

Matias Acosta

List of Publications by Year in descending order

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Version: 2024-02-01

42
papers

3,528
citations

257101

24
h-index

253896

43
g-index

48
all docs

48
docs citations

48
times ranked

2762
citing authors

| # | ARTICLE | IF | CITATIONS |
|---|---|-----|-----------|
| 1 | Giant electric-field-induced strains in lead-free ceramics for actuator applications – status and perspective. Journal of Electroceramics, 2012, 29, 71-93. | 0.8 | 813 |
| 2 | BaTiO ₃ -based piezoelectrics: Fundamentals, current status, and perspectives. Applied Physics Reviews, 2017, 4, . | 5.5 | 813 |
| 3 | Relationship between electromechanical properties and phase diagram in the Ba(Zr _{0.2} Ti _{0.8})O ₃ –x(Ba _{0.7} Ca _{0.3})TiO ₃ lead-free piezoceramic. Acta Materialia, 2014, 80, 48-55. | 3.8 | 174 |
| 4 | High-temperature dielectrics in CaZrO ₃ -modified Bi _{1/2} Na _{1/2} TiO ₃ -based lead-free ceramics. Journal of the European Ceramic Society, 2012, 32, 4327-4334. | 2.8 | 153 |
| 5 | Temperature- and Frequency-Dependent Properties of the 0.75Bi _{1/2} Na _{1/2} TiO ₃ –0.25SrTiO ₃ Lead-Free Incipient Piezoceramic. Journal of the American Ceramic Society, 2014, 97, 1937-1943. | 1.9 | 144 |
| 6 | Strong electrocaloric effect in lead-free 0.65Ba(Zr _{0.2} Ti _{0.8})O ₃ -0.35(Ba _{0.7} Ca _{0.3})TiO ₃ ceramics obtained by direct measurements. Applied Physics Letters, 2015, 106, . Origin of the large piezoelectric activity in cmmlm | 1.5 | 131 |
| 7 | | | |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Stress-dependent electromechanical properties of doped $(\text{Ba}_{1-x}\text{Ca}_x)(\text{Zr}_y\text{Ti}_{1-y})\text{O}_3$. Journal of the European Ceramic Society, 2015, 35, 1209-1217. | 2.8 | 37 |
| 20 | Wide Compositional Range <i>In Situ</i> Electric Field Investigations on Lead-Free $\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_{3-x}(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ ceramics. Applied Physics Letters, 2015, 107, . | 1.5 | 37 |
| 21 | Designing properties of $(\text{Na}_{1/2}\text{Bi}_x)\text{TiO}_3$ -based materials through A-site non-stoichiometry. Journal of Materials Chemistry C, 2018, 6, 738-744. | 2.7 | 37 |
| 22 | A high-entropy manganite in an ordered nanocomposite for long-term application in solid oxide cells. Nature Communications, 2021, 12, 2660. | 5.8 | 37 |
| 23 | Mechanisms of electromechanical response in $(1-x)\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_{3-x}(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ ceramics. Applied Physics Letters, 2015, 107, . | 1.5 | 34 |
| 24 | Polarization dynamics variation across the temperature- and composition-driven phase transitions in the lead-free $\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_{3-x}(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ ferroelectrics. Journal of Applied Physics, 2015, 118, . | 1.1 | 30 |
| 25 | Piezoelectricity and rotostriction through polar and non-polar coupled instabilities in bismuth-based piezoceramics. Scientific Reports, 2016, 6, 28742. | 1.6 | 23 |
| 26 | Electric field-temperature phase diagram of sodium bismuth titanate-based relaxor ferroelectrics. Journal of Materials Science, 2018, 53, 9393-9400. | 1.7 | 23 |
| 27 | Influence of composition on the unipolar electric fatigue of $\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_{3-x}(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ lead-free piezoceramics. Journal of the American Ceramic Society, 2017, 100, 4699-4709. | | 22 |
| 28 | Temperature-dependent R-curve behavior of the lead-free ferroelectric $0.615\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_{3-x}0.385(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ ceramic. Engineering Fracture Mechanics, 2015, 144, 68-77. | 2.0 | 21 |
| 29 | Strain Mechanisms in Lead-Free Ferroelectrics for Actuators. Springer Theses, 2016, . | 0.0 | 20 |
| 30 | Revealing the core-shell interactions of a giant strain relaxor ferroelectric $0.75\text{Bi}_{1/2}\text{Na}_{1/2}\text{TiO}_3-0.25\text{SrTiO}_3$. Scientific Reports, 2016, 6, 36910. | 1.6 | 19 |
| 31 | Enabling nanoscale flexoelectricity at extreme temperature by tuning cation diffusion. Nature Communications, 2018, 9, 4445. | 5.8 | 19 |
| 32 | Cytotoxicity, chemical stability, and surface properties of ferroelectric ceramics for biomaterials. Journal of the American Ceramic Society, 2018, 101, 440-449. | 1.9 | 18 |
| 33 | Temperature dependent polarization reversal mechanism in $0.94(\text{Bi}_{1/2}\text{Na}_{1/2})\text{TiO}_3-0.06\text{Ba}(\text{Zr}_{0.02}\text{Ti}_{0.98})\text{O}_3$ relaxor ceramics. Applied Physics Letters, 2015, 107, . | 1.5 | 17 |
| 34 | Tailoring ergodicity through selective A-site doping in the $\text{Bi}_{1/2}\text{Na}_{1/2}\text{TiO}_3-\text{Bi}_{1/2}\text{K}_{1/2}\text{TiO}_3$ system. Journal of Applied Physics, 2015, 117, 134106. | 1.1 | 17 |
| 35 | Multi-analyser detector (MAD) for high-resolution and high-energy powder X-ray diffraction. Journal of Synchrotron Radiation, 2021, 28, 146-157. | 1.0 | 17 |
| 36 | Oxygen-vacancy-mediated dielectric property in perovskite $\text{Eu}_{0.5}\text{Ba}_{0.5}\text{TiO}_3$ epitaxial thin films. Applied Physics Letters, 2018, 112, . | 1.5 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Enhancing electromechanical properties of lead-free ferroelectrics with bilayer ceramic/ceramic composites. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 997-1006. | 1.7 | 12 |
| 38 | Revealing the role of local stress on the depolarization of BNT-BT-based relaxors. Physical Review Materials, 2019, 3, . | 0.9 | 11 |
| 39 | Influence of B-site Disorder on the Properties of Unpoled $\text{Bi}_{1/2}\text{Na}_{1/2}\text{TiO}_3 \cdot 0.06\text{Ba}(\text{Zr}_x\text{Ti}_{1-x})_2\text{O}_3$ Piezoceramics. Journal of the American Ceramic Society, 2016, 99, 2801-2808. | 4.0 | 8 |
| 40 | Route to High-Performance Micro-solid Oxide Fuel Cells on Metallic Substrates. ACS Applied Materials & Interfaces, 2021, 13, 4117-4125. | 4.0 | 9 |
| 41 | Surface chemistry and porosity engineering through etching reveal ultrafast oxygen reduction kinetics below 400°C in B-site exposed (La,Sr)(Co,Fe)O ₃ thin-films. Journal of Power Sources, 2022, 523, 230983. | 4.0 | 8 |
| 42 | A typology of advisory bodies in legislatures and research perspectives. Journal of Legislative Studies, The, 0, , 1-26. | 0.6 | 1 |