

# HÃ©lÃ¨ne BÃ©a

## List of Publications by Year in descending order

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44  
papers

3,402  
citations

257101

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45  
docs citations

45  
times ranked

3995  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Influence of parasitic phases on the properties of BiFeO <sub>3</sub> epitaxial thin films. Applied Physics Letters, 2005, 87, 072508.   | 1.5  | 369       |
| 2  | Evidence for Room-Temperature Multiferroicity in a Compound with a Giant Axial Ratio. Physical Review Letters, 2009, 102, 217603.  | 2.9  | 331       |
| 3  | Spintronics with multiferroics. Journal of Physics Condensed Matter, 2008, 20, 434221.   | 0.7  | 306       |
| 4  | Fractal Dimension and Size Scaling of Domains in Thin Films of Multiferroic $\text{BiFeO}_3$ . Physical Review Letters, 2008, 100, 027602.   | 2.9  | 270       |
| 5  | Mechanisms of Exchange Bias with Multiferroic $\text{BiFeO}_3$ Epitaxial Thin Films. Physical Review Letters, 2008, 100, 017204.   | 2.9  | 250       |
| 6  | Structural distortion and magnetism of BiFeO <sub>3</sub> epitaxial thin films: A Raman spectroscopy and neutron diffraction study. Philosophical Magazine Letters, 2007, 87, 165-174.   | 0.5  | 207       |
| 7  | Investigation on the origin of the magnetic moment of BiFeO <sub>3</sub> thin films by advanced x-ray characterizations. Physical Review B, 2006, 74, .  | 1.1  | 197       |
| 8  | The Skyrmion Switch: Turning Magnetic Skyrmion Bubbles on and off with an Electric Field. Nano Letters, 2017, 17, 3006-3012.   | 4.5  | 181       |
| 9  | Large-Voltage Tuning of Dzyaloshinskii-Moriya Interactions: A Route toward Dynamic Control of Skyrmion Chirality. Nano Letters, 2018, 18, 4871-4877.   | 4.5  | 173       |
| 10 | Tunnel magnetoresistance and robust room temperature exchange bias with multiferroic BiFeO <sub>3</sub> epitaxial thin films. Applied Physics Letters, 2006, 89, 242114.   | 1.5  | 149       |
| 11 | Creation of Magnetic Skyrmion Bubble Lattices by Ultrafast Laser in Ultrathin Films. Nano Letters, 2018, 18, 7362-7371.  | 4.5  | 103       |
| 12 | Combining half-metals and multiferroics into epitaxial heterostructures for spintronics. Applied Physics Letters, 2006, 88, 062502.  | 1.5  | 100       |
| 13 | Irradiation-induced Ag nanocluster nucleation in silicate glasses: Analogy with photography. Physical Review B, 2007, 76, .  | 1.1  | 79        |
| 14 | A way forward along domain walls. Nature Materials, 2009, 8, 168-169.  | 13.3 | 66        |
| 15 | Penetration depth and absorption mechanisms of spin currents in Ir <sub>20</sub> Mn <sub>80</sub> and Fe <sub>50</sub> Mn <sub>50</sub> polycrystalline films by ferromagnetic resonance and spin pumping. Applied Physics Letters, 2014, 104, 032406. | 1.5  | 61        |
| 16 | Thickness-dependent structural and electrical properties of multiferroic Mn-doped BiFeO <sub>3</sub> thin films grown epitaxially by pulsed laser deposition. Applied Physics Letters, 2008, 93, 082902.   | 1.5  | 60        |
| 17 | Crystallographic, magnetic, and ferroelectric structures of bulklike BiFeO <sub>3</sub> thin films. Applied Physics Letters, 2008, 93, 072901.   | 1.5  | 55        |
| 18 | Ferroelectricity Down to at Least 2 nm in Multiferroic BiFeO <sub>3</sub> Epitaxial Thin Films. Japanese Journal of Applied Physics, 2006, 45, L187-L189.  | 0.8  | 53        |

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|----|---|-----|-----------|
| 19 | Exchange coupling with the multiferroic compound $\text{BiFeO}_3$ in antiferromagnetic multidomain films and single-domain crystals. Physical Review B, 2010, 81, .                 | 1.1 | 47        |
| 20 | Skyrmion Brownian circuit implemented in continuous ferromagnetic thin film. Applied Physics Letters, 2020, 117, .  | 1.5 | 43        |
| 21 | Charge trapping-detrapping mechanism of barrier breakdown in MgO magnetic tunnel junctions. Applied Physics Letters, 2011, 99, .  | 1.5 | 33        |
| 22 | Shear effects in lateral piezoresponse force microscopy at $180^\circ$ ferroelectric domain walls. Applied Physics Letters, 2009, 95, 132902.                                       | 1.5 | 32        |
| 23 | Imaging ferroelectric domains in multiferroics using a low-energy electron microscope in the mirror operation mode. Physica Status Solidi - Rapid Research Letters, 2010, 4, 22-24. | 1.2 | 31        |
| 24 | Nanoscale polarization switching mechanisms in multiferroic $\text{BiFeO}_3$ thin films. Journal of Physics Condensed Matter, 2011, 23, 142201.                                     | 0.7 | 26        |
| 25 | Spin-dependent transport in antiferromagnetic tunnel junctions. Applied Physics Letters, 2014, 105, .   | 1.5 | 22        |
| 26 | Lateral piezoelectric response across ferroelectric domain walls in thin films. Journal of Applied Physics, 2010, 108, .  | 1.1 | 20        |
| 27 | Anisotropic bimodal distribution of blocking temperature with multiferroic $\text{BiFeO}_3$ epitaxial thin films. Applied Physics Letters, 2012, 100, .                             | 1.5 | 20        |
| 28 | Modelling of time-dependent dielectric barrier breakdown mechanisms in MgO-based magnetic tunnel junctions. Journal Physics D: Applied Physics, 2012, 45, 295002.                   | 1.3 | 18        |
| 29 | Electric field control of interfacial Dzyaloshinskii-Moriya interaction in Pt/Co/AlOx thin films. Journal of Magnetism and Magnetic Materials, 2021, 520, 167122.                   | 1.0 | 16        |
| 30 | Integration of Multiferroic $\text{BiFeO}_3$ Thin Films into Heterostructures for Spintronics. IEEE Transactions on Magnetics, 2008, 44, 1941-1945.                                 | 1.2 | 15        |
| 31 | Mapping different skyrmion phases in double wedges of Ta/FeCoB/TaOx trilayers. Physical Review B, 2019, 100, .  | 1.1 | 14        |
| 32 | Reversible and Irreversible Voltage Manipulation of Interfacial Magnetic Anisotropy in Pt/Co/Oxide Multilayers. Physical Review Applied, 2020, 14, .                                | 1.5 | 14        |
| 33 | Correlation between write endurance and electrical low frequency noise in MgO based magnetic tunnel junctions. Applied Physics Letters, 2013, 102, 052404.                          | 1.5 | 8         |
| 34 | Kinetics of Ion Migration in the Electric Field-Driven Manipulation of Magnetic Anisotropy of Pt/Co/Oxide Multilayers. Small, 2021, 17, e2102427.                                   | 5.2 | 7         |
| 35 | Barrier Breakdown Mechanisms in MgO-Based Magnetic Tunnel Junctions and Correlation With Low-Frequency Noise. IEEE Transactions on Magnetics, 2012, 48, 4340-4343.                  | 1.2 | 5         |
| 36 | Spin-modulated torque waves in ferrimagnetic tunnel junctions. Physical Review B, 2014, 90, .   | 1.1 | 5         |

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|----|--|-----|-----------|
| 37 | Interface phenomena in ferromagnet/ $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Ta} \langle \text{mml:msub} \rangle \langle \text{mml:mi} \text{mathvariant="normal"} \rangle \text{O} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{x} \langle \text{mml:mi} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ -based systems: Damping, perpendicular magnetic anisotropy, and Dzyaloshinskii-Moriya interaction. <i>Physical Review Materials</i> , 2020, 4, . | 0.9 | 5         |
| 38 | Barrier Breakdown Mechanisms in MgO-Based Magnetic Tunnel Junctions under Pulsed Conditions. , 2012, , .   |     | 3         |
| 39 | Breakdown mechanisms in MgO based magnetic tunnel junctions and correlation with low frequency noise. <i>Microelectronics Reliability</i> , 2013, 53, 1239-1242.   | 0.9 | 2         |
| 40 | Large voltage tuning of Dzyalonshtinskii-Moriya interaction: towards a chirality switch?. , 2018, , .  |     | 2         |
| 41 | Static and dynamic properties of 1-kink skyrmion in Pt/Co/MgO trilayer. <i>Physical Review B</i> , 2021, 104, .  | 1.1 | 2         |
| 42 | Barrier breakdown mechanisms in MgO-based magnetic tunnel junctions under pulsed conditions and correlation with low-frequency noise. <i>Proceedings of SPIE</i> , 2012, , .   | 0.8 | 0         |
| 43 | Breakdown mechanisms in MgO based magnetic tunnel junctions and correlation with low frequency noise. , 2014, , .  |     | 0         |
| 44 | Interfacial Dzyaloshinskii-Moriya Interaction, Perpendicular Magnetic Anisotropy, and Damping in CoFeB-/Oxide-Based Systems. <i>IEEE Transactions on Magnetics</i> , 2022, 58, 1-5.  | 1.2 | 0         |