

Rai Moriya

List of Publications by Year in descending order

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93
papers

4,648
citations

159585

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95266

68
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93
all docs

93
docs citations

93
times ranked

4320
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Current-Controlled Magnetic Domain-Wall Nanowire Shift Register. <i>Science</i> , 2008, 320, 209-211. | 12.6 | 620 |
| 2 | Oscillatory dependence of current-driven magnetic domain wall motion on current pulse length. <i>Nature</i> , 2006, 443, 197-200. | 27.8 | 395 |
| 3 | Dependence of Current and Field Driven Depinning of Domain Walls on Their Structure and Chirality in Permalloy Nanowires. <i>Physical Review Letters</i> , 2006, 97, 207205. | 7.8 | 339 |
| 4 | Direct observation of the coherent precession of magnetic domain walls propagating along permalloy nanowires. <i>Nature Physics</i> , 2007, 3, 21-25. | 16.7 | 285 |
| 5 | Influence of Current on Field-Driven Domain Wall Motion in Permalloy Nanowires from Time Resolved Measurements of Anisotropic Magnetoresistance. <i>Physical Review Letters</i> , 2006, 96, 197207. | 7.8 | 275 |
| 6 | Current Driven Domain Wall Velocities Exceeding the Spin Angular Momentum Transfer Rate in Permalloy Nanowires. <i>Physical Review Letters</i> , 2007, 98, 037204. | 7.8 | 240 |
| 7 | Directional control of spin-wave emission by spatially shaped light. <i>Nature Photonics</i> , 2012, 6, 662-666. | 31.4 | 219 |
| 8 | Dynamics of Magnetic Domain Walls Under Their Own Inertia. <i>Science</i> , 2010, 330, 1810-1813. | 12.6 | 192 |
| 9 | Effect of Optical Spin Injection on Ferromagnetically Coupled Mn Spins in the III-V Magnetic Alloy Semiconductor(Ga,Mn)As. <i>Physical Review Letters</i> , 2002, 88, 137202. | 7.8 | 157 |
| 10 | Resonant Amplification of Magnetic Domain-Wall Motion by a Train of Current Pulses. <i>Science</i> , 2007, 315, 1553-1556. | 12.6 | 136 |
| 11 | Cubic Rashba Spin-Orbit Interaction of a Two-Dimensional Hole Gas in a Strained- Ge/SiGe Quantum Well. <i>Physical Review Letters</i> , 2014, 113, 086601. | 7.8 | 110 |
| 12 | Large current modulation in exfoliated-graphene/MoS ₂ /metal vertical heterostructures. <i>Applied Physics Letters</i> , 2014, 105, . | 3.3 | 106 |
| 13 | Probing vortex-core dynamics using current-induced resonant excitation of a trapped domain wall. <i>Nature Physics</i> , 2008, 4, 368-372. | 16.7 | 105 |
| 14 | Electrical Spin Injection into Graphene through Monolayer Hexagonal Boron Nitride. <i>Applied Physics Express</i> , 2013, 6, 073001. | 2.4 | 92 |
| 15 | Suppression of exciton-exciton annihilation in tungsten disulfide monolayers encapsulated by hexagonal boron nitrides. <i>Physical Review B</i> , 2017, 95, . | 3.2 | 92 |
| 16 | Electric field modulation of Schottky barrier height in graphene/MoSe ₂ van der Waals heterointerface. <i>Applied Physics Letters</i> , 2015, 107, . | 3.3 | 78 |
| 17 | Magnetotransport study of temperature dependent magnetic anisotropy in a (Ga,Mn)As epilayer. <i>Journal of Applied Physics</i> , 2003, 94, 7657. | 2.5 | 69 |
| 18 | Enhanced stochasticity of domain wall motion in magnetic racetracks due to dynamic pinning. <i>Nature Communications</i> , 2010, 1, 25. | 12.8 | 66 |

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|----|--|------|-----------|
| 19 | Supercurrent in van der Waals Josephson junction. Nature Communications, 2016, 7, 10616. | 12.8 | 65 |
| 20 | Topological repulsion between domain walls in magnetic nanowires leading to the formation of bound states. Nature Communications, 2012, 3, 810. | 12.8 | 60 |
| 21 | Dry release transfer of graphene and few-layer h-BN by utilizing thermoplasticity of polypropylene carbonate. Npj 2D Materials and Applications, 2019, 3, . | 7.9 | 60 |
| 22 | Relation among concentrations of incorporated Mn atoms, ionized Mn acceptors, and holes in p-(Ga,Mn)As epilayers. Journal of Applied Physics, 2003, 93, 4603-4609. | 2.5 | 49 |
| 23 | Construction of van der Waals magnetic tunnel junction using ferromagnetic layered dichalcogenide. Applied Physics Letters, 2015, 107, . | 3.3 | 47 |
| 24 | Exfoliation and van der Waals heterostructure assembly of intercalated ferromagnet Cr _{1/3} TaS ₂ . 2D Materials, 2017, 4, 041007. | 4.4 | 41 |
| 25 | Assembly of van der Waals heterostructures: exfoliation, searching, and stacking of 2D materials. Japanese Journal of Applied Physics, 2020, 59, 010101. | 1.5 | 41 |
| 26 | Discrete Domain Wall Positioning Due to Pinning in Current Driven Motion along Nanowires. Nano Letters, 2011, 11, 96-100. | 9.1 | 40 |
| 27 | 3D Manipulation of 2D Materials Using Microdome Polymer. Nano Letters, 2020, 20, 2486-2492. | 9.1 | 38 |
| 28 | Tunneling transport in a few monolayer-thick WS ₂ /graphene heterojunction. Applied Physics Letters, 2014, 105, . | 3.3 | 36 |
| 29 | Dynamics of domain wall depinning driven by a combination of direct and pulsed currents. Applied Physics Letters, 2008, 92, . | 3.3 | 32 |
| 30 | Tunnel spin injection into graphene using Al ₂ O ₃ barrier grown by atomic layer deposition on functionalized graphene surface. Journal of Magnetism and Magnetic Materials, 2012, 324, 849-852. | 2.3 | 31 |
| 31 | N- and p-type carrier injections into WSe ₂ with van der Waals contacts of two-dimensional materials. Japanese Journal of Applied Physics, 2017, 56, 04CK09. | 1.5 | 31 |
| 32 | Edge-channel interferometer at the graphene quantum Hall pn junction. Applied Physics Letters, 2015, 106, . | 3.3 | 29 |
| 33 | Dependence of field driven domain wall velocity on cross-sectional area in Ni ₆₅ Fe ₂₀ Co ₁₅ nanowires. Applied Physics Letters, 2010, 97, . | 3.3 | 27 |
| 34 | Modulation of Schottky barrier height in graphene/MoS ₂ /metal vertical heterostructure with large current ON/OFF ratio. Japanese Journal of Applied Physics, 2015, 54, 04DJ04. | 1.5 | 27 |
| 35 | Influence of the density of states of graphene on the transport properties of graphene/MoS ₂ /metal vertical field-effect transistors. Applied Physics Letters, 2015, 106, . | 3.3 | 26 |
| 36 | Contribution of Shape Anisotropy to the Magnetic Configuration of (Ga, Mn)As. Japanese Journal of Applied Physics, 2004, 43, L306-L308. | 1.5 | 25 |

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|----|---|------|-----------|
| 37 | Real time observation of the field driven periodic transformation of domain walls in Permalloy nanowires at the Larmor frequency and its first harmonic. Applied Physics Letters, 2008, 92, 112510. | 3.3 | 24 |
| 38 | Current-Induced Magnetization Reversal in a (Ga,Mn)As-Based Magnetic Tunnel Junction. Japanese Journal of Applied Physics, 2004, 43, L825-L827. | 1.5 | 22 |
| 39 | Superconducting proximity effect in a $\text{Nb}/\text{S}_2/\text{Pt}$ van der Waals junction. Physical Review B, 2020, 101, . | | |
| 40 | Thermal-magnetic noise measurement of spin-torque effects on ferromagnetic resonance in MgO-based magnetic tunnel junctions. Applied Physics Letters, 2009, 95, . | 3.3 | 17 |
| 41 | Nonlocal spin transport in single-walled carbon nanotube networks. Physical Review B, 2012, 85, . | 3.2 | 16 |
| 42 | Hexagonal Boron Nitride Synthesized at Atmospheric Pressure Using Metal Alloy Solvents: Evaluation as a Substrate for 2D Materials. Nano Letters, 2020, 20, 735-740. | 9.1 | 16 |
| 43 | Resonant Tunneling Due to van der Waals Quantum-Well States of Few-Layer WSe_2 in $\text{WSe}_2/\text{h-BN}/\text{p}^+\text{-MoS}_2$ Junction. Nano Letters, 2021, 21, 3929-3934. | 9.1 | 16 |
| 44 | Formation of quantized states and spin dynamics in In_xV -based ferromagnetic quantum wells. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 2016-2017. | 2.3 | 15 |
| 45 | Spin injection into multilayer graphene from highly spin-polarized Co_2FeSi Heusler alloy. Applied Physics Express, 2016, 9, 063006. | 2.4 | 15 |
| 46 | Carbon-Rich Domain in Hexagonal Boron Nitride: Carrier Mobility Degradation and Anomalous Bending of the Landau Fan Diagram in Adjacent Graphene. Nano Letters, 2019, 19, 7282-7286. | 9.1 | 15 |
| 47 | Emergence of orbital angular moment at van Hove singularity in graphene/h-BN moiré superlattice. Nature Communications, 2020, 11, 5380. | 12.8 | 15 |
| 48 | Optical coupling between atomically thin black phosphorus and a two dimensional photonic crystal nanocavity. Applied Physics Letters, 2017, 110, . | 3.3 | 13 |
| 49 | Reducing spin torque switching current density by boron insertion into a CoFeB free layer of a magnetic tunnel junction. Applied Physics Letters, 2012, 100, 172407. | 3.3 | 10 |
| 50 | Photo-thermoelectric detection of cyclotron resonance in asymmetrically carrier-doped graphene two-terminal device. Applied Physics Letters, 2018, 113, . | 3.3 | 10 |
| 51 | Carbon annealed HPHT-hexagonal boron nitride: Exploring defect levels using 2D materials combined through van der Waals interface. Carbon, 2020, 167, 785-791. | 10.3 | 10 |
| 52 | Preparation and magneto-optical property of highly-resistive (Ga,Fe)As epilayers. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 10, 224-228. | 2.7 | 9 |
| 53 | Control of magnetic anisotropy and magnetotransport in epitaxial micropatterned (Ga,Mn)As wire structures. IEEE Transactions on Magnetics, 2003, 39, 2785-2787. | 2.1 | 9 |
| 54 | Cyclotron Resonance Study of Monolayer Graphene under Double Moiré Potentials. Nano Letters, 2020, 20, 4566-4572. | 9.1 | 9 |

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|----|--|-----|-----------|
| 55 | Low-temperature p-type ohmic contact to WSe ₂ using p+-MoS ₂ /WSe ₂ van der Waals interface. Applied Physics Letters, 2020, 117, . | 3.3 | 8 |
| 56 | Fabrication of Single-Electron Transistor Composed of a Self-Assembled Quantum Dot and Nanogap Electrode by Atomic Force Microscope Local Oxidation. Applied Physics Express, 2010, 3, 035001. | 2.4 | 7 |
| 57 | Rhenium dinitride: Carrier transport in a novel transition metal dinitride layered crystal. APL Materials, 2019, 7, 101103. | 5.1 | 7 |
| 58 | Resonant Tunneling between Quantized Subbands in van der Waals Double Quantum Well Structure Based on Few-Layer WSe ₂ . Nano Letters, 2022, 22, 4640-4645. | 9.1 | 7 |
| 59 | Switchable out-of-plane shift current in ferroelectric two-dimensional material CuInP ₂ S ₆ . Applied Physics Letters, 2022, 120, 013103. | 3.3 | 6 |
| 60 | Preparation of quaternary magnetic alloy semiconductor epilayers (Ga,Mn,Fe)As. Journal of Crystal Growth, 2002, 237-239, 1344-1348. | 1.5 | 5 |
| 61 | Photo-Nernst detection of cyclotron resonance in partially irradiated graphene. Applied Physics Letters, 2019, 115, 153102. | 3.3 | 5 |
| 62 | Subband-resolved momentum-conserved resonant tunneling in monolayer graphene/h-BN/ABA-trilayer graphene small-twist-angle tunneling device. Applied Physics Letters, 2022, 120, 083102. | 3.3 | 5 |
| 63 | Characteristics of molecular beam epitaxy-grown GaFeAs. Current Applied Physics, 2002, 2, 379-382. | 2.4 | 4 |
| 64 | Spin Relaxation in Weak Localization Regime in Multilayer Graphene Spin Valves. Japanese Journal of Applied Physics, 2013, 52, 040205. | 1.5 | 4 |
| 65 | Edge-Channel Transport of Dirac Fermions in Graphene Quantum Hall Junctions. Journal of the Physical Society of Japan, 2015, 84, 121007. | 1.6 | 4 |
| 66 | (Invited) Vertical Field Effect Transistor Based on Graphene/Transition Metal Dichalcogenide Van Der Waals Heterostructure. ECS Transactions, 2015, 69, 357-363. | 0.5 | 4 |
| 67 | Electrical Control of Cyclotron Resonance in Dual-Gated Trilayer Graphene. Nano Letters, 2019, 19, 8097-8102. | 9.1 | 4 |
| 68 | Selective etching of hexagonal boron nitride by high-pressure CF ₄ plasma for individual one-dimensional ohmic contacts to graphene layers. Applied Physics Letters, 2020, 117, . | 3.3 | 4 |
| 69 | Effect of a pick-and-drop process on optical properties of a CVD-grown monolayer tungsten disulfide. Physical Review Materials, 2018, 2, . | 2.4 | 4 |
| 70 | Title is missing!. Journal of Superconductivity and Novel Magnetism, 2003, 16, 439-442. | 0.5 | 3 |
| 71 | Anisotropic Magnetotransport due to Uniaxial Magnetic Anisotropy in (Ga,Mn)As Wires. IEEE Transactions on Magnetics, 2004, 40, 2682-2684. | 2.1 | 3 |
| 72 | Photo-induced magnetization rotation in III-V ferromagnetic alloy semiconductor quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 987-990. | 2.7 | 3 |

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|----|---|-----|-----------|
| 73 | Heat transfer at the van der Waals interface between graphene and NbSe ₂ . Physical Review B, 2018, 98, . | 3.2 | 3 |
| 74 | Mid-infrared Photodetection Using Cyclotron Resonance in Graphene/h-BN van der Waals Heterostructures. Sensors and Materials, 2019, 31, 2281. | 0.5 | 3 |
| 75 | Correlation between ferromagnetism and hole localization in very thin (Ga,Mn)As epilayers. Journal of Applied Physics, 2005, 97, 10D301. | 2.5 | 2 |
| 76 | Generation of local magnetic fields at megahertz rates for the study of domain wall propagation in magnetic nanowires. Applied Physics Letters, 2009, 95, 262503. | 3.3 | 2 |
| 77 | Mid-infrared photoresponse of graphene nanoribbon bolometer. Japanese Journal of Applied Physics, 2014, 53, 035101. | 1.5 | 2 |
| 78 | Magnetization Reversal by Electrical Spin Injection in Ferromagnetic (Ga,Mn)As-Based Magnetic Tunnel Junctions. Journal of Superconductivity and Novel Magnetism, 2005, 18, 3-7. | 0.5 | 1 |
| 79 | Oscillatory dependence of current driven domain wall motion on current pulse length. , 2006, , . | | 1 |
| 80 | Cross-Sectional Transmission Electron Microscopy Analysis of Nanogap Electrode Fabricated by Atomic Force Microscope Local Oxidation. Japanese Journal of Applied Physics, 2013, 52, 055201. | 1.5 | 1 |
| 81 | Detection of cyclotron resonance using photo-induced thermionic emission at graphene/MoS ₂ van der Waals interface. Applied Physics Letters, 2019, 115, 143101. | 3.3 | 1 |
| 82 | Excitation and Control of Spin Wave by Light Pulses. Springer Proceedings in Physics, 2015, , 80-82. | 0.2 | 1 |
| 83 | Defect-assisted tunneling spectroscopy of electronic band structure in twisted bilayer graphene/hexagonal boron nitride moiré superlattices. Applied Physics Letters, 2022, 120, 203103. | 3.3 | 1 |
| 84 | Control of magnetic features in epitaxial micro-patterned (Ga,Mn)As wire structures. , 0, , . | | 0 |
| 85 | Cross-sectional transmission electron microscopy analysis of a single self-assembled quantum dot single electron transistor fabricated by atomic force microscope local oxidation. Japanese Journal of Applied Physics, 2014, 53, 045202. | 1.5 | 0 |
| 86 | Graphene-based Mid-infrared Photodetectors and Spin Transport Devices. Journal of the Vacuum Society of Japan, 2014, 57, 451-456. | 0.3 | 0 |
| 87 | Coherent Carrier Transport in Graphene npn Junctions. Hyomen Kagaku, 2015, 36, 124-128. | 0.0 | 0 |
| 88 | van der Waals junctions of layered 2D materials for functional devices. , 2015, , . | | 0 |
| 89 | Graphene/transition metal dichalcogenide/metal vertical heterostructure transistor with large current ON/OFF ratio. , 2015, , . | | 0 |
| 90 | Fundamental properties of Fe-based III-V magnetic alloy semiconductor (Ga,Fe)As. Springer Proceedings in Physics, 2001, , 258-259. | 0.2 | 0 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 91 | Spin Logic Devices. , 2016, , 764-779. | | 0 |
| 92 | Probing many-body interactions in the cyclotron resonance of $\text{hBN/bilayer graphene/}$ hBN . Physical Review B, 2021, 104, . | 3.2 | 0 |
| 93 | Evaluation of polyvinyl chloride adhesion to 2D crystal flakes. Npj 2D Materials and Applications, 2022, 6, . | 7.9 | 0 |