

# Sebastian Goennenwein

## List of Publications by Year in descending order

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131  
papers

10,828  
citations

36303

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30087

103  
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135  
all docs

135  
docs citations

135  
times ranked

7996  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Giant anomalous Hall effect in a ferromagnetic kagome-lattice semimetal. <i>Nature Physics</i> , 2018, 14, 1125-1131.  | 16.7 | 876       |
| 2  | Spin Hall Magnetoresistance Induced by a Nonequilibrium Proximity Effect. <i>Physical Review Letters</i> , 2013, 110, 206601.  | 7.8  | 867       |
| 3  | A spin triplet supercurrent through the half-metallic ferromagnet CrO <sub>2</sub> . <i>Nature</i> , 2006, 439, 825-827.   | 27.8 | 663       |
| 4  | Theory of spin Hall magnetoresistance. <i>Physical Review B</i> , 2013, 87, .  | 3.2  | 615       |
| 5  | High Cooperativity in Coupled Microwave Resonator Ferrimagnetic Insulator Hybrids. <i>Physical Review Letters</i> , 2013, 111, 127003.                                     | 7.8  | 562       |
| 6  | Quantitative study of the spin Hall magnetoresistance in ferromagnetic insulator/normal metal hybrids. <i>Physical Review B</i> , 2013, 87, .                              | 3.2  | 422       |
| 7  | Elastically Driven Ferromagnetic Resonance in Nickel Thin Films. <i>Physical Review Letters</i> , 2011, 106, 117601.   | 7.8  | 278       |
| 8  | Experimental Test of the Spin Mixing Interface Conductivity Concept. <i>Physical Review Letters</i> , 2013, 111, 176601.   | 7.8  | 268       |
| 9  | Scaling Behavior of the Spin Pumping Effect in Ferromagnet-Platinum Bilayers. <i>Physical Review Letters</i> , 2011, 107, 046601.  | 7.8  | 232       |
| 10 | Local Charge and Spin Currents in Magnetothermal Landscapes. <i>Physical Review Letters</i> , 2012, 108, 106602.   | 7.8  | 225       |
| 11 | Spin Pumping with Coherent Elastic Waves. <i>Physical Review Letters</i> , 2012, 108, 176601.  | 7.8  | 203       |
| 12 | Surface acoustic wave driven ferromagnetic resonance in nickel thin films: Theory and experiment. <i>Physical Review B</i> , 2012, 86, .                                   | 3.2  | 200       |
| 13 | Magnon, phonon, and electron temperature profiles and the spin Seebeck effect in magnetic insulator/normal metal hybrid structures. <i>Physical Review B</i> , 2013, 88, . | 3.2  | 179       |
| 14 | Exchange magnon-polaritons in microwave cavities. <i>Physical Review B</i> , 2015, 91, .   | 3.2  | 165       |
| 15 | Electric field controlled manipulation of the magnetization in Ni/BaTiO <sub>3</sub> hybrid structures. <i>Applied Physics Letters</i> , 2010, 96, .                       | 3.3  | 158       |
| 16 | Origin of the spin Seebeck effect in compensated ferrimagnets. <i>Nature Communications</i> , 2016, 7, 10452.  | 12.8 | 154       |
| 17 | Voltage controlled inversion of magnetic anisotropy in a ferromagnetic thin film at room temperature. <i>New Journal of Physics</i> , 2009, 11, 013021.                    | 2.9  | 145       |
| 18 | Spin Hall magnetoresistance in antiferromagnet/heavy-metal heterostructures. <i>Physical Review B</i> , 2018, 97, .  | 3.2  | 140       |

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|----|--|------|-----------|
| 19 | Observation of the spin Nernst effect. Nature Materials, 2017, 16, 977-981.  | 27.5 | 137       |
| 20 | Epitaxial $\text{ZnO}$ thin films: A spintronic material with tunable electrical and magnetic properties. Physical Review B, 2009, 79, .                                   | 3.2  | 134       |
| 21 | Non-local magnetoresistance in YIG/Pt nanostructures. Applied Physics Letters, 2015, 107, .  | 3.3  | 131       |
| 22 | Femtosecond formation dynamics of the spin Seebeck effect revealed by terahertz spectroscopy. Nature Communications, 2018, 9, 2899.  | 12.8 | 131       |
| 23 | Spin-Torque Excitation of Perpendicular Standing Spin Waves in Coupled $\text{YIG}/\text{Co}$ Heterostructures. Physical Review Letters, 2018, 120, 127201.                | 7.8  | 130       |
| 24 | DX-behavior of Si in AlN. Physical Review B, 2000, 61, R16283-R16286.  | 3.2  | 123       |
| 25 | Investigation of induced Pt magnetic polarization in Pt/Y <sub>3</sub> Fe <sub>5</sub> O <sub>12</sub> bilayers. Applied Physics Letters, 2012, 101, .                     | 3.3  | 113       |
| 26 | <i>In situ</i> manipulation of magnetic anisotropy in magnetite thin films. Physical Review B, 2008, 77, .   | 3.2  | 96        |
| 27 | Large anomalous Nernst effect in thin films of the Weyl semimetal Co <sub>2</sub> MnGa. Applied Physics Letters, 2018, 113, .  | 3.3  | 92        |
| 28 | Advanced spectroscopic synchrotron techniques to unravel the intrinsic properties of dilute magnetic oxides: the case of Co:ZnO. New Journal of Physics, 2010, 12, 013020. | 2.9  | 89        |
| 29 | Longitudinal spin Seebeck effect contribution in transverse spin Seebeck effect experiments in Pt/YIG and Pt/NFO. Nature Communications, 2015, 6, 8211.                    | 12.8 | 87        |
| 30 | Spin wave resonance in Ga <sub>1-x</sub> MnxAs. Applied Physics Letters, 2003, 82, 730-732.  | 3.3  | 86        |
| 31 | Temperature dependent spin transport properties of platinum inferred from spin Hall magnetoresistance measurements. Applied Physics Letters, 2014, 104, .                  | 3.3  | 84        |
| 32 | Prospects for carrier-mediated ferromagnetism in GaN. Physica Status Solidi (B): Basic Research, 2003, 239, 277-290.   | 1.5  | 83        |
| 33 | Current heating induced spin Seebeck effect. Applied Physics Letters, 2013, 103, .   | 3.3  | 82        |
| 34 | Spin-glass-like behavior of Ge:Mn. Physical Review B, 2006, 74, .  | 3.2  | 78        |
| 35 | Exchange-Enhanced Ultrastrong Magnon-Magnon Coupling in a Compensated Ferrimagnet. Physical Review Letters, 2019, 123, 117204.   | 7.8  | 77        |
| 36 | Magnon-based logic in a multi-terminal YIG/Pt nanostructure. Applied Physics Letters, 2016, 109, .   | 3.3  | 74        |



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|----|---|-----|-----------|
| 55 | Electroelastic Hyperfine Tuning of Phosphorus Donors in Silicon. Physical Review Letters, 2011, 106, 037601.  | 7.8 | 48        |
| 56 | Novel multifunctional materials based on oxide thin films and artificial heteroepitaxial multilayers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 232-251. | 1.8 | 47        |
| 57 | Large Spin Hall Magnetoresistance in Antiferromagnetic $\text{Pt}/\text{Fe}/\text{Pt}$ Multilayers. Physical Review Letters, 2010, 105, 087203.   | 3.2 | 47        |
| 58 | Converse magnetoelectric effects in $\text{Fe}/\text{Pt}$ multilayers. Physical Review Letters, 2010, 105, 087203.  | 3.2 | 42        |
| 59 | Magnon Mode Selective Spin Transport in Compensated Ferrimagnets. Nano Letters, 2017, 17, 3334-3340.  | 9.1 | 42        |
| 60 | Gilbert damping of magnetostatic modes in a yttrium iron garnet sphere. Applied Physics Letters, 2017, 110, .   | 3.3 | 42        |
| 61 | Quantitative study of magnetotransport through a (Ga,Mn)As single ferromagnetic domain. Physical Review B, 2005, 71, .  | 3.2 | 41        |
| 62 | Thickness dependence of the anomalous Nernst effect and the Mott relation of Weyl semimetal thin films. Physical Review B, 2020, 101, .   | 3.2 | 40        |
| 63 | Piezoelectric voltage control of magnetization orientation in a ferromagnetic semiconductor. Physica Status Solidi - Rapid Research Letters, 2008, 2, 96-98.                            | 2.4 | 38        |
| 64 | Time resolved spin Seebeck effect experiments. Applied Physics Letters, 2014, 104, 202410.  | 3.3 | 38        |
| 65 | Zinc oxide "From dilute magnetic doping to spin transport. Physica Status Solidi (B): Basic Research, 2014, 251, 1700-1709.   | 1.5 | 37        |
| 66 | Combined Brillouin light scattering and microwave absorption study of magnon-photon coupling in a split-ring resonator/YIG film system. Applied Physics Letters, 2016, 109, .           | 3.3 | 37        |
| 67 | Spin-wave resonances and surface spin pinning in $\text{GaMnAs}$ thin films. Physical Review B, 2009, 79, .   | 3.2 | 35        |
| 68 | High cooperativity coupling between a phosphorus donor spin ensemble and a superconducting microwave resonator. Applied Physics Letters, 2015, 107, .                                   | 3.3 | 34        |
| 69 | Passivation of Mn acceptors in GaMnAs. Applied Physics Letters, 2004, 84, 2277-2279.  | 3.3 | 32        |
| 70 | Topological Hall effect in thin films of $\text{Mn}/\text{Pt}$ multilayers. Physical Review Materials, 2019, 3, .   | 3.2 | 32        |
| 71 | Giant magnetic anisotropy changes in $\text{Sr}_2\text{CrReO}_6$ thin films on $\text{BaTiO}_3$ . Applied Physics Letters, 2009, 95, 062508.  | 3.3 | 30        |
| 72 | Impact of the interface quality of $\text{Pt}/\text{YIG}(111)$ hybrids on their spin Hall magnetoresistance. Applied Physics Letters, 2017, 110, .                                      | 3.3 | 30        |

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|----|---|-----|-----------|
| 73 | Control of Nonlocal Magnon Spin Transport via Magnon Drift Currents. Physical Review Letters, 2021, 126, 257201.  | 7.8 | 30        |
| 74 | Magnetic anisotropy of Ga <sub>1-x</sub> Mn <sub>x</sub> As thin films on GaAs (311)A probed by ferromagnetic resonance. Applied Physics Letters, 2006, 89, 012507.                           | 3.3 | 29        |
| 75 | All oxide ferromagnet/semiconductor epitaxial heterostructures. Applied Physics Letters, 2008, 93, 162510.  | 3.3 | 29        |
| 76 | Efficient spin transport through native oxides of nickel and permalloy with platinum and gold overlayers. Physical Review B, 2016, 93, .  | 3.2 | 29        |
| 77 | Spin Seebeck effect at microwave frequencies. Physical Review B, 2016, 93, .  | 3.2 | 28        |
| 78 | Spin Hall magnetoresistance in the non-collinear ferrimagnet GdIG close to the compensation temperature. Journal of Physics Condensed Matter, 2018, 30, 035802.                               | 1.8 | 28        |
| 79 | Tunable magnon-photon coupling in a compensating ferrimagnet from weak to strong coupling. Applied Physics Letters, 2017, 110, .  | 3.3 | 27        |
| 80 | Temperature dependence of the non-local spin Seebeck effect in YIG/Pt nanostructures. AIP Advances, 2017, 7, .  | 1.3 | 27        |
| 81 | Electrically detected ferromagnetic resonance. Applied Physics Letters, 2007, 90, 162507.   | 3.3 | 26        |
| 82 | Spin transport and spin dephasing in zinc oxide. Applied Physics Letters, 2012, 101, 082404.  | 3.3 | 26        |
| 83 | Antiferromagnetic resonance detected by direct current voltages in MnF <sub>2</sub> /Pt bilayers. Journal of Applied Physics, 2015, 118, .  | 2.5 | 25        |
| 84 | Helimagnon Resonances in an Intrinsic Chiral Magnonic Crystal. Physical Review Letters, 2017, 119, 237204.  | 7.8 | 25        |
| 85 | Multiferroic materials based on artificial thin film heterostructures. Philosophical Magazine Letters, 2007, 87, 141-154.   | 1.2 | 24        |
| 86 | Signatures of the Magnetic Entropy in the Thermopower Signals in Nanoribbons of the Magnetic Weyl Semimetal Co <sub>3</sub> Sn <sub>2</sub> S <sub>2</sub> . Nano Letters, 2020, 20, 300-305. | 9.1 | 23        |
| 87 | Planar Hall effect and magnetic anisotropy in epitaxially strained chromium dioxide thin films. Applied Physics Letters, 2007, 90, 142509.  | 3.3 | 22        |
| 88 | Magnetoresistance and anomalous Hall effect in micro-ribbons of the magnetic Weyl semimetal Co <sub>3</sub> Sn <sub>2</sub> S <sub>2</sub> . Applied Physics Letters, 2019, 114, .            | 3.3 | 22        |
| 89 | Spin-dependent transport in elemental and compound semiconductors and nanostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2056-2093.                     | 0.8 | 21        |
| 90 | Magnetic and Electronic Properties of Weyl Semimetal Co <sub>2</sub> MnGa Thin Films. Nanomaterials, 2021, 11, 251.   | 4.1 | 21        |

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|-----|--|-----|-----------|
| 91  | Generation of recombination noise of DX centers in AlN:Si. Applied Physics Letters, 2001, 79, 2396-2398.   | 3.3 | 20        |
| 92  | Ferromagnetism in epitaxial Zn <sub>0.95</sub> Co <sub>0.05</sub> O films grown on ZnO and Al <sub>2</sub> O <sub>3</sub> . Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3581-3596.  | 1.8 | 20        |
| 93  | Magnetocrystalline anisotropy and magnetization reversal in Ga <sub>1-x</sub> MnxP synthesized by ion implantation and pulsed-laser melting. Physical Review B, 2007, 75, .                                      | 3.2 | 20        |
| 94  | Spin Hall noise. Physical Review B, 2014, 90, .  | 3.2 | 20        |
| 95  | Spin Hall magnetoimpedance. Physical Review B, 2014, 90, .   | 3.2 | 16        |
| 96  | 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        |
| 97  | Angle-dependent spin-wave resonance spectroscopy of (Ga,Mn)As films. Physical Review B, 2013, 87, .  | 3.2 | 15        |
| 98  | Giant magnetoelastic effects in BaTiO <sub>3</sub> -based extrinsic multiferroic hybrids. Physical Review B, 2012, 86, .   | 3.2 | 14        |
| 99  | Theoretical model for torque differential magnetometry of single-domain magnets. Physical Review B, 2014, 89, .  | 3.2 | 14        |
| 100 | All Electrical Access to Topological Transport Features in Mn <sub>1.8</sub> PtSn Films. Nano Letters, 2019, 19, 2366-2370.  | 9.1 | 14        |
| 101 | Spin Hall magnetoresistance in heterostructures consisting of noncrystalline paramagnetic YIG and Pt. Applied Physics Letters, 2019, 114, .  | 3.3 | 13        |
| 102 | Local and nonlocal spin Seebeck effect in lateral Pt/Cr <sub>2</sub> O <sub>3</sub> /Pt devices at low temperatures. APL Materials, 2021, 9, .   | 5.1 | 13        |
| 103 | Magnetization dynamics affected by phonon pumping. Physical Review B, 2022, 106, .   | 3.2 | 13        |
| 104 | Phase Diagram of the Electron-Doped La <sub>2-x</sub> Ce <sub>x</sub> CuO <sub>4</sub> Cuprate Superconductor from Andreev Bound States at Grain Boundary Junctions. Physical Review Letters, 2008, 100, 227001. | 7.8 | 12        |
| 105 | Microscopic Identification of the Origin of Generation-Recombination Noise in Hydrogenated Amorphous Silicon with Noise-Detected Magnetic Resonance. Physical Review Letters, 2000, 84, 5188-5191.               | 7.8 | 11        |
| 106 | Magneto-optical imaging of elastic strain-controlled magnetization reorientation. European Physical Journal B, 2012, 85, 1.  | 1.5 | 11        |
| 107 | Spin Pumping and Spin Currents in Magnetic Insulators. Solid State Physics, 2013, 64, 123-156.   | 0.5 | 11        |
| 108 | Role of Magnetic Exchange Interactions in Chiral-Type Hall Effects of Epitaxial Mn <sub>x</sub> PtSn Films. ACS Applied Electronic Materials, 2021, 3, 1323-1333.  | 4.3 | 11        |

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|-----|---|-----|-----------|
| 109 | Ferromagnetic Resonance in $\text{Ga}_{1-x}\text{Mn}_x\text{As}$ . Journal of Superconductivity and Novel Magnetism, 2003, 16, 75-78.   | 0.5 | 9         |
| 110 | Suppression of hole-mediated ferromagnetism in $\text{Ga}_{1-x}\text{Mn}_x\text{P}$ by hydrogen. Journal of Applied Physics, 2008, 104, 013908.   | 2.5 | 9         |
| 111 | Magnetic microstructure and magnetotransport in $\text{Co}_2\text{FeAl}$ Heusler compound thin films. Applied Physics Letters, 2011, 98, 042501.  | 3.3 | 9         |
| 112 | Spin injection into silicon detected by broadband ferromagnetic resonance spectroscopy. Applied Physics Letters, 2017, 110, 182402.   | 3.3 | 9         |
| 113 | Anomalous spin Hall angle of a metallic ferromagnet determined by a multiterminal spin injection/detection device. Applied Physics Letters, 2019, 115, .  | 3.3 | 9         |
| 114 | Spin-hall-active platinum thin films grown via atomic layer deposition. Applied Physics Letters, 2018, 112, .   | 3.3 | 8         |
| 115 | Static magnetic proximity effects and spin Hall magnetoresistance in $\text{Pt}/\text{Y}_3\text{Fe}_5\text{O}_{12}$ and inverted $\text{Y}_3\text{Fe}_5\text{O}_{12}/\text{Pt}$ bilayers. Physical Review B, 2020, 102, . | 3.2 | 8         |
| 116 | A versatile platform for magnetostriction measurements in thin films. Journal of Applied Physics, 2016, 119, .  | 2.5 | 6         |
| 117 | Focused ion beam modification of non-local magnon-based transport in yttrium iron garnet/platinum heterostructures. Applied Physics Letters, 2019, 114, 252401.   | 3.3 | 6         |
| 118 | Atomic layer deposition of yttrium iron garnet thin films. Physical Review Materials, 2022, 6, .  | 2.4 | 6         |
| 119 | Electron spin resonance of $\text{Zn}_{1-x}\text{Mg}_x\text{O}$ thin films grown by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2010, 97, 092102.  | 3.3 | 5         |
| 120 | Detection of DC currents and resistance measurements in longitudinal spin Seebeck effect experiments on $\text{Pt}/\text{YIG}$ and $\text{Pt}/\text{NFO}$ . AIP Advances, 2016, 6, .                                      | 1.3 | 5         |
| 121 | Experimental observation of an enhanced anisotropic magnetoresistance in non-local configuration. Applied Physics Letters, 2011, 99, 142112.  | 3.3 | 4         |
| 122 | Anisotropic magnetothermal transport in $\text{Co}_{1-x}\text{Mn}_x\text{O}$ thin films. Physical Review B, 2021, 104, .  | 3.2 | 4         |
| 123 | Local tunneling magnetoresistance probed by low-temperature scanning laser microscopy. Applied Physics Letters, 2011, 99, 182513.   | 3.3 | 3         |
| 124 | An all-electrical torque differential magnetometer operating under ambient conditions. European Physical Journal B, 2015, 88, 1.  | 1.5 | 3         |
| 125 | Spin Current in an Antiferromagnet is Coherent. Physics Magazine, 2020, 13, .   | 0.1 | 3         |
| 126 | Magnetocrystalline anisotropies in $\text{Mn}_x\text{PtSn}$ thin films. APL Materials, 2021, 9, .   | 5.1 | 3         |



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|-----|--|-----|-----------|
| 127 | Pure spin current transport in gallium doped zinc oxide. Applied Physics Letters, 2017, 110, 052403.                                     | 3.3 | 2         |
| 128 | Nonlocal magnon-based transport in yttrium-iron-garnetâ€“platinum heterostructures at high temperatures. Physical Review B, 2021, 103, . | 3.2 | 2         |
| 129 | Electrical Signal Picks Up a Magnetâ€™s Heartbeat. Physics Magazine, 2015, 8, .  | 0.1 | 1         |
| 130 | Prospects for Carrier-Mediated Ferromagnetism in GaN. ChemInform, 2004, 35, no.  | 0.0 | 0         |
| 131 | TEM studies of cobalt-doped zinc oxide films. , 0, , 623-624.  |     | 0         |