

Sidong Lei

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307
papers

20,056
citations

66
h-index

136
g-index

335
ext. papers

23,286
ext. citations

8.5
avg, IF

6.69
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 307 | Vertical and in-plane heterostructures from WS ₂ /MoS ₂ monolayers. <i>Nature Materials</i> , 2014 , 13, 1135-42 | 27 | 1580 |
| 306 | Vapour phase growth and grain boundary structure of molybdenum disulphide atomic layers. <i>Nature Materials</i> , 2013 , 12, 754-9 | 27 | 1384 |
| 305 | Magnetism. Blowing magnetic skyrmion bubbles. <i>Science</i> , 2015 , 349, 283-6 | 33.3 | 908 |
| 304 | In-plane heterostructures of graphene and hexagonal boron nitride with controlled domain sizes. <i>Nature Nanotechnology</i> , 2013 , 8, 119-24 | 28.7 | 687 |
| 303 | Magnetization switching through giant spin-orbit torque in a magnetically doped topological insulator heterostructure. <i>Nature Materials</i> , 2014 , 13, 699-704 | 27 | 616 |
| 302 | Switching of perpendicular magnetization by spin-orbit torques in the absence of external magnetic fields. <i>Nature Nanotechnology</i> , 2014 , 9, 548-54 | 28.7 | 569 |
| 301 | Direct observation of the skyrmion Hall effect. <i>Nature Physics</i> , 2017 , 13, 162-169 | 16.2 | 555 |
| 300 | Evolution of the electronic band structure and efficient photo-detection in atomic layers of InSe. <i>ACS Nano</i> , 2014 , 8, 1263-72 | 16.7 | 436 |
| 299 | Two-Step Growth of Two-Dimensional WSe ₂ /MoSe ₂ Heterostructures. <i>Nano Letters</i> , 2015 , 15, 6135-41 | 11.5 | 401 |
| 298 | Direct laser-patterned micro-supercapacitors from paintable MoS ₂ films. <i>Small</i> , 2013 , 9, 2905-10 | 11 | 401 |
| 297 | Chiral Majorana fermion modes in a quantum anomalous Hall insulator-superconductor structure. <i>Science</i> , 2017 , 357, 294-299 | 33.3 | 363 |
| 296 | Scale-invariant quantum anomalous Hall effect in magnetic topological insulators beyond the two-dimensional limit. <i>Physical Review Letters</i> , 2014 , 113, 137201 | 7.4 | 348 |
| 295 | Chemical vapor deposition of thin crystals of layered semiconductor SnS ₂ for fast photodetection application. <i>Nano Letters</i> , 2015 , 15, 506-13 | 11.5 | 342 |
| 294 | Synthesis and photoresponse of large GaSe atomic layers. <i>Nano Letters</i> , 2013 , 13, 2777-81 | 11.5 | 319 |
| 293 | Resistive switching materials for information processing. <i>Nature Reviews Materials</i> , 2020 , 5, 173-195 | 73.3 | 318 |
| 292 | Room-Temperature Creation and Spin-Orbit Torque Manipulation of Skyrmions in Thin Films with Engineered Asymmetry. <i>Nano Letters</i> , 2016 , 16, 1981-8 | 11.5 | 211 |
| 291 | Wafer-scale monodomain films of spontaneously aligned single-walled carbon nanotubes. <i>Nature Nanotechnology</i> , 2016 , 11, 633-8 | 28.7 | 209 |

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| 290 | Giant electric-field-induced reversible and permanent magnetization reorientation on magnetoelectric Ni/(011) [Pb(Mg _{1/3} Nb _{2/3})O ₃](1-x)[PbTiO ₃] _x heterostructure. <i>Applied Physics Letters</i> , 2011 , 98, 012504 | 3.4 | 204 |
| 289 | An Atomically Layered InSe Avalanche Photodetector. <i>Nano Letters</i> , 2015 , 15, 3048-55 | 11.5 | 201 |
| 288 | Piezoelectric effect in chemical vapour deposition-grown atomic-monolayer triangular molybdenum disulfide piezotronics. <i>Nature Communications</i> , 2015 , 6, 7430 | 17.4 | 193 |
| 287 | Precise Quantization of the Anomalous Hall Effect near Zero Magnetic Field. <i>Physical Review Letters</i> , 2015 , 114, 187201 | 7.4 | 189 |
| 286 | Effect of phonon confinement on the thermoelectric figure of merit of quantum wells. <i>Journal of Applied Physics</i> , 1998 , 84, 6149-6153 | 2.5 | 187 |
| 285 | Spin Wave Magnetic NanoFabric: A New Approach to Spin-Based Logic Circuitry. <i>IEEE Transactions on Magnetics</i> , 2008 , 44, 2141-2152 | 2 | 184 |
| 284 | Strong Rashba-Edelstein Effect-Induced Spin-Orbit Torques in Monolayer Transition Metal Dichalcogenide/Ferromagnet Bilayers. <i>Nano Letters</i> , 2016 , 16, 7514-7520 | 11.5 | 181 |
| 283 | Electric-field control of spin-orbit torque in a magnetically doped topological insulator. <i>Nature Nanotechnology</i> , 2016 , 11, 352-9 | 28.7 | 170 |
| 282 | Two-dimensional spintronics for low-power electronics. <i>Nature Electronics</i> , 2019 , 2, 274-283 | 28.4 | 163 |
| 281 | Room-Temperature Skyrmion Shift Device for Memory Application. <i>Nano Letters</i> , 2017 , 17, 261-268 | 11.5 | 160 |
| 280 | Proximity induced high-temperature magnetic order in topological insulator--ferrimagnetic insulator heterostructure. <i>Nano Letters</i> , 2014 , 14, 3459-65 | 11.5 | 156 |
| 279 | Surface functionalization of two-dimensional metal chalcogenides by Lewis acid-base chemistry. <i>Nature Nanotechnology</i> , 2016 , 11, 465-71 | 28.7 | 150 |
| 278 | Photoluminescence quenching and charge transfer in artificial heterostacks of monolayer transition metal dichalcogenides and few-layer black phosphorus. <i>ACS Nano</i> , 2015 , 9, 555-63 | 16.7 | 145 |
| 277 | Electrical spin injection and transport in germanium. <i>Physical Review B</i> , 2011 , 84, | 3.3 | 141 |
| 276 | Electrical control of reversible and permanent magnetization reorientation for magnetoelectric memory devices. <i>Applied Physics Letters</i> , 2011 , 98, 262504 | 3.4 | 135 |
| 275 | Electrical detection of spin-polarized surface states conduction in (Bi(0.53)Sb(0.47)) ₂ Te ₃ topological insulator. <i>Nano Letters</i> , 2014 , 14, 5423-9 | 11.5 | 134 |
| 274 | Robust bi-stable memory operation in single-layer graphene ferroelectric memory. <i>Applied Physics Letters</i> , 2011 , 99, 042109 | 3.4 | 133 |
| 273 | Alleviation of Fermi-level pinning effect on metal/germanium interface by insertion of an ultrathin aluminum oxide. <i>Applied Physics Letters</i> , 2008 , 93, 202105 | 3.4 | 129 |

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| 272 | Optoelectronic memory using two-dimensional materials. <i>Nano Letters</i> , 2015 , 15, 259-65 | 11.5 | 128 |
| 271 | Metallic 1T phase source/drain electrodes for field effect transistors from chemical vapor deposited MoS ₂ . <i>APL Materials</i> , 2014 , 2, 092516 | 5.7 | 126 |
| 270 | Synthesis of Millimeter-Scale Transition Metal Dichalcogenides Single Crystals. <i>Advanced Functional Materials</i> , 2016 , 26, 2009-2015 | 15.6 | 126 |
| 269 | Electric-field-induced spin wave generation using multiferroic magnetoelectric cells. <i>Applied Physics Letters</i> , 2014 , 104, 082403 | 3.4 | 125 |
| 268 | Review of 3D topological insulator thin-film growth by molecular beam epitaxy and potential applications. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 50-63 | 2.5 | 125 |
| 267 | Charge-carrier dynamics in hybrid plasmonic organic solar cells with Ag nanoparticles. <i>Applied Physics Letters</i> , 2011 , 98, 253302 | 3.4 | 121 |
| 266 | Epitaxial growth of Bi ₂ Se ₃ topological insulator thin films on Si (111). <i>Journal of Applied Physics</i> , 2011 , 109, 103702 | 2.5 | 118 |
| 265 | Competing weak localization and weak antilocalization in ultrathin topological insulators. <i>Nano Letters</i> , 2013 , 13, 48-53 | 11.5 | 113 |
| 264 | Non-volatile magnonic logic circuits engineering. <i>Journal of Applied Physics</i> , 2011 , 110, 034306 | 2.5 | 111 |
| 263 | Tailoring the physical properties of molybdenum disulfide monolayers by control of interfacial chemistry. <i>Nano Letters</i> , 2014 , 14, 1354-61 | 11.5 | 110 |
| 262 | Tailoring exchange couplings in magnetic topological-insulator/antiferromagnet heterostructures. <i>Nature Materials</i> , 2017 , 16, 94-100 | 27 | 108 |
| 261 | Magnetization switching through spin-Hall-effect-induced chiral domain wall propagation. <i>Physical Review B</i> , 2014 , 89, | 3.3 | 105 |
| 260 | Strain-Induced Electronic Structure Changes in Stacked van der Waals Heterostructures. <i>Nano Letters</i> , 2016 , 16, 3314-20 | 11.5 | 101 |
| 259 | Metal-to-insulator switching in quantum anomalous Hall states. <i>Nature Communications</i> , 2015 , 6, 8474 | 17.4 | 100 |
| 258 | Stability, electronic, and magnetic properties of the magnetically doped topological insulators Bi ₂ Se ₃ , Bi ₂ Te ₃ , and Sb ₂ Te ₃ . <i>Physical Review B</i> , 2013 , 88, | 3.3 | 100 |
| 257 | Synthesis of large-scale atomic-layer SnS ₂ through chemical vapor deposition. <i>Nano Research</i> , 2017 , 10, 2386-2394 | 10 | 97 |
| 256 | Investigating the origin of Fermi level pinning in Ge Schottky junctions using epitaxially grown ultrathin MgO films. <i>Applied Physics Letters</i> , 2010 , 96, 102103 | 3.4 | 96 |
| 255 | VOLTAGE-CONTROLLED MAGNETIC ANISOTROPY IN SPINTRONIC DEVICES. <i>Spin</i> , 2012 , 02, 1240002 | 1.3 | 95 |

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| 254 | Interplay between different magnetisms in Cr-doped topological insulators. <i>ACS Nano</i> , 2013 , 7, 9205-12 | 16.7 | 94 |
| 253 | Vertical graphene-base hot-electron transistor. <i>Nano Letters</i> , 2013 , 13, 2370-5 | 11.5 | 94 |
| 252 | Towards van der Waals Epitaxial Growth of GaAs on Si using a Graphene Buffer Layer. <i>Advanced Functional Materials</i> , 2014 , 24, 6629-6638 | 15.6 | 93 |
| 251 | Temperature dependence of the voltage-controlled perpendicular anisotropy in nanoscale MgO CoFeB Ta magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2014 , 104, 112410 | 3.4 | 92 |
| 250 | Origin of interfacial perpendicular magnetic anisotropy in MgO/CoFe/metallic capping layer structures. <i>Scientific Reports</i> , 2015 , 5, 18173 | 4.9 | 91 |
| 249 | Giant spin-torque diode sensitivity in the absence of bias magnetic field. <i>Nature Communications</i> , 2016 , 7, 11259 | 17.4 | 89 |
| 248 | Imaging the motion of electrons across semiconductor heterojunctions. <i>Nature Nanotechnology</i> , 2017 , 12, 36-40 | 28.7 | 86 |
| 247 | Topological Hall effect at above room temperature in heterostructures composed of a magnetic insulator and a heavy metal. <i>Nature Electronics</i> , 2019 , 2, 182-186 | 28.4 | 73 |
| 246 | Interfacial Dzyaloshinskii-Moriya Interaction: Effect of 5d Band Filling and Correlation with Spin Mixing Conductance. <i>Physical Review Letters</i> , 2018 , 120, 157204 | 7.4 | 73 |
| 245 | Band alignments and photon-induced carrier transfer from wetting layers to Ge islands grown on Si(001). <i>Applied Physics Letters</i> , 2001 , 78, 1763-1765 | 3.4 | 73 |
| 244 | Normal-incidence Ge quantum-dot photodetectors at 1.5 μm based on Si substrate. <i>Applied Physics Letters</i> , 2002 , 80, 1189-1191 | 3.4 | 72 |
| 243 | Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. <i>Nano Letters</i> , 2018 , 18, 980-986 | 11.5 | 68 |
| 242 | Room-Temperature Spin-Orbit Torque from Topological Surface States. <i>Physical Review Letters</i> , 2019 , 123, 207205 | 7.4 | 67 |
| 241 | Manipulating surface-related ferromagnetism in modulation-doped topological insulators. <i>Nano Letters</i> , 2013 , 13, 4587-93 | 11.5 | 66 |
| 240 | Enhancement of voltage-controlled magnetic anisotropy through precise control of Mg insertion thickness at CoFeB MgO interface. <i>Applied Physics Letters</i> , 2017 , 110, 052401 | 3.4 | 64 |
| 239 | Plasmonic effects for light concentration in organic photovoltaic thin films induced by hexagonal periodic metallic nanospheres. <i>Applied Physics Letters</i> , 2011 , 98, 151110 | 3.4 | 64 |
| 238 | Magnetolectric spin wave amplifier for spin wave logic circuits. <i>Journal of Applied Physics</i> , 2009 , 106, 123909 | 2.5 | 64 |
| 237 | Stable silver nanoclusters electrochemically deposited on nitrogen-doped graphene as efficient electrocatalyst for oxygen reduction reaction. <i>Journal of Power Sources</i> , 2015 , 274, 1173-1179 | 8.9 | 62 |

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|-----|---|------|----|
| 236 | Current-driven perpendicular magnetization switching in Ta/CoFeB/[TaOx or MgO/TaOx] films with lateral structural asymmetry. <i>Applied Physics Letters</i> , 2014 , 105, 102411 | 3.4 | 61 |
| 235 | Electric-poling-induced magnetic anisotropy and electric-field-induced magnetization reorientation in magnetoelectric Ni/(011) [Pb(Mg _{1/3} Nb _{2/3})O ₃](1-x)-[PbTiO ₃] _x heterostructure. <i>Journal of Applied Physics</i> , 2011 , 109, 07D732 | 2.5 | 59 |
| 234 | Comparative Evaluation of Spin-Transfer-Torque and Magnetoelectric Random Access Memory. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2016 , 6, 134-145 | 5.2 | 58 |
| 233 | Spintronics Based on Topological Insulators. <i>Spin</i> , 2016 , 06, 1640001 | 1.3 | 56 |
| 232 | Magneto-optical investigation of spin-orbit torques in metallic and insulating magnetic heterostructures. <i>Nature Communications</i> , 2015 , 6, 8958 | 17.4 | 55 |
| 231 | Giant interfacial perpendicular magnetic anisotropy in MgO/CoFe/capping layer structures. <i>Applied Physics Letters</i> , 2017 , 110, 072403 | 3.4 | 53 |
| 230 | Layer Engineering of 2D Semiconductor Junctions. <i>Advanced Materials</i> , 2016 , 28, 5126-32 | 24 | 53 |
| 229 | Direct structural evidences of Mn ₁₁ Ge ₈ and Mn ₅ Ge ₂ clusters in Ge _{0.96} Mn _{0.04} thin films. <i>Applied Physics Letters</i> , 2008 , 92, 101913 | 3.4 | 53 |
| 228 | Role of dimensional crossover on spin-orbit torque efficiency in magnetic insulator thin films. <i>Nature Communications</i> , 2018 , 9, 3612 | 17.4 | 53 |
| 227 | Stateful Reconfigurable Logic via a Single-Voltage-Gated Spin Hall-Effect Driven Magnetic Tunnel Junction in a Spintronic Memory. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 4295-4301 | 2.9 | 52 |
| 226 | Effect of the oxide layer on current-induced spin-orbit torques in Hf CoFeB MgO and Hf CoFeB TaOx structures. <i>Applied Physics Letters</i> , 2015 , 106, 032406 | 3.4 | 51 |
| 225 | Issues of nanoelectronics: a possible roadmap. <i>Journal of Nanoscience and Nanotechnology</i> , 2002 , 2, 235-66 | 51 | 51 |
| 224 | Spin-orbit torques in perpendicularly magnetized Ir ₂₂ Mn ₇₈ /Co ₂₀ Fe ₆₀ B ₂₀ /MgO multilayer. <i>Applied Physics Letters</i> , 2016 , 109, 222401 | 3.4 | 51 |
| 223 | Interfacial control of Dzyaloshinskii-Moriya interaction in heavy metal/ferromagnetic metal thin film heterostructures. <i>Physical Review B</i> , 2016 , 94, | 3.3 | 50 |
| 222 | Enhanced field emission properties from CNT arrays synthesized on Inconel superalloy. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 1986-91 | 9.5 | 50 |
| 221 | Suspended few-layer graphene beam electromechanical switch with abrupt on-off characteristics and minimal leakage current. <i>Applied Physics Letters</i> , 2011 , 99, 023103 | 3.4 | 50 |
| 220 | Alloying, elemental enrichment, and interdiffusion during the growth of Ge(Si)/Si(001) quantum dots. <i>Physical Review B</i> , 2002 , 65, | 3.3 | 50 |
| 219 | Spin-Orbit Torque Switching of a Nearly Compensated Ferrimagnet by Topological Surface States. <i>Advanced Materials</i> , 2019 , 31, e1901681 | 24 | 48 |

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| 218 | Dzyaloshinskii-Moriya Interaction across an Antiferromagnet-Ferromagnet Interface. <i>Physical Review Letters</i> , 2017 , 119, 027202 | 7.4 | 48 |
| 217 | Electrical spin injection and transport in semiconductor nanowires: challenges, progress and perspectives. <i>Nanoscale</i> , 2015 , 7, 4325-37 | 7.7 | 48 |
| 216 | Electrical field control magnetic phase transition in nanostructured Mn _x Ge _{1-x} . <i>Applied Physics Letters</i> , 2007 , 90, 012501 | 3.4 | 48 |
| 215 | Spatially resolved photoexcited charge-carrier dynamics in phase-engineered monolayer MoS ₂ . <i>ACS Nano</i> , 2015 , 9, 840-9 | 16.7 | 47 |
| 214 | Metallic nanomesh electrodes with controllable optical properties for organic solar cells. <i>Applied Physics Letters</i> , 2012 , 100, 143109 | 3.4 | 47 |
| 213 | Atomic-Scale Magnetism of Cr-Doped Bi ₂ Se ₃ Thin Film Topological Insulators. <i>ACS Nano</i> , 2015 , 9, 10237-10247 | 13.7 | 46 |
| 212 | Exchange-biasing topological charges by antiferromagnetism. <i>Nature Communications</i> , 2018 , 9, 2767 | 17.4 | 46 |
| 211 | Memory effects related to deep levels in metal-oxide-semiconductor structure with nanocrystalline Si. <i>Applied Physics Letters</i> , 2002 , 80, 2502-2504 | 3.4 | 46 |
| 210 | Above Room-Temperature Ferromagnetism in Wafer-Scale Two-Dimensional van der Waals FeGeTe Tailored by a Topological Insulator. <i>ACS Nano</i> , 2020 , 14, 10045-10053 | 16.7 | 45 |
| 209 | Large Tunneling Magnetoresistance in VSe/MoS Magnetic Tunnel Junction. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 17647-17653 | 9.5 | 44 |
| 208 | High-Current Gain Two-Dimensional MoSe ₂ -Based Hot-Electron Transistors. <i>Nano Letters</i> , 2015 , 15, 7905-1211.5 | 11.5 | 42 |
| 207 | Thickness-dependent bulk electronic properties in Bi ₂ Se ₃ thin films revealed by infrared spectroscopy. <i>Physical Review B</i> , 2013 , 88, | 3.3 | 42 |
| 206 | Vertically Aligned Carbon Nanotubes/Graphene Hybrid Electrode as a TCO- and Pt-Free Flexible Cathode for Application in Solar Cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 20902-20907 | 13 | 41 |
| 205 | Spin-orbit torque from a ferromagnetic metal. <i>Physical Review B</i> , 2019 , 99, | 3.3 | 40 |
| 204 | Spiral Growth of SnSe ₂ Crystals by Chemical Vapor Deposition. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1600383 | 4.6 | 40 |
| 203 | Thermally stable voltage-controlled perpendicular magnetic anisotropy in Mo CoFeB MgO structures. <i>Applied Physics Letters</i> , 2015 , 107, 142403 | 3.4 | 39 |
| 202 | Part-per-million quantization and current-induced breakdown of the quantum anomalous Hall effect. <i>Physical Review B</i> , 2018 , 98, | 3.3 | 39 |
| 201 | Impact of gate work-function on memory characteristics in Al ₂ O ₃ /HfO _x /Al ₂ O ₃ /graphene charge-trap memory devices. <i>Applied Physics Letters</i> , 2012 , 100, 023109 | 3.4 | 38 |

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| 200 | Ternary CuIn7Se11 : towards ultra-thin layered photodetectors and photovoltaic devices. <i>Advanced Materials</i> , 2014 , 26, 7666-72 | 24 | 37 |
| 199 | Low-Cost, Large-Area, Facile, and Rapid Fabrication of Aligned ZnO Nanowire Device Arrays. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 13466-71 | 9.5 | 37 |
| 198 | Mobile Néel skyrmions at room temperature: status and future. <i>AIP Advances</i> , 2016 , 6, 055602 | 1.5 | 34 |
| 197 | Scalable Transfer of Suspended Two-Dimensional Single Crystals. <i>Nano Letters</i> , 2015 , 15, 5089-97 | 11.5 | 33 |
| 196 | Atomic-Monolayer MoS Band-to-Band Tunneling Field-Effect Transistor. <i>Small</i> , 2016 , 12, 5676-5683 | 11 | 33 |
| 195 | Experimental Demonstration of Spintronic Broadband Microwave Detectors and Their Capability for Powering Nanodevices. <i>Physical Review Applied</i> , 2019 , 11, | 4.3 | 32 |
| 194 | Strain-induced magnetization change in patterned ferromagnetic nickel nanostructures. <i>Journal of Applied Physics</i> , 2011 , 109, 123903 | 2.5 | 32 |
| 193 | Alternate State Variables for Emerging Nanoelectronic Devices. <i>IEEE Nanotechnology Magazine</i> , 2009 , 8, 66-75 | 2.6 | 32 |
| 192 | Topological Transitions Induced by Antiferromagnetism in a Thin-Film Topological Insulator. <i>Physical Review Letters</i> , 2018 , 121, 096802 | 7.4 | 32 |
| 191 | Creation and annihilation of non-volatile fixed magnetic skyrmions using voltage control of magnetic anisotropy. <i>Nature Electronics</i> , 2020 , 3, 539-545 | 28.4 | 31 |
| 190 | Observing the interplay between surface and bulk optical nonlinearities in thin van der Waals crystals. <i>Scientific Reports</i> , 2016 , 6, 22620 | 4.9 | 31 |
| 189 | Direct Mapping of Charge Distribution during Lithiation of Ge Nanowires Using Off-Axis Electron Holography. <i>Nano Letters</i> , 2016 , 16, 3748-53 | 11.5 | 31 |
| 188 | Proximity-Induced Magnetic Order in a Transferred Topological Insulator Thin Film on a Magnetic Insulator. <i>ACS Nano</i> , 2018 , 12, 5042-5050 | 16.7 | 31 |
| 187 | Exchange bias switching in an antiferromagnet/ferromagnet bilayer driven by spin-orbit torque. <i>Nature Electronics</i> , 2020 , 3, 757-764 | 28.4 | 30 |
| 186 | Joule Heating Effect on Field-Free Magnetization Switching by Spin-Orbit Torque in Exchange-Biased Systems. <i>Physical Review Applied</i> , 2017 , 7, | 4.3 | 29 |
| 185 | Atomic-Monolayer Two-Dimensional Lateral Quasi-Heterojunction Bipolar Transistors with Resonant Tunneling Phenomenon. <i>ACS Nano</i> , 2017 , 11, 11015-11023 | 16.7 | 29 |
| 184 | Normal-incidence epitaxial SiGeC photodetector near 1.3 μ m wavelength grown on Si substrate. <i>Applied Physics Letters</i> , 1996 , 69, 2330-2332 | 3.4 | 29 |
| 183 | Strong Electrical Manipulation of Spin-Orbit Torque in Ferromagnetic Heterostructures. <i>Advanced Electronic Materials</i> , 2016 , 2, 1600219 | 6.4 | 29 |

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|-----|---|------|----|
| 182 | Direct growth of MoS ₂ single crystals on polyimide substrates. <i>2D Materials</i> , 2017 , 4, 021028 | 5.9 | 27 |
| 181 | Magneto-electric tuning of the phase of propagating spin waves. <i>Applied Physics Letters</i> , 2012 , 101, 022409 | 3.4 | 27 |
| 180 | Coplanar waveguide radio frequency ferromagnetic parametric amplifier. <i>Applied Physics Letters</i> , 2008 , 93, 072509 | 3.4 | 27 |
| 179 | Effect of heavy metal layer thickness on spin-orbit torque and current-induced switching in Hf CoFeB MgO structures. <i>Applied Physics Letters</i> , 2016 , 109, 022403 | 3.4 | 27 |
| 178 | Voltage-controlled magnetoelectric memory and logic devices. <i>MRS Bulletin</i> , 2018 , 43, 970-977 | 3.2 | 27 |
| 177 | Exploring interfacial exchange coupling and sublattice effect in heavy metal/ferrimagnetic insulator heterostructures using Hall measurements, x-ray magnetic circular dichroism, and neutron reflectometry. <i>Physical Review B</i> , 2019 , 99, | 3.3 | 26 |
| 176 | 3D Band Diagram and Photoexcitation of 2D-3D Semiconductor Heterojunctions. <i>Nano Letters</i> , 2015 , 15, 5919-25 | 11.5 | 26 |
| 175 | Enhancing electric-field control of ferromagnetism through nanoscale engineering of high-T MnGe nanomesh. <i>Nature Communications</i> , 2016 , 7, 12866 | 17.4 | 26 |
| 174 | Influence of Edge Defects, Vacancies, and Potential Fluctuations on Transport Properties of Extremely Scaled Graphene Nanoribbons. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 3231-3238 | 2.9 | 26 |
| 173 | Diode-MTJ Crossbar Memory Cell Using Voltage-Induced Unipolar Switching for High-Density MRAM. <i>IEEE Electron Device Letters</i> , 2013 , 34, 753-755 | 4.4 | 26 |
| 172 | Engineering of tunnel junctions for prospective spin injection in germanium. <i>Applied Physics Letters</i> , 2009 , 94, 242104 | 3.4 | 26 |
| 171 | Field-Free Spin-Orbit Torque Switching of Perpendicular Magnetization by the Rashba Interface. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 39369-39375 | 9.5 | 24 |
| 170 | Chiral transport along magnetic domain walls in the quantum anomalous Hall effect. <i>Npj Quantum Materials</i> , 2017 , 2, | 5 | 24 |
| 169 | Spin-torque ferromagnetic resonance measurements utilizing spin Hall magnetoresistance in W/Co ₄₀ Fe ₄₀ B ₂₀ /MgO structures. <i>Applied Physics Letters</i> , 2016 , 109, 202404 | 3.4 | 24 |
| 168 | Deterministic Spin-Orbit Torque Switching by a Light-Metal Insertion. <i>Nano Letters</i> , 2020 , 20, 3703-3709 | 11.5 | 22 |
| 167 | Spin-Torque Driven Switching Probability Density Function Asymmetry. <i>IEEE Transactions on Magnetism</i> , 2012 , 48, 3818-3820 | 2 | 22 |
| 166 | Low-frequency noise in top-gated ambipolar carbon nanotube field effect transistors. <i>Applied Physics Letters</i> , 2008 , 92, 223114 | 3.4 | 21 |
| 165 | Ferrimagnetic Skyrmions in Topological Insulator/Ferrimagnet Heterostructures. <i>Advanced Materials</i> , 2020 , 32, e2003380 | 24 | 21 |

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|-----|--|------|----|
| 164 | Strain-Mediated Spin-Orbit-Torque Switching for Magnetic Memory. <i>Physical Review Applied</i> , 2018 , 10, | 4.3 | 21 |
| 163 | Topology-Dependent Brownian Gyromotion of a Single Skyrmion. <i>Physical Review Letters</i> , 2020 , 125, 027206 | 7.4 | 20 |
| 162 | Fast photoresponse and high detectivity in copper indium selenide (CuIn ₇ Se ₁₁) phototransistors. <i>2D Materials</i> , 2018 , 5, 015001 | 5.9 | 20 |
| 161 | Solid-Vapor Reaction Growth of Transition-Metal Dichalcogenide Monolayers. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 10656-61 | 16.4 | 20 |
| 160 | Deficiency of the bulk spin Hall effect model for spin-orbit torques in magnetic-insulator/heavy-metal heterostructures. <i>Physical Review B</i> , 2017 , 95, | 3.3 | 19 |
| 159 | Annealing effects on the microstructure of Ge/Si(001) quantum dots. <i>Applied Physics Letters</i> , 2001 , 79, 1258-1260 | 3.4 | 19 |
| 158 | Observation of carbon incorporation during gallium arsenide growth by molecular beam epitaxy. <i>Applied Physics Letters</i> , 1988 , 53, 2203-2204 | 3.4 | 19 |
| 157 | Voltage-Controlled Magnetic Tunnel Junctions for Processing-In-Memory Implementation. <i>IEEE Electron Device Letters</i> , 2018 , 39, 440-443 | 4.4 | 18 |
| 156 | Zero-field edge plasmons in a magnetic topological insulator. <i>Nature Communications</i> , 2017 , 8, 1836 | 17.4 | 18 |
| 155 | Chiral Symmetry Breaking for Deterministic Switching of Perpendicular Magnetization by Spin-Orbit Torque. <i>Nano Letters</i> , 2021 , 21, 515-521 | 11.5 | 18 |
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