

Masashi Shiraishi

List of Publications by Year in descending order

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149
papers

6,727
citations

81900

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docs citations

153
times ranked

7216
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical transport properties of atomically thin WSe ₂ using perpendicular magnetic anisotropy metal contacts. Applied Physics Letters, 2022, 120, .	3.3	1
2	Influence of adjacent metal films on magnon propagation in $Y_3Fe_5O_{12}$. Physical Review B, 2022, 105, .	3.2	1
3	Current-induced out-of-plane torques in a single permalloy layer with lateral structural asymmetry. Physical Review B, 2022, 105, .	3.2	4
4	Efficient room-temperature magnetization direction detection by means of the enhanced anomalous Nernst effect in a Weyl ferromagnet. Physical Review Materials, 2022, 6, .	2.4	6
5	Full calculation of inter-conversion between charge, spin, and heat current using a common partial differential equation platform. Journal of Applied Physics, 2022, 131, 243903.	2.5	1
6	Enhancement of low-frequency spin-orbit-torque ferromagnetic resonance signals by frequency tuning observed in Pt/Py, Pt/Co, and Pt/Fe bilayers. AIP Advances, 2021, 11, 025206.	1.3	1
7	Approaching barrier-free contacts to monolayer MoS ₂ employing [Co/Pt] multilayer electrodes. NPG Asia Materials, 2021, 13, .	7.9	8
8	Spin to charge conversion in Si/Cu/ferromagnet systems investigated by ac inductive measurements. Physical Review B, 2021, 103, .	3.2	2
9	Investigation of the thermal tolerance of silicon-based lateral spin valves. Scientific Reports, 2021, 11, 10583.	3.3	1
10	Synthetic Rashba spin-orbit system using a silicon metal-oxide semiconductor. Nature Materials, 2021, 20, 1228-1232.	27.5	11
11	Silicon Spintronics for Electronic Devices. , 2021, , .		0
12	Observation of a superconducting state of a topological superconductor candidate, FeTe _{0.6} Se _{0.4} , equipping ferromagnetic electrodes with perpendicular magnetic anisotropy. Applied Physics Express, 2021, 14, 093002.	2.4	1
13	Coexistence of low-frequency spin-torque ferromagnetic resonance and unidirectional spin Hall magnetoresistance. Physical Review B, 2021, 104, .	3.2	3
14	Giant spin Hall angle in the Heusler alloy Weyl ferromagnet $Co_2Fe_2O_4$. Physical Review B, 2021, 103, .	3.2	1
15	Modulation of spin-torque ferromagnetic resonance with a nanometer-thick platinum by ionic gating. Scientific Reports, 2021, 11, 21779.	3.3	3
16	Spin transport in n-type 3C-SiC observed in a lateral spin-pumping device. Solid State Communications, 2020, 305, 113754.	1.9	3
17	Spin transport in a lateral spin valve with a suspended Cu channel. Scientific Reports, 2020, 10, 10699.	3.3	3
18	Sizable spin-transfer torque in the Bi/Ni ₈₀ Fe ₂₀ bilayer film. Applied Physics Letters, 2020, 117, .	3.3	4

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19	Enhancement of spin signals by thermal annealing in silicon-based lateral spin valves. AIP Advances, 2020, 10, 095021.	1.3	4
20	Detection of ferromagnetic resonance from 1Ånm-thick Co. Scientific Reports, 2020, 10, 15764.	3.3	3
21	In-plane spin-orbit torque magnetization switching and its detection using the spin rectification effect at subgahertz frequencies. Physical Review B, 2020, 102, .	3.2	9
22	Modulation of spin conversion in a 1.5Ånm-thick Pd film by ionic gating. Applied Physics Letters, 2020, 117, 092406.	3.3	4
23	Over 1% magnetoresistance ratio at room temperature in non-degenerate silicon-based lateral spin valves. Applied Physics Express, 2020, 13, 083002.	2.4	10
24	Investigation of gating effect in Si spin MOSFET. Applied Physics Letters, 2020, 116, .	3.3	8
25	Gate-Tunable Spin xor Operation in a Silicon-Based Device at Room Temperature. Physical Review Applied, 2020, 13, .	3.8	7
26	Quantitative and systematic analysis of bias dependence of spin accumulation voltage in a nondegenerate Si-based spin valve. Physical Review B, 2019, 99, .	3.2	14
27	IEEE Magnetics Society Distinguished Lecturers for 2020. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	0
28	Ferromagnetic resonance imbalance at high microwave power: Effect on the Gilbert damping parameter. Journal of Applied Physics, 2019, 126, .	2.5	0
29	Monolayer MoS2 field effect transistor with low Schottky barrier height with ferromagnetic metal contacts. Scientific Reports, 2019, 9, 17032.	3.3	9
30	Stability of spin XOR gate operation in silicon based lateral spin device with large variations in spin transport parameters. AIP Advances, 2019, 9, 125326.	1.3	3
31	Spin Transport and Spin Conversion at Room Temperature in Exotic Materials Systems. Journal of the Institute of Electrical Engineers of Japan, 2019, 139, 668-673.	0.0	0
32	Spin-orbit coupling induced by bismuth doping in silicon thin films. Applied Physics Letters, 2018, 113, .	3.3	11
33	Spin-wave-induced lateral temperature gradient in a YIG thin film/GGG system excited in an ESR cavity. Applied Physics Letters, 2018, 112, .	3.3	11
34	Note: Derivative divide, a method for the analysis of broadband ferromagnetic resonance in the frequency domain. Review of Scientific Instruments, 2018, 89, 076101.	1.3	16
35	Thermally Generated Spin Signals in a Nondegenerate Silicon Spin Valve. Physical Review Applied, 2018, 9, .	3.8	6
36	Tunable inverse spin Hall effect in nanometer-thick platinum films by ionic gating. Nature Communications, 2018, 9, 3118.	12.8	52

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37	Quantitative investigation of the inverse Rashba-Edelstein effect in Bi/Ag and Ag/Bi on YIG. Applied Physics Letters, 2017, 110, .	3.3	28
38	Strong evidence for d-electron spin transport at room temperature at a LaAlO ₃ /SrTiO ₃ interface. Nature Materials, 2017, 16, 609-614.	27.5	55
39	Investigation of spin scattering mechanism in silicon channels of Fe/MgO/Si lateral spin valves. Applied Physics Letters, 2017, 110, 192401.	3.3	10
40	Spin injection into silicon detected by broadband ferromagnetic resonance spectroscopy. Applied Physics Letters, 2017, 110, 182402.	3.3	9
41	Spin to Charge Interconversion Phenomena in the Interface and Surface States. Journal of the Physical Society of Japan, 2017, 86, 011001.	1.6	43
42	Spin conversion on the nanoscale. Nature Physics, 2017, 13, 829-832.	16.7	75
43	Significant reduction in spin pumping efficiency in a platinum/yttrium iron garnet bilayer at low temperature. Applied Physics Express, 2016, 9, 053002.	2.4	17
44	Switching of charge-current-induced spin polarization in the topological insulator Bi_2S_3 . Physical Review B, 2016, 94, .	3.2	55
45	Transport and spin conversion of multicarriers in semimetal bismuth. Physical Review B, 2016, 93, .	3.2	41
46	Observation of large spin accumulation voltages in nondegenerate Si spin devices due to spin drift effect: Experiments and theory. Physical Review B, 2016, 93, .	3.2	29
47	Gate-Tunable Spin-Charge Conversion and the Role of Spin-Orbit Interaction in Graphene. Physical Review Letters, 2016, 116, 166102.	7.8	70
48	Spin transport and spin conversion in compound semiconductor with non-negligible spin-orbit interaction. Physical Review B, 2015, 91, .	3.2	20
49	Tunable spin current due to bulk insulating property in the topological insulator $\text{TI} \text{Bi}_{1-x}\text{Sb}_x$. Physical Review B, 2015, 91, .	3.2	20
50	Precise determination of two-carrier transport properties in the topological insulator Bi_2Te_3 . Physical Review B, 2015, 91, .	3.2	10
51	Ferromagnetic resonance and spin pumping efficiency for inverse spin-Hall effect normalization in yttrium-iron-garnet-based systems. Applied Physics Express, 2015, 8, 103002.	2.4	10
52	Experimental Demonstration of Room-Temperature Spin Transport in n -Type Germanium Epilayers. Physical Review Letters, 2015, 114, 196602.	7.8	85
53	Room-temperature operation of Si spin MOSFET with high on/off spin signal ratio. Applied Physics Express, 2015, 8, 113004.	2.4	63
54	Temperature evolution of electromotive force from Pt on yttrium-iron-garnet under ferromagnetic resonance. Journal of Applied Physics, 2015, 117, 17D136.	2.5	6

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55	Observation of spin-charge conversion in chemical-vapor-deposition-grown single-layer graphene. Applied Physics Letters, 2014, 105, .	3.3	23
56	Spin drift in highly doped n-type Si. Applied Physics Letters, 2014, 104, 092409.	3.3	26
57	Graphene spintronics. , 2014, , 324-340.		0
58	Spin Transport in Nondegenerate Si with a Spin MOSFET Structure at Room Temperature. Physical Review Applied, 2014, 2, .	3.8	86
59	Local magnetoresistance in Fe/MgO/Si lateral spin valve at room temperature. Applied Physics Letters, 2014, 104, .	3.3	49
60	Conversion of pure spin current to charge current in amorphous bismuth. Journal of Applied Physics, 2014, 115, 17C507.	2.5	19
61	Surface Shubnikov-de Haas oscillations and nonzero Berry phases of the topological hole conduction in $Tl_{1-x}Bi_xSe_2$. Physical Review B, 2014, 90, .	3.2	26
62	Electrical Detection of the Spin Polarization Due to Charge Flow in the Surface State of the Topological Insulator $Bi_{1.5}Sb_{0.5}Te_{1.7}Se_{1.3}$. Nano Letters, 2014, 14, 6226-6230.	9.1	144
63	Self-induced inverse spin Hall effect in permalloy at room temperature. Physical Review B, 2014, 89, .	3.2	113
64	Graphene spintronics. , 2014, , 117-132.		0
65	Giant enhancement of spin pumping efficiency using Fe ₃ Si ferromagnet. Physical Review B, 2013, 88, .	3.2	33
66	Spin-Pump-Induced Spin Transport in p-Type Si at Room Temperature. Physical Review Letters, 2013, 110, 127201.	7.8	162
67	Dynamically generated pure spin current in single-layer graphene. Physical Review B, 2013, 87, .	3.2	62
68	Dynamical Spin Injection into p-Type Germanium at Room Temperature. Applied Physics Express, 2013, 6, 023001.	2.4	39
69	Temperature Dependence of Spin Hall Angle of Palladium. Applied Physics Express, 2013, 6, 083001.	2.4	21
70	Vertical spin transport in Al with Pd/Al/Ni ₈₀ Fe ₂₀ trilayer films at room temperature by spin pumping. Scientific Reports, 2013, 3, .	3.3	21
71	Characterization of MgO Thin Films Grown on Carbon Materials by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2013, 52, 070208.	1.5	1
72	Correlation of Microstructure and Transport Properties of Multilayered Graphene Spin Valves on SiO ₂ /Si. Journal of Physics: Conference Series, 2013, 471, 012048.	0.4	1

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73	Observation of weak temperature dependence of spin diffusion length in highly-doped Si by using a non-local 3-terminal method. Journal of Applied Physics, 2012, 111, 07C322.	2.5	2
74	Effect of spin drift on spin accumulation voltages in highly doped silicon. Applied Physics Letters, 2012, 101, .	3.3	32
75	Realization of ohmic-like contact between ferromagnet and rubrene single crystal. Applied Physics Letters, 2012, 101, 073501.	3.3	5
76	Investigation of the inverted Hanle effect in highly doped Si. Physical Review B, 2012, 86, .	3.2	57
77	Observation of Magneticâ€Switching and Multiferroicâ€Like Behavior of Co Nanoparticles in a C₆₀ Matrix. Advanced Functional Materials, 2012, 22, 3845-3852.	14.9	6
78	Electrically-Generated Pure Spin Current in Graphene. Japanese Journal of Applied Physics, 2012, 51, 08KA01.	1.5	4
79	Room-Temperature Electron Spin Transport in a Highly Doped Si Channel. Applied Physics Express, 2011, 4, 023003.	2.4	177
80	Observation of a tunneling magnetoresistance effect in magnetic tunneling junctions with a high resistance ferromagnetic oxide Fe ₂ MnO ₄ electrode. Solid State Communications, 2011, 151, 1296-1299.	1.9	0
81	Graphene: Piecing it Together. Advanced Materials, 2011, 23, 4471-4490.	21.0	127
82	Molecular spintronics. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 43, 1295-1317.	2.7	67
83	Spin transport properties in silicon in a nonlocal geometry. Physical Review B, 2011, 83, .	3.2	31
84	Electrical investigation of the interface band structure in rubrene single-crystal/nickel junction. Applied Physics Letters, 2011, 99, 043505.	3.3	5
85	Comparison of spin signals in silicon between nonlocal four-terminal and three-terminal methods. Applied Physics Letters, 2011, 98, .	3.3	61
86	Local and non-local magnetoresistance with spin precession in highly doped Si. Applied Physics Letters, 2011, 98, .	3.3	27
87	Temperature dependence of spin diffusion length in silicon by Hanle-type spin precession. Applied Physics Letters, 2010, 96, .	3.3	83
88	Evidence of Electrical Spin Injection Into Silicon Using MgO Tunnel Barrier. IEEE Transactions on Magnetics, 2010, 46, 1436-1439.	2.1	47
89	Graphene Spintronics. Hyomen Kagaku, 2010, 31, 162-168.	0.0	1
90	Coupled-Mode Excitations Induced in an Antiferromagnetically Coupled Multilayer by Spin-Transfer Torque. Applied Physics Express, 2010, 3, 033001.	2.4	17

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91	Voltage-induced perpendicular magnetic anisotropy change in magnetic tunnel junctions. Applied Physics Letters, 2010, 96, .	3.3	228
92	Variation of the perpendicular magnetic anisotropy with bias voltage in ultra thin ferromagnetic layers. , 2010, , .		0
93	Investigation of Spin-Dependent Transport Properties and Spin-Spin Interactions in a Copper-Phthalocyanine-Cobalt Nanocomposite System. Japanese Journal of Applied Physics, 2010, 49, 033002.	1.5	7
94	Electrical Detection of Changes in Voltage-induced Magnetic Anisotropy in Magnetic Tunnel Junctions. Journal of the Magnetics Society of Japan, 2010, 34, 289-292.	0.9	0
95	Enhanced magnetoresistance due to charging effects in a molecular nanocomposite spin device. Physical Review B, 2009, 79, .	3.2	17
96	Voltage control of in-plane magnetic anisotropy in ultrathin Fe/n-GaAs(001) Schottky junctions. Applied Physics Letters, 2009, 94, .	3.3	21
97	Analysis of Degradation in Graphene-Based Spin Valves. Applied Physics Express, 2009, 2, 123004.	2.4	9
98	Inelastic tunneling spectra of MgO barrier magnetic tunneling junctions showing large magnon contribution. Journal of Applied Physics, 2009, 105, .	2.5	16
99	rf amplification in a three-terminal magnetic tunnel junction with a magnetic vortex structure. Applied Physics Letters, 2009, 95, 022513.	3.3	8
100	Robustness of Spin Polarization in Graphene-Based Spin Valves. Advanced Functional Materials, 2009, 19, 3711-3716.	14.9	70
101	Large voltage-induced magnetic anisotropy change in a few atomic layers of iron. Nature Nanotechnology, 2009, 4, 158-161.	31.5	1,140
102	Spin-transfer-torque-induced ferromagnetic resonance for Fe/Cr/Fe layers with an antiferromagnetic coupling field. Applied Physics Letters, 2009, 94, .	3.3	15
103	Spin transport in single- and multi-layer graphene. , 2009, , .		6
104	Logic circuits using solution-processed single-walled carbon nanotube transistors. Applied Physics Letters, 2008, 92, 253507.	3.3	25
105	Transfer characteristics in graphene field-effect transistors with Co contacts. Applied Physics Letters, 2008, 93, 152104.	3.3	47
106	Spin Injection into Graphene at Room Temperature. Hyomen Kagaku, 2008, 29, 310-314.	0.0	3
107	A nuclear magnetic resonance study on rubrene-cobalt nanocomposites. Applied Physics Letters, 2008, 93, 053103.	3.3	6
108	Surface potential analyses of single-walled carbon nanotube/metal interfaces. Journal of Applied Physics, 2007, 101, 014311.	2.5	6

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109	Structural Study of Single-Walled Carbon Nanotube Films Doped by a Solution Method. <i>Journal of Nanoscience and Nanotechnology</i> , 2007, 7, 3533-3536.	0.9	8
110	Tunnel magnetoresistance of C60-Co nanocomposites and spin-dependent transport in organic semiconductors. <i>Physical Review B</i> , 2007, 76, .	3.2	49
111	Spin Injection into a Graphene Thin Film at Room Temperature. <i>Japanese Journal of Applied Physics</i> , 2007, 46, L605-L607.	1.5	182
112	Spin-dependent transport in nanocomposites of Alq3 molecules and cobalt nanoparticles. <i>Applied Physics Letters</i> , 2007, 91, 063123.	3.3	26
113	Dependence on annealing temperatures of tunneling spectra in high-resistance CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Solid State Communications</i> , 2007, 143, 574-578.	1.9	23
114	Large magnetoresistance in rubrene-Co nano-composites. <i>Chemical Physics Letters</i> , 2007, 448, 106-110.	2.6	24
115	Differential conductance measurements of low-resistance CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 310, e649-e651.	2.3	7
116	Detection of current-driven magnetic domain wall deformation using anisotropic magnetoresistance effect. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 3987-3990.	1.8	0
117	Spin-Dependent Transport in C60-Co Nano-Composites. <i>Japanese Journal of Applied Physics</i> , 2006, 45, L717-L719.	1.5	33
118	Tunneling spectroscopy of magnetic tunnel junctions: Comparison between CoFeB/MgO/CoFeB and CoFeB/Al ₂ O ₃ /CoFeB. <i>Journal of Applied Physics</i> , 2006, 99, 08T309.	2.5	8
119	Ambipolar single electron transistors using side-contacted single-walled carbon nanotubes. <i>Chemical Physics Letters</i> , 2006, 417, 540-544.	2.6	13
120	Strong Anisotropy in the Far-Infrared Absorption Spectra of Stretch-Aligned Single-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2006, 18, 1166-1169.	21.0	133
121	Optical Observation of Carrier Accumulation in Single-Walled Carbon Nanotube Transistors. <i>Japanese Journal of Applied Physics</i> , 2006, 45, L1190-L1192.	1.5	8
122	Gigantic Optical Stark Effect and Ultrafast Relaxation of Excitons in Single-Walled Carbon Nanotubes. <i>Journal of the Physical Society of Japan</i> , 2006, 75, 043709.	1.6	15
123	Solution-Processed Single-Walled Carbon Nanotube Transistors with High Mobility and Large On/Off Ratio. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 6524-6527.	1.5	28
124	Band structure modulation by carrier doping in random-network carbon nanotube transistors. <i>Applied Physics Letters</i> , 2006, 89, 013112.	3.3	11
125	Improvements in the device characteristics of random-network single-walled carbon nanotube transistors by using high- κ gate insulators. <i>Applied Physics Letters</i> , 2006, 89, 203505.	3.3	13
126	Tunneling spectra of sputter-deposited CoFeB/MgO/CoFeB magnetic tunnel junctions showing giant tunneling magnetoresistance effect. <i>Solid State Communications</i> , 2005, 136, 611-615.	1.9	36

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127	Control of Carrier Density by a Solution Method in Carbon-Nanotube Devices. <i>Advanced Materials</i> , 2005, 17, 2430-2434.	21.0	89
128	Characterization of SWNT-Thin-Film Transistors. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0
129	Electronic mean free path in as-produced and purified single-wall carbon nanotubes. <i>Applied Physics Letters</i> , 2005, 86, 122106.	3.3	11
130	Spectroscopic characterization of single-walled carbon nanotubes carrier-doped by encapsulation of TCNQ. <i>Physical Review B</i> , 2005, 71, .	3.2	34
131	Control of injected carriers in tetracyano-p-quinodimethane encapsulated carbon nanotube transistors. <i>Applied Physics Letters</i> , 2005, 87, 093107.	3.3	19
132	Solution-Processed Fabrication of Single-Walled Carbon Nanotube Field Effect Transistors. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2005, 13, 485-489.	2.1	2
133	Hydrogen adsorption and desorption in carbon nanotube systems and its mechanisms. <i>Applied Physics A: Materials Science and Processing</i> , 2004, 78, 947-953.	2.3	68
134	Single-walled carbon nanotube aggregates for solution-processed field effect transistors. <i>Chemical Physics Letters</i> , 2004, 394, 110-113.	2.6	75
135	Gas-solid interactions in the hydrogen/single-walled carbon nanotube system. <i>Chemical Physics Letters</i> , 2003, 367, 633-636.	2.6	102
136	Tomonaga-Luttinger-liquid behavior in single-walled carbon nanotube networks. <i>Solid State Communications</i> , 2003, 127, 215-218.	1.9	23
137	Stable and controlled amphoteric doping by encapsulation of organic molecules inside carbon nanotubes. <i>Nature Materials</i> , 2003, 2, 683-688.	27.5	520
138	Dense hydrogen adsorption on carbon subnanopores at 77 K. <i>Applied Physics Letters</i> , 2003, 83, 3392-3394.	3.3	48
139	Electronic structures of fullerenes and metallofullerenes studied by surface potential analysis. <i>Physical Review B</i> , 2003, 68, .	3.2	28
140	Synthesis of organics/SWNT compounds. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	0
141	Nuclear Magnetic Resonance of Molecular Hydrogen Trapped in Single-Walled Carbon Nanotube Bundles. <i>Journal of Nanoscience and Nanotechnology</i> , 2002, 2, 463-465.	0.9	12
142	Conduction mechanisms in single-walled carbon nanotubes. <i>Synthetic Metals</i> , 2002, 128, 235-239.	3.9	52
143	Electrolysis of Water Vapor Using a Fullerene-Based Electrolyte. <i>Electrochemical and Solid-State Letters</i> , 2002, 5, A74.	2.2	5
144	The characterization of plasma-polymerized C 60 thin films. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 74, 613-616.	2.3	10

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145	Hydrogen storage in single-walled carbon nanotube bundles and peapods. Chemical Physics Letters, 2002, 358, 213-218.	2.6	97
146	Work function of carbon nanotubes. Carbon, 2001, 39, 1913-1917.	10.3	467
147	Electrical Spin Injection into Silicon Using MgO Tunnel Barrier. Applied Physics Express, 0, 2, 053003.	2.4	74
148	Voltage-Assisted Magnetization Switching in Ultrathin Fe ₈₀ Co ₂₀ Alloy Layers. Applied Physics Express, 0, 2, 063001.	2.4	190
149	Ink-Jet Printing of Carbon Nanotube Thin-Film Transistors on Flexible Plastic Substrates. Applied Physics Express, 0, 2, 025005.	2.4	75