

# Matias Acosta

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

42  
papers

2,689  
citations

23  
h-index

48  
g-index

48  
ext. papers

3,098  
ext. citations

5.2  
avg, IF

5.18  
L-index

#	Paper	IF	Citations
42	Surface chemistry and porosity engineering through etching reveal ultrafast oxygen reduction kinetics below 400 °C in B-site exposed (La,Sr)(Co,Fe)O <sub>3</sub> thin-films. <i>Journal of Power Sources</i> , <b>2022</b> , 523, 230983	8.9	0
41	A high-entropy manganite in an ordered nanocomposite for long-term application in solid oxide cells. <i>Nature Communications</i> , <b>2021</b> , 12, 2660	17.4	15
40	Route to High-Performance Micro-solid Oxide Fuel Cells on Metallic Substrates. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 4117-4125	9.5	5
39	Multi-analyser detector (MAD) for high-resolution and high-energy powder X-ray diffraction. <i>Journal of Synchrotron Radiation</i> , <b>2021</b> , 28, 146-157	2.4	4
38	Nanostructured Materials and Interfaces for Advanced Ionic Electronic Conducting Oxides. <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1900462	4.6	23
37	Revealing the role of local stress on the depolarization of BNT-BT-based relaxors. <i>Physical Review Materials</i> , <b>2019</b> , 3,	3.2	6
36	Thermal-stability of electric field-induced strain and energy storage density in Nb-doped BNKT-ST piezoceramics. <i>Journal of the European Ceramic Society</i> , <b>2018</b> , 38, 2511-2519	6	58
35	Oxygen-vacancy-mediated dielectric property in perovskite Eu <sub>0.5</sub> Ba <sub>0.5</sub> TiO <sub>3</sub> -epitaxial thin films. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 182906	3.4	12
34	Electric field-temperature phase diagram of sodium bismuth titanate-based relaxor ferroelectrics. <i>Journal of Materials Science</i> , <b>2018</b> , 53, 9393-9400	4.3	18
33	Cytotoxicity, chemical stability, and surface properties of ferroelectric ceramics for biomaterials. <i>Journal of the American Ceramic Society</i> , <b>2018</b> , 101, 440-449	3.8	14
32	High piezoelectricity by multiphase coexisting point: Barium titanate derivatives. <i>MRS Bulletin</i> , <b>2018</b> , 43, 595-599	3.2	30
31	Designing properties of (Na <sub>1/2</sub> Bix)TiO <sub>3</sub> -based materials through A-site non-stoichiometry. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 738-744	7.1	29
30	Enabling nanoscale flexoelectricity at extreme temperature by tuning cation diffusion. <i>Nature Communications</i> , <b>2018</b> , 9, 4445	17.4	9
29	Influence of composition on the unipolar electric fatigue of Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> lead-free piezoceramics. <i>Journal of the American Ceramic Society</i> , <b>2017</b> , 100, 4699-4709	3.8	17
28	BaTiO <sub>3</sub> -based piezoelectrics: Fundamentals, current status, and perspectives. <i>Applied Physics Reviews</i> , <b>2017</b> , 4, 041305	17.3	487
27	Electrocaloric Effect in Ba(Zr,Ti)O <sub>3</sub> (Ba,Ca)TiO <sub>3</sub> Ceramics Measured Directly. <i>Journal of the American Ceramic Society</i> , <b>2016</b> , 99, 4022-4030	3.8	51
26	Piezoelectricity and rotostriction through polar and non-polar coupled instabilities in bismuth-based piezoceramics. <i>Scientific Reports</i> , <b>2016</b> , 6, 28742	4.9	22

25	Strain Mechanisms in Lead-Free Ferroelectrics for Actuators. <i>Springer Theses</i> , <b>2016</b> ,	0.1	16
24	Formation of the core-shell microstructure in lead-free Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -SrTiO <sub>3</sub> piezoceramics and its influence on the electromechanical properties. <i>Journal of the European Ceramic Society</i> , <b>2016</b> , 36, 1009-1016	6	60
23	Influence of B-Site Disorder on the Properties of Unpoled Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -0.06Ba(Zr <sub>x</sub> Ti <sub>1-x</sub> )O <sub>3</sub> Piezoceramics. <i>Journal of the American Ceramic Society</i> , <b>2016</b> , 99, 2801-2808	3.8	10
22	Revealing the core-shell interactions of a giant strain relaxor ferroelectric 0.75BiNaTiO-0.25SrTiO. <i>Scientific Reports</i> , <b>2016</b> , 6, 36910	4.9	17
21	Criticality: Concept to Enhance the Piezoelectric and Electrocaloric Properties of Ferroelectrics. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 7326-7333	15.6	71
20	Wide Compositional Range In Situ Electric Field Investigations on Lead-Free Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> Piezoceramic. <i>Physical Review Applied</i> , <b>2015</b> , 3,	4.3	32
19	Enhancing electromechanical properties of lead-free ferroelectrics with bilayer ceramic/ceramic composites. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2015</b> , 62, 997-1006	3.2	6
18	Temperature-dependent R-curve behavior of the lead-free ferroelectric 0.615Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -0.385(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ceramic. <i>Engineering Fracture Mechanics</i> , <b>2015</b> , 144, 68-77	4.2	18
17	Tailoring ergodicity through selective A-site doping in the Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -Bi <sub>1/2</sub> K <sub>1/2</sub> TiO <sub>3</sub> system. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 134106	2.5	17
16	Origin of the large piezoelectric activity in (1-x)Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -x(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ceramics. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	103
15	Strong electrocaloric effect in lead-free 0.65Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -0.35(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ceramics obtained by direct measurements. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 062901	3.4	114
14	Polarization dynamics variation across the temperature- and composition-driven phase transitions in the lead-free Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ferroelectrics. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 134104	2.5	23
13	Temperature dependent polarization reversal mechanism in 0.94(Bi <sub>1/2</sub> Na <sub>1/2</sub> )TiO <sub>3</sub> -0.06Ba(Zr <sub>0.02</sub> Ti <sub>0.98</sub> )O <sub>3</sub> relaxor ceramics. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 232906	3.4	16
12	Mechanisms of electromechanical response in (1-x)Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -x(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ceramics. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 142906	3.4	27
11	Core-shell Lead-free Piezoelectric Ceramics: Current Status and Advanced Characterization of the Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -SrTiO <sub>3</sub> System. <i>Journal of the American Ceramic Society</i> , <b>2015</b> , 98, 3405-3422	3.8	97
10	Stress-dependent electromechanical properties of doped (Ba <sub>1-x</sub> Ca <sub>x</sub> )(Zr <sub>y</sub> Ti <sub>1-y</sub> )O <sub>3</sub> . <i>Journal of the European Ceramic Society</i> , <b>2015</b> , 35, 1209-1217	6	32
9	Mechanical constitutive behavior and exceptional blocking force of lead-free BZT-xBCT piezoceramics. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 204107	2.5	37
8	Temperature- and Frequency-Dependent Properties of the 0.75Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -0.25SrTiO <sub>3</sub> Lead-Free Incipient Piezoceramic. <i>Journal of the American Ceramic Society</i> , <b>2014</b> , 97, 1937-1943	3.8	127

7	Relationship between electromechanical properties and phase diagram in the Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> lead-free piezoceramic. <i>Acta Materialia</i> , <b>2014</b> , 80, 48-55	8.4	149
6	In situ electric field induced domain evolution in Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -0.3(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ferroelectrics. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 112904	3.4	36
5	Tailoring the Piezoelectric and Relaxor Properties of (Bi <sub>1/2</sub> Na <sub>1/2</sub> )TiO <sub>3</sub> -BaTiO <sub>3</sub> via Zirconium Doping. <i>Journal of the American Ceramic Society</i> , <b>2013</b> , 96, 2881-2886	3.8	41
4	Polarization dynamics across the morphotropic phase boundary in Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -x(Ba <sub>0.7</sub> Ca <sub>0.3</sub> )TiO <sub>3</sub> ferroelectrics. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 152904	3.4	34
3	High-temperature dielectrics in CaZrO <sub>3</sub> -modified Bi <sub>1/2</sub> Na <sub>1/2</sub> TiO <sub>3</sub> -based lead-free ceramics. <i>Journal of the European Ceramic Society</i> , <b>2012</b> , 32, 4327-4334	6	127
2	Giant electric-field-induced strains in lead-free ceramics for actuator applications – status and perspective. <i>Journal of Electroceramics</i> , <b>2012</b> , 29, 71-93	1.5	674
1	A typology of advisory bodies in legislatures and research perspectives. <i>Journal of Legislative Studies</i> , <b>2011</b> , 1-26	0.4	