

# Brice Gautier

## List of Publications by Year in descending order

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82  
papers

1,103  
citations

393982

19  
h-index

454577

30  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1528  
citing authors

#	ARTICLE	IF	CITATIONS
1	Epitaxy of BaTiO <sub>3</sub> thin film on Si(001) using a SrTiO <sub>3</sub> buffer layer for non-volatile memory application. <i>Microelectronic Engineering</i> , 2011, 88, 1232-1235.	1.1	99
2	Geometric conductive filament confinement by nanotips for resistive switching of HfO <sub>2</sub> -RRAM devices with high performance. <i>Scientific Reports</i> , 2016, 6, 25757.	1.6	62
3	Chemistry and Atomic Distortion at the Surface of an Epitaxial BaTiO <sub>3</sub> Thin Film after Dissociative Adsorption of Water. <i>Journal of Physical Chemistry C</i> , 2012, 116, 21802-21809.	1.5	60
4	Electrical properties of (110) epitaxial lead-free ferroelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> thin films grown by pulsed laser deposition: Macroscopic and nanoscale data. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	46
5	Electrochemical behaviour of ceramic sol-gel coatings on mild steel. <i>Journal of Non-Crystalline Solids</i> , 2001, 293-295, 527-533.	1.5	45
6	Macroscopic and nanoscale electrical properties of pulsed laser deposited (100) epitaxial lead-free Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> thin films. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	43
7	Low-temperature transition to a superconducting phase in boron-doped silicon films grown on (001)-oriented silicon wafers. <i>Physical Review B</i> , 2010, 81, .	1.1	34
8	Epitaxial growth and electrical measurement of single crystalline Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> thin film on Si(001) for micro-electromechanical systems. <i>Thin Solid Films</i> , 2012, 520, 4572-4575.	0.8	32
9	Room temperature multiferroicity in Ga <sub>0.6</sub> Fe <sub>1.4</sub> O <sub>3</sub> :Mg thin films. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	32
10	Quantification of germanium and boron in heterostructures Si/Si <sub>1-x</sub> Ge <sub>x</sub> /Si by SIMS. <i>Thin Solid Films</i> , 1997, 294, 54-58.	0.8	28
11	A new technique based on current measurement for nanoscale ferroelectricity assessment: Nano-positive up negative down. <i>Review of Scientific Instruments</i> , 2017, 88, 023901.	0.6	28
12	Molecular beam epitaxy growth of BaTiO <sub>3</sub> thin films and crucial impact of oxygen content conditions on the electrical characteristics. <i>Thin Solid Films</i> , 2012, 520, 4595-4599.	0.8	27
13	Nanoscale study of the ferroelectric properties of SrBi <sub>2</sub> Nb <sub>2</sub> O <sub>9</sub> thin films grown by pulsed laser deposition on epitaxial Pt electrodes using atomic force microscope. <i>Applied Surface Science</i> , 2003, 217, 108-117.	3.1	25
14	Electromechanical response of amorphous LaAlO <sub>3</sub> thin film probed by scanning probe microscopies. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	25
15	Finite element method simulation of the domain growth kinetics in single-crystal LiTaO <sub>3</sub> : Role of surface conductivity. <i>Journal of Applied Physics</i> , 2011, 110, 052016.	1.1	24
16	Ferroelectric Pb(Zr,Ti)O <sub>3</sub> epitaxial layers on GaAs. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	23
17	Toward a better reliability in the deconvolution of SIMS depth profiles. <i>Surface and Interface Analysis</i> , 1998, 26, 974-983.	0.8	22
18	Chemistry and structure of BaTiO <sub>3</sub> ultra-thin films grown by different O <sub>2</sub> plasma power. <i>Chemical Physics Letters</i> , 2014, 592, 206-210.	1.2	21

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19	A new mechanicalâ€œelectrical approach to the wheel-rail contact. <i>Wear</i> , 2008, 265, 1408-1416.	1.5	20
20	Structural study and ferroelectricity of epitaxial BaTiO <sub>3</sub> films on silicon grown by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	20
21	Quantitative SIMS measurement of high concentration of boron in silicon (up to 20at.%) using an isotopic comparative method. <i>Applied Surface Science</i> , 2008, 255, 1377-1380.	3.1	19
22	Impact of introducing CuSiN self-aligned barriers in advanced copper interconnects. <i>Microelectronic Engineering</i> , 2005, 82, 587-593.	1.1	18
23	Growth and nanoscale ferroelectric investigation of radiofrequency-sputtered LiNbO <sub>3</sub> thin films. <i>Materials Chemistry and Physics</i> , 2004, 86, 340-346.	2.0	17
24	Nanoscale observation of the distribution of the polarization orientation of ferroelectric domains in lithium niobate thin films. <i>Thin Solid Films</i> , 2006, 515, 1592-1596.	0.8	17
25	Influence of the ferroelectric polarization on the electronic structure of BaTiO <sub>3</sub> thin films. <i>Surface and Interface Analysis</i> , 2010, 42, 1690-1694.	0.8	17
26	Ferroelectricity in a quasicrystalline ultrathin BaTiO <sub>3</sub> film. <i>Physical Review B</i> , 2011, 84, .	1.1	17
27	Imaging by atomic force microscopy of the electrical properties difference of the facets of oxygen-ion-induced ripple topography in silicon. <i>Applied Surface Science</i> , 2004, 231-232, 136-140.	3.1	15
28	Nanoscale leakage current measurements in metal organic chemical vapor deposition crystalline SrTiO <sub>3</sub> films. <i>Thin Solid Films</i> , 2009, 517, 1868-1873.	0.8	14
29	Deconvolution of very low primary energy SIMS depth profiles. <i>Applied Surface Science</i> , 2006, 252, 6478-6481.	3.1	13
30	Surface roughening and erosion rate change at low energy SIMS depth profiling of silicon during oblique bombardment. <i>Applied Surface Science</i> , 2006, 253, 2662-2670.	3.1	12
31	Abnormal switching of ferroelectric domains created by the tip of an atomic force microscope in a congruent LiTaO <sub>3</sub> single-crystal thin film. <i>Journal of Applied Physics</i> , 2011, 110, 024102.	1.1	12
32	Pulsed laser deposition of epitaxial ferroelectric Pb(Zr,Ti)O <sub>3</sub> films on silicon substrates. <i>Thin Solid Films</i> , 2012, 520, 4604-4607.	0.8	12
33	Epitaxial inversion on ferromagnetic (Fe,Zn)O <sub>4</sub> /ferroelectric BiFeO <sub>3</sub> core-shell nanodot arrays using three dimensional nano-seeding assembly. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	12
34	Phase transitions in [001]-oriented morphotropic PbZr <sub>0.52</sub> Ti <sub>0.48</sub> O <sub>3</sub> thin film deposited onto SrTiO <sub>3</sub> -buffered Si substrate. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	12
35	Interpretation of multiscale characterization techniques to assess ferroelectricity: The case of GaFeO <sub>3</sub> . <i>Ultramicroscopy</i> , 2017, 172, 47-51.	0.8	12
36	Quantitative and simultaneous analysis of the polarity of polycrystalline ZnO seed layers and related nanowires grown by wet chemical deposition. <i>Nanotechnology</i> , 2017, 28, 095704.	1.3	11

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37	Influence of surface orientation on the formation of sputtering-induced ripple topography in silicon. Applied Surface Science, 2004, 231-232, 678-683.	3.1	9
38	SIMS depth profile correction for the study of the first step of the diffusion of boron in silicon. Nuclear Instruments & Methods in Physics Research B, 1998, 142, 361-376.	0.6	8
39	Initial stages of silicon anodization in the transition regime: Nanoparticle formation. Applied Physics Letters, 2005, 86, 213107.	1.5	7
40	Silicon nanoparticle formation by short pulse electrochemical etching in the transition regime. Journal of Applied Physics, 2006, 100, 104307.	1.1	7
41	Study of the physical and electrical degradation of thin oxide films by atomic force microscope. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, 01AA06.	0.6	7
42	Strain effect in PbTiO <sub>3</sub> /PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> superlattices: From polydomain to monodomain structures. Journal of Applied Physics, 2012, 112, .	1.1	7
43	Structural observation of piezoelectric inhomogeneity in a mixed-orientation Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> perovskite thin film. Applied Physics Letters, 2014, 105, .	1.5	7
44	Nanoscale study of perovskite BiFeO <sub>3</sub> /spinel (Fe,Zn) <sub>3</sub> O <sub>4</sub> co-deposited thin film by electrical scanning probe methods. Applied Surface Science, 2015, 351, 531-536.	3.1	7
45	Interpretation of scanning capacitance microscopy for thin oxides characterization. Thin Solid Films, 2009, 517, 6721-6725.	0.8	6
46	Two-dimensional epitaxial ErSi <sub>2</sub> grown on B-passivated Si(111) $\sqrt{3}\sqrt{3}$ surfaces. Physical Review B, 1999, 60, 11645-11652.	1.1	5
47	Nanoscale Investigation of the Ferroelectric Properties of Sol-Gel (PbZr <sub>x</sub> Ti <sub>1-x</sub> )O <sub>3</sub> Films. Ferroelectrics, 2002, 269, 219-224.	0.3	5
48	AFM study of the SIMS beam induced roughness in monocrystalline silicon in presence of initial surface or bulk defects of nanometric size. Applied Surface Science, 2006, 252, 6448-6451.	3.1	5
49	The isotopic comparative method (ICM) for SIMS quantification of boron in silicon up to 40 at.%. Surface and Interface Analysis, 2011, 43, 36-40.	0.8	5
50	KTa <sub>0.65</sub> Nb <sub>0.35</sub> O <sub>3</sub> thin films epitaxially grown by pulsed laser deposition on metallic and oxide epitaxial electrodes. Applied Surface Science, 2012, 258, 9297-9301.	3.1	5
51	Phase transition in ferroelectric Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> epitaxial thin films. Thin Solid Films, 2014, 553, 85-88.	0.8	5
52	Investigation of tip-depletion-induced fail in scanning capacitance microscopy for the determination of carrier type. Ultramicroscopy, 2017, 174, 46-49.	0.8	5
53	Combined ToF-SIMS and AFM protocol for accurate 3D chemical analysis and data visualization. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	5
54	High-resolution inspections of ferroelectric thin PZT films. Annales De Chimie: Science Des Materiaux, 2001, 26, 145-149.	0.2	4

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55	Influence of the surrounding ambient on the reliability of the electrical characterization of thin oxide layers using an atomic force microscope. <i>Microelectronics Reliability</i> , 2011, 51, 2097-2101.	0.9	4
56	Toward a better understanding of the nanoscale degradation mechanisms of ultra-thin SiO <sub>2</sub> /Si films: Investigation of the best experimental conditions with a conductive-atomic force microscope. <i>Journal of Applied Physics</i> , 2011, 110, .	1.1	4
57	SIMS quantification of thick Si <sub>1-x</sub> Gex films (0 ≤ x ≤ 1) using the isotopic comparative method under Ar+beam. <i>Surface and Interface Analysis</i> , 2013, 45, 376-380.	0.8	4
58	Mechanical Switching of Ferroelectric Domains in 330 nm Thick Sol-Gel-Grown PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> Films Assisted by Nanocavities. <i>Advanced Electronic Materials</i> , 2022, 8, .	2.6	4
59	Er deposition in the submonolayer range on weakly boron-doped Si(111) surface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000, 18, 2239.	0.9	3
60	Isotopic comparative method (ICM) for the determination of variations of the ion yields in boron-doped silicon as a function of oxygen concentration in the 0-10 at.% range. <i>Surface and Interface Analysis</i> , 2011, 43, 137-140.	0.8	3
61	Spurious phenomena occurring during current measurement on ultra-thin dielectric layers: From electro-thermal effects to surface damage. <i>Journal of Applied Physics</i> , 2014, 115, 134103.	1.1	3
62	Surface atomic and chemical structure of relaxor Sr <sub>0.63</sub> Ba <sub>0.37</sub> Nb <sub>2</sub> O <sub>6</sub> (001). <i>Applied Physics Letters</i> , 2015, 106, 242901.	1.5	3
63	Effect of LiNbO <sub>3</sub> polarity on the structural, optical and acoustic properties of epitaxial ZnO and Mg <sub>x</sub> Zn <sub>1-x</sub> O films. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 484003.	1.3	3
64	Carbon self-organization in the ternary Si <sub>1-x</sub> GexCy alloy. <i>Journal of Applied Physics</i> , 1998, 83, 5251-5257.	1.1	2
65	Scanning tunneling microscopy study of the Er/Ge(111) c(2 $\sqrt{3}$ × $\sqrt{3}$ ) interface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000, 18, 2738-2741.	0.9	2
66	Comparison of scanning capacitance microscopy measurements in open and closed loop modes on highly doped silicon monolayers. <i>Solid-State Electronics</i> , 2006, 50, 1479-1482.	0.8	2
67	IMPACT OF THE AMBIENT HUMIDITY ON THE KINETICS OF FORMATION OF FERROELECTRIC DOMAINS IN MONOCRYSTALLINE LiTaO <sub>3</sub> . <i>International Journal of Nanoscience</i> , 2012, 11, 1240013.	0.4	2
68	Iterative deconvolution using the MRI model for removing experimental broadening and shift effects in SIMS depth profiles. <i>Surface and Interface Analysis</i> , 2018, 50, 1336-1342.	0.8	2
69	Nanoscale Study of the Influence of Atomic Oxygen on the Electrical Properties of LaAlO <sub>3</sub> Thin High-k Oxide Films Deposited by Molecular Beam Epitaxy. , 2009, , .		2
70	Influence of the Microstructure and of an Ion Beam Etching on the Domain Propagation in PZT Thin Films. <i>Integrated Ferroelectrics</i> , 2002, 50, 231-240.	0.3	1
71	Scaling Effects on Ferro-Electrics: Application in Nanoelectronics and Characterization. , 2009, , .		1
72	Nanoscale Characterization Of Ultra-Thin Dielectrics Using Scanning Capacitance Microscopy. , 2009, , .		1

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73	Epitaxial Growth of Ferroelectric Pb(Zr,Ti)O <sub>3</sub> Layers on GaAs. Materials Research Society Symposia Proceedings, 2014, 1675, 93-98.	0.1	1
74	Characterizing Ferroelectricity with an Atomic Force Microscopy: An All-Around Technique. Nanoscience and Technology, 2019, , 173-203.	1.5	1
75	Integration of functional oxides on silicon for novel devices. , 2011, , .		0
76	Single crystal PZT thin film membrane with highly conductive electrodes. , 2012, , .		0
77	Imaging by atomic force microscopy of the properties difference of the layers covering the facets created during SIMS analysis. Applied Surface Science, 2014, 308, 24-30.	3.1	0
78	Study and characterization of the irreversible transformation of electrically stressed planar Ti/TiOx/Ti junctions. Journal of Applied Physics, 2015, 118, 144502.	1.1	0
79	Electrical properties of Molecular Beam Epitaxy grown Barium Titanate probed by conductive Atomic Force Microscopy. Thin Solid Films, 2017, 642, 324-327.	0.8	0
80	Accurate Measurement at the Nanoscale of Remnant Polarisation Charge in Ferroelectric Films. , 2018, , .		0
81	Ionic migrations during poling process in lanthanum aluminate investigated by time of flight-secondary ions mass spectrometry and piezoresponse force microscopy combined methodology. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, 034002.	0.6	0
82	The Superconducting Transition in Boron Doped Silicon Films. Acta Physica Polonica A, 2010, 118, 1026-1027.	0.2	0