

# T Zac Ward

## List of Publications by Year in descending order

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Version: 2024-02-01

119  
papers

3,806  
citations

117453

34  
h-index

138251

58  
g-index

122  
all docs

122  
docs citations

122  
times ranked

5642  
citing authors

| #  | ARTICLE                                                                                                                                                                                                                             | IF   | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1  | Design and Realization of Ohmic and Schottky Interfaces for Oxide Electronics. <i>Small Science</i> , 2022, 2, 2100087.                                                                                                             | 5.8  | 6         |
| 2  | Searching for superconductivity in high entropy oxide Ruddlesden-Popper cuprate films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022, 40, .                                                  | 0.9  | 14        |
| 3  | Exploring the Spatial Control of Topotactic Phase Transitions Using Vertically Oriented Epitaxial Interfaces. <i>Nano-Micro Letters</i> , 2022, 14, 2.                                                                              | 14.4 | 3         |
| 4  | Designing Magnetism in High Entropy Oxides. <i>Advanced Science</i> , 2022, 9, e2200391.                                                                                                                                            | 5.6  | 28        |
| 5  | Reversible Hydrogen-Induced Phase Transformations in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Thin Films Characterized by In Situ Neutron Reflectometry. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 10898-10906. | 4.0  | 10        |
| 6  | High Entropy Oxide Relaxor Ferroelectrics. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 11962-11970.                                                                                                                   | 4.0  | 26        |
| 7  | The structural modification and magnetism of many-layer epitaxial graphene implanted with low-energy light ions. <i>Carbon</i> , 2022, 192, 462-472.                                                                                | 5.4  | 2         |
| 8  | Surface-Driven Evolution of the Anomalous Hall Effect in Magnetic Topological Insulator $\text{MnBi}_2\text{Te}_4$ Thin Films. <i>Advanced Functional Materials</i> , 2022, 32, .                                                   | 7.8  | 2         |
| 9  | Determination of rutile transition metal oxide (110) surface terminations by scanning tunneling microscopy contrast reversal. <i>Physical Review B</i> , 2021, 103, .                                                               | 1.1  | 0         |
| 10 | Post-synthesis control of Berry phase driven magnetotransport in $\text{SrRuO}_3$ films. <i>Physical Review B</i> , 2021, 103, .                                                                                                    | 1.1  | 14        |
| 11 | Synthesis method comparison of compositionally complex rare earth-based Ruddlesden-Popper $\text{A}_n\text{B}_{2n-1}\text{O}_{7n-1}$ type cuprates. <i>Journal of the American Ceramic Society</i> , 2021, 104, 3750-3759.          | 1.9  | 9         |
| 12 | Magnetic Texture in Insulating Single Crystal High Entropy Oxide Spinel Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 17971-17977.                                                                               | 4.0  | 24        |
| 13 | Charge doping effects on magnetic properties of single-crystal $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$                                                                                                                         |      |           |

| #  | ARTICLE                                                                                                                                                                                        | IF  | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Vertically Aligned Single-Crystalline CoFe <sub>2</sub> O <sub>4</sub> Nanobrush Architectures with High Magnetization and Tailored Magnetic Anisotropy. <i>Nanomaterials</i> , 2020, 10, 472. | 1.9 | 2         |

|    |                                                                                                                                                                                                                                                                                                        |     |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| 20 | The emergent field of high entropy oxides: Design, prospects, challenges, and opportunities for tailoring material properties. <i>APL Materials</i> , 2020, 8, .<br><a href="#">Magnetic anisotropy in single-crystal high-entropy perovskite oxide &lt;math&gt;\langle \dots \rangle&lt;/math&gt;</a> | 2.2 | 152 |
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| 21 |  |  |  |
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| #  | ARTICLE                                                                                                                                                                            | IF  | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Electrically reversible cracks in an intermetallic film controlled by an electric field. Nature Communications, 2018, 9, 41.                                                       | 5.8 | 53        |
| 38 | High-performance multilayer WSe <sub>2</sub> field-effect transistors with carrier type control. Nano Research, 2018, 11, 722-730.                                                 | 5.8 | 101       |
| 39 | Homo-endotaxial one-dimensional Si nanostructures. Nanoscale, 2018, 10, 260-267.                                                                                                   | 2.8 | 3         |
| 40 | Understanding Electric Double-Layer Gating Based on Ionic Liquids: from Nanoscale to Macroscale. ACS Applied Materials & Interfaces, 2018, 10, 43211-43218.                        | 4.0 | 21        |
| 41 | Designing Magnetic Anisotropy through Strain Doping. Advanced Science, 2018, 5, 1800356.                                                                                           | 5.6 | 15        |
| 42 | Removal of the Magnetic Dead Layer by Geometric Design. Advanced Functional Materials, 2018, 28, 1800922.                                                                          | 7.8 | 21        |
| 43 | Direct Imaging of Low-Dimensional Nanostructures. Microscopy and Microanalysis, 2018, 24, 90-91.                                                                                   | 0.2 | 0         |
| 44 | Ion Migration Studies in Exfoliated 2D Molybdenum Oxide via Ionic Liquid Gating for Neuromorphic Device Applications. ACS Applied Materials & Interfaces, 2018, 10, 22623-22631.   | 4.0 | 12        |
| 45 | Single-crystal high entropy perovskite oxide epitaxial films. Physical Review Materials, 2018, 2, .                                                                                | 0.9 | 102       |
| 46 | Nonequilibrium Synthesis of Highly Porous Single-Crystalline Oxide Nanostructures. Advanced Materials Interfaces, 2017, 4, 1601034.                                                | 1.9 | 6         |
| 47 | Reversible Control of Interfacial Magnetism through Ionic-Liquid-Assisted Polarization Switching. Nano Letters, 2017, 17, 1665-1669.                                               | 4.5 | 28        |
| 48 | Persistent Electrochemical Performance in Epitaxial VO <sub>2</sub> (B). Nano Letters, 2017, 17, 2229-2233.                                                                        | 4.5 | 41        |
| 49 | Impact of gate geometry on ionic liquid gated ionotronic systems. APL Materials, 2017, 5, .                                                                                        | 2.2 | 11        |
| 50 | Symmetry driven control of optical properties in WO <sub>3</sub> films. APL Materials, 2017, 5, 066106.                                                                            | 2.2 | 9         |
| 51 | Interface-induced multiferroism by design in complex oxide superlattices. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5062-E5069. | 3.3 | 42        |
| 52 | Kinetically Controlled Fabrication of Single-Crystalline TiO <sub>2</sub> Nanobrush Architectures with High Energy {001} Facets. Advanced Science, 2017, 4, 1700045.               | 5.6 | 5         |
| 53 | Role of Electrical Double Layer Structure in Ionic Liquid Gated Devices. ACS Applied Materials & Interfaces, 2017, 9, 40949-40958.                                                 | 4.0 | 24        |
| 54 | Exposing high-energy surfaces by rapid-anneal solid phase epitaxy. APL Materials, 2017, 5, 086103.                                                                                 | 2.2 | 1         |

| #  | ARTICLE                                                                                                                                                                                                                                 | IF   | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 55 | Designing functionality in perovskite thin films using ion implantation techniques: Assessment and insights from first-principles calculations. <i>Scientific Reports</i> , 2017, 7, 11166.                                             | 1.6  | 5         |
| 56 | Dimensionality Effects in FeGe <sub>2</sub> Nanowires: Enhanced Anisotropic Magnetization and Anomalous Electrical Transport. <i>Scientific Reports</i> , 2017, 7, 7126.                                                                | 1.6  | 9         |
| 57 | Oxide Epitaxy with Large Symmetry Mismatch: Bronze-phase VO <sub>2</sub> on SrTiO <sub>3</sub> . <i>Microscopy and Microanalysis</i> , 2017, 23, 1580-1581.                                                                             | 0.2  | 1         |
| 58 | High performance top-gated multilayer WSe <sub>2</sub> field effect transistors. <i>Nanotechnology</i> , 2017, 28, 475202.                                                                                                              | 1.3  | 33        |
| 59 | Distortion Correction in Scanning Transmission Electron Microcopy with Controllable Scanning Pathways. <i>Microscopy and Microanalysis</i> , 2016, 22, 900-901.                                                                         | 0.2  | 0         |
| 60 | Ferroelectric Self-Poling, Switching, and Monoclinic Domain Configuration in BiFeO <sub>3</sub> Thin Films. <i>Advanced Functional Materials</i> , 2016, 26, 5166-5173.                                                                 | 7.8  | 25        |
| 61 | Amorphous Semiconductors: Ionic Liquid Activation of Amorphous Metal-Oxide Semiconductors for Flexible Transparent Electronic Devices ( <i>Adv. Funct. Mater.</i> 17/2016). <i>Advanced Functional Materials</i> , 2016, 26, 2774-2774. | 7.8  | 4         |
| 62 | Strain-induced optical band gap variation of SnO <sub>2</sub> films. <i>Thin Solid Films</i> , 2016, 615, 103-106.                                                                                                                      | 0.8  | 26        |
| 63 | Dynamic defect correlations dominate activated electronic transport in SrTiO <sub>3</sub> . <i>Scientific Reports</i> , 2016, 6, 30141.                                                                                                 | 1.6  | 3         |
| 64 | Nanoscale self-templating for oxide epitaxy with large symmetry mismatch. <i>Scientific Reports</i> , 2016, 6, 38168.                                                                                                                   | 1.6  | 18        |
| 65 | Giant Controllable Magnetization Changes Induced by Structural Phase Transitions in a Metamagnetic Artificial Multiferroic. <i>Scientific Reports</i> , 2016, 6, 22708.                                                                 | 1.6  | 39        |
| 66 | Epitaxial Growth of Intermetallic MnPt Films on Oxides and Large Exchange Bias. <i>Advanced Materials</i> , 2016, 28, 118-123.                                                                                                          | 11.1 | 24        |
| 67 | Ferromagnetism: Epitaxial Growth of Intermetallic MnPt Films on Oxides and Large Exchange Bias ( <i>Adv. Mater.</i> 1/2016). <i>Advanced Materials</i> , 2016, 28, 204-204.                                                             | 11.1 | 0         |
| 68 | Growth of high-quality self-catalyzed core-shell GaAsP nanowires on Si substrates. <i>Proceedings of SPIE</i> , 2016, , .                                                                                                               | 0.8  | 0         |
| 69 | Focused helium-ion beam irradiation effects on electrical transport properties of few-layer WSe <sub>2</sub> : enabling nanoscale direct write homo-junctions. <i>Scientific Reports</i> , 2016, 6, 27276.                              | 1.6  | 99        |
| 70 | Enhancing interfacial magnetization with a ferroelectric. <i>Physical Review B</i> , 2016, 94, .                                                                                                                                        | 1.1  | 34        |
| 71 | Multimodal Responses of Self-Organized Circuitry in Electronically Phase Separated Materials. <i>Advanced Electronic Materials</i> , 2016, 2, 1600189.                                                                                  | 2.6  | 3         |
| 72 | Enhanced ferroelectric polarization and possible morphotropic phase boundary in PZT-based alloys. <i>Physical Review B</i> , 2016, 93, .                                                                                                | 1.1  | 7         |

| #  | ARTICLE                                                                                                                                                                       | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Full Electroresistance Modulation in a Mixed-Phase Metallic Alloy. <i>Physical Review Letters</i> , 2016, 116, 097203.                                                        | 2.9 | 88        |
| 74 | Controlling Octahedral Rotations in a Perovskite via Strain Doping. <i>Scientific Reports</i> , 2016, 6, 26491.                                                               | 1.6 | 50        |
| 75 | Emerging magnetism and anomalous Hall effect in iridate–manganite heterostructures. <i>Nature Communications</i> , 2016, 7, 12721.                                            | 5.8 | 123       |
| 76 | Ionic Liquid Activation of Amorphous Metal–Oxide Semiconductors for Flexible Transparent Electronic Devices. <i>Advanced Functional Materials</i> , 2016, 26, 2820-2825.      | 7.8 | 46        |
| 77 | Continuously Controlled Optical Band Gap in Oxide Semiconductor Thin Films. <i>Nano Letters</i> , 2016, 16, 1782-1786.                                                        | 4.5 | 35        |
| 78 | Ultrathin nanosheets of CrSiTe <sub>3</sub> : a semiconducting two-dimensional ferromagnetic material. <i>Journal of Materials Chemistry C</i> , 2016, 4, 315-322.            | 2.7 | 235       |
| 79 | Influence of electron doping on the ground state of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ . <i>Physical Review B</i> , 2015, 92, .                                         | 5.1 | 89        |
| 80 | Strain Doping: Reversible Single-Axis Control of a Complex Oxide Lattice via Helium Implantation. <i>Physical Review Letters</i> , 2015, 114, 256801.                         | 2.9 | 84        |
| 81 | Optimising the defect filter layer design for III/V QDs on Si for integrated laser applications. , 2015, , .                                                                  |     | 0         |
| 82 | First-Order Melting of a Weak Spin-Orbit Mott Insulator into a Correlated Metal. <i>Physical Review Letters</i> , 2015, 114, 257203.                                          | 2.9 | 40        |
| 83 | Polarity-Driven Quasi-3-Fold Composition Symmetry of Self-Catalyzed III–V Ternary Core–Shell Nanowires. <i>Nano Letters</i> , 2015, 15, 3128-3133.                            | 4.5 | 39        |
| 84 | Ferromagnetism and Nonmetallic Transport of Thin-Film $\text{FeSi}$ . A Stabilized Metastable Material. <i>Physical Review Letters</i> , 2015, 114, 147202.                   | 2.9 | 26        |
| 85 | Stoichiometry control of complex oxides by sequential pulsed-laser deposition from binary-oxide targets. <i>Applied Physics Letters</i> , 2015, 106, .                        | 1.5 | 12        |
| 86 | Ionic Liquid versus SiO <sub>2</sub> -Gated a-IGZO Thin Film Transistors: A Direct Comparison. <i>ECS Journal of Solid State Science and Technology</i> , 2015, 4, Q105-Q109. | 0.9 | 23        |
| 87 | Chemically induced Jahn–Teller ordering on manganite surfaces. <i>Nature Communications</i> , 2014, 5, 4528.                                                                  | 5.8 | 28        |
| 88 | Strain driven anisotropic magnetoresistance in antiferromagnetic La <sub>0.4</sub> Sr <sub>0.6</sub> MnO <sub>3</sub> . <i>Applied Physics Letters</i> , 2014, 105, .         | 1.5 | 20        |
| 89 | Active control of magnetoresistance of organic spin valves using ferroelectricity. <i>Nature Communications</i> , 2014, 5, 4396.                                              | 5.8 | 51        |
| 90 | Structural and electronic origin of the magnetic structures in hexagonal $\text{LuFeO}_3$ . <i>Physical Review B</i> , 2014, 90, .                                            | 1.1 | 38        |

| #   | ARTICLE                                                                                                                                                                                 | IF   | CITATIONS |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 91  | Publisher's Note: Structural and electronic origin of the magnetic structures in hexagonal $\text{LuFeO}_3$ [Phys. Rev. B, 90, 014436 (2014)]. Physical Review B, 2014, 90, .           | 1.1  | 3         |
| 92  | Wafer-Scale Fabrication of Self-Catalyzed 1.7 eV GaAsP Core-Shell Nanowire Photocathode on Silicon Substrates. Nano Letters, 2014, 14, 2013-2018.                                       | 4.5  | 58        |
| 93  | Resolving transitions in the mesoscale domain configuration in VO <sub>2</sub> using laser speckle pattern analysis. Scientific Reports, 2014, 4, 6259.                                 | 1.6  | 5         |
| 94  | A persistent metal-insulator transition at the surface of an oxygen-deficient, epitaxial manganite film. Nanoscale, 2013, 5, 9659.                                                      | 2.8  | 4         |
| 95  | Phase Transitions, Phase Coexistence, and Piezoelectric Switching Behavior in Highly Strained BiFeO <sub>3</sub> Films. Advanced Materials, 2013, 25, 5561-5567.                        | 11.1 | 84        |
| 96  | Phase Transitions, Phase Coexistence, and Piezoelectric Switching Behavior in Highly Strained BiFeO <sub>3</sub> Films (Adv. Mater. 39(2013)). Advanced Materials, 2013, 25, 5560-5560. | 11.1 | 0         |
| 97  | Room-Temperature Multiferroic Hexagonal $\text{LuFeO}_3$ Films. Physical Review Letters, 2013, 110, 237601.                                                                             | 2.9  | 195       |
| 98  | Emergent phenomena in manganites under spatial confinement. Chinese Physics B, 2013, 22, 017501.                                                                                        | 0.7  | 19        |
| 99  | Electrophoretic-like Gating Used To Control Metal-Insulator Transitions in Electronically Phase Separated Manganite Wires. Nano Letters, 2013, 13, 3749-3754.                           | 4.5  | 31        |
| 100 | Unit cell orientation of tetragonal-like BiFeO <sub>3</sub> thin films grown on highly miscut LaAlO <sub>3</sub> substrates. Applied Physics Letters, 2013, 102, 221910.                | 1.5  | 10        |
| 101 | Growth diagram of La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> thin films using pulsed laser deposition. Journal of Applied Physics, 2013, 113, .                               | 1.1  | 20        |
| 102 | Fabrication of Spatially Confined Complex Oxides. Journal of Visualized Experiments, 2013, , e50573.                                                                                    | 0.2  | 1         |
| 103 | Growth diagram and magnetic properties of hexagonal $\text{LuFeO}_2\text{O}$ thin films. Physical Review B, 2012, 85, .                                                                 | 1.1  | 25        |
| 104 | Emergent Metal-Insulator Transitions Associated with Electronic Inhomogeneities in Low-Dimensional Complex Oxides. Springer Series in Materials Science, 2012, , 69-86.                 | 0.4  | 0         |
| 105 | Tuning the Metal-Insulator Transition in Manganite Films through Surface Exchange Coupling with Magnetic Nanodots. Physical Review Letters, 2011, 106, 157207.                          | 2.9  | 24        |
| 106 | Dynamics of a first-order electronic phase transition in manganites. Physical Review B, 2011, 83, .                                                                                     | 1.1  | 32        |
| 107 | Tuning the Ferromagnetic Coupling of Fe Nanodots on Cu(111) via Dimensionality Variation of the Mediating Electrons. Physical Review Letters, 2010, 104, 167202.                        | 2.9  | 7         |
| 108 | Giant Magnetoresistance in Organic Spin Valves. Physical Review Letters, 2010, 104, 236602.                                                                                             | 2.9  | 181       |

| #   | ARTICLE                                                                                                                                                        | IF  | CITATIONS |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | Tunable Metallicity of the $\text{La}_{0.01}\text{Ca}_{0.99}\text{MnO}_3$ system. Physical Review Letters, 2009, 102, 087201.                                  | 2.9 | 48        |
| 110 | Time-Resolved Electronic Phase Transitions in Manganites. Physical Review Letters, 2009, 102, 087201.                                                          | 2.9 | 48        |
| 111 | Elastically driven anisotropic percolation in electronic phase-separated manganites. Nature Physics, 2009, 5, 885-888.                                         | 6.5 | 157       |
| 112 | Emerging transport behavior in manganites wires. , 2008, , .                                                                                                   |     | 0         |
| 113 | Reemergent Metal-Insulator Transitions in Manganites Exposed with Spatial Confinement. Physical Review Letters, 2008, 100, 247204.                             | 2.9 | 98        |
| 114 | S186 <i>Invited</i> X-ray Microdiffraction Techniques for Measuring Local Microstructure and Strain Distributions. Powder Diffraction, 2008, 23, 189-189.      | 0.4 | 0         |
| 115 | Influence of different substrates on phase separation in $\text{La}_{1-x}\text{PryCaxMnO}_3$ thin films. Journal of Applied Physics, 2006, 99, 08S901.         | 1.1 | 52        |
| 116 | Giant Discrete Steps in Metal-Insulator Transition in Perovskite Manganite Wires. Physical Review Letters, 2006, 97, 167201.                                   | 2.9 | 102       |
| 117 | Towards a High Diffraction Efficiency of Photorefractive Multiple Quantum Wells. AIP Conference Proceedings, 2005, , .                                         | 0.3 | 0         |
| 118 | Optimisation of photorefractive multiple quantum wells for biomedical imaging. Synthetic Metals, 2005, 155, 406-409.                                           | 2.1 | 13        |
| 119 | Generalized Ellipsometry Measurements of Crystalline Thin Film and Bulk Tin Oxide. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100378. | 0.8 | 1         |