120	Anisotropy and Damping in Co ₂ FeAl _{0.5} Si _{0.5} via Electrical Detection of Ferromagnetic Resonance. Japanese Journal of Applied Physics, 2012, 51, 083001.	1.5	0
121	Diffusive spin dynamics in 10 nm wide InGaAs/InAlAs quantum wells. , 2019, , .		0