Bertrand Vilquin

List of Publications by Year
in descending order

109	1,655	279487 23	360668 35
papers	citations	h-index	g-index

112	112	112	2150
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Epitaxy of BaTiO3 thin film on Si(001) using a SrTiO3 buffer layer for non-volatile memory application. Microelectronic Engineering, 2011, 88, 1232-1235.	1.1	99
2	Molecular beam epitaxy of SrTiO3 on Si (001): Early stages of the growth and strain relaxation. Applied Physics Letters, 2009, 95, .	1.5	83
3	Orientation control of textured PZT thin films sputtered on silicon substrate with TiOx seeding. Materials Research Bulletin, 2000, 35, 1381-1390.	2.7	74
4	Narrowband Thermal Emission Realized through the Coupling of Cavity and Tamm Plasmon Resonances. ACS Photonics, 2018, 5, 2446-2452.	3.2	74
5	Chemistry and Atomic Distortion at the Surface of an Epitaxial BaTiO₃ Thin Film after Dissociative Adsorption of Water. Journal of Physical Chemistry C, 2012, 116, 21802-21809.	1.5	60
6	Metal-insulator transition and ferromagnetism phenomena inLa0.7Ce0.3MnO3thin films:â€ƒ Formation of Ce-rich nanoclusters. Physical Review B, 2004, 70, .	1.1	45
7	Screening of ferroelectric domains on BaTiO₃(001) surface by ultraviolet photo-induced charge and dissociative water adsorption. Applied Physics Letters, 2012, 101, 092902.	1.5	45
8	Full field electron spectromicroscopy applied to ferroelectric materials. Journal of Applied Physics, 2013, 113, .	1.1	43
9	Interface electronic structure in a metal/ferroelectric heterostructure under applied bias. Physical Review B, 2013, 87, .	1.1	40
10	Asymmetrical leakage currents as a possible origin of the polarization offsets observed in compositionally graded ferroelectric films. Journal of Applied Physics, 2003, 93, 5583-5591.	1.1	37
11	Huge Reduction of the Wake-Up Effect in Ferroelectric HZO Thin Films. ACS Applied Electronic Materials, 2019, 1, 1740-1745.	2.0	36
12	Epitaxial growth and electrical measurement of single crystalline Pb(Zr0.52Ti0.48)O3 thin film on Si(001) for micro-electromechanical systems. Thin Solid Films, 2012, 520, 4572-4575.	0.8	32
13	Graded ferroelectric thin films: Possible origin of the shift along the polarization axis. Applied Physics Letters, 2002, 81, 5015-5017.	1.5	31
14	Barium titanate (BaTiO_3) RF characterization for application in electro-optic modulators. Optical Materials Express, 2017, 7, 4328.	1.6	31
15	Effect of in situ Pt bottom electrode deposition and of Pt top electrode preparation on PZT thin films properties. Applied Surface Science, 2002, 195, 63-73.	3.1	29
16	Hall effect in strainedLa0.85Ba0.15MnO3thin films. Physical Review B, 2005, 71, .	1.1	28
17	Evidence for the formation of two phases during the growth of SrTi<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>O</mml:mi><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></m silicon. Physical Review B, 2011, 83, .	1.1	28
18	La0.7Ce0.3MnO3 epitaxial films fabricated by a pulsed laser deposition method. Solid State Communications, 2004, 129, 785-790.	0.9	27

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19	Molecular beam epitaxy growth of BaTiO3 thin films and crucial impact of oxygen content conditions on the electrical characteristics. Thin Solid Films, 2012, 520, 4595-4599.	0.8	27
20	Oxides heterostructures for nanoelectronics. International Journal of Nanotechnology, 2010, 7, 320.	0.1	25
21	Electromechanical response of amorphous LaAlO3 thin film probed by scanning probe microscopies. Applied Physics Letters, 2014, 105, .	1.5	25
22	Orientation control of rhomboedral PZT thin films on Pt/Ti/SiO2/Si substrates. EPJ Applied Physics, 2001, 15, 153-165.	0.3	24
23	A Review on the Efficiency of Graphene-Based BHJ Organic Solar Cells. Journal of Nanomaterials, 2015, 2015, 1-15.	1.5	24
24	Dramatic impact of pressure and annealing temperature on the properties of sputtered ferroelectric HZO layers. APL Materials, 2019, 7, .	2.2	24
25	Imprint issue during retention tests for HfO2-based FRAM: An industrial challenge?. Applied Physics Letters, 2021, 118, .	1.5	23
26	Surface investigations on different nucleation pathways for diamond heteroepitaxial growth on iridium. Diamond and Related Materials, 2012, 22, 52-58.	1.8	22
27	Characterization of ferroelectric hafnium/zirconium oxide solid solutions deposited by reactive magnetron sputtering. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	0.6	22
28	Epitaxial PZT thin films on TiOxcovered Pt/MgO substrate by RF magnetron sputtering. Ferroelectrics, 2001, 256, 47-68.	0.3	21
29	Transport and magnetic properties of La0.9Ce0.1MnO3 thin films. Journal of Applied Physics, 2005, 97, 033905.	1.1	21
30	Chemistry and structure of BaTiO3 ultra-thin films grown by different O2 plasma power. Chemical Physics Letters, 2014, 592, 206-210.	1.2	21
31	Effect of Li substitution on the magnetic properties of LixMg0.40Ni0.60â^'2xFe2+xO4 ferrites. Physica B: Condensed Matter, 2011, 406, 1506-1512.	1.3	20
32	Heteroepitaxy of SrTiO3 thin films on Si (001) using different growth strategies: Toward substratelike quality. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	0.6	20
33	Narrowband thermal emission from Tamm plasmons of a modified distributed Bragg reflector. Applied Physics Letters, 2018, 113, .	1.5	20
34	Dramatic effect of thermal expansion mismatch on the structural, dielectric, ferroelectric and pyroelectric properties of low-cost epitaxial PZT films on SrTiO₃and Si. CrystEngComm, 2016, 18, 1887-1891.	1.3	19
35	Room-temperature soft mode and ferroelectric like polarization in SrTiO3 ultrathin films: Infrared and ab initio study. Scientific Reports, 2017, 7, 2160.	1.6	19
36	Growth temperature dependence of epitaxial Gd2O3 films on Si(111). Microelectronic Engineering, 2009, 86, 1700-1702.	1.1	18

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37	Sawyerâ€“Tower hysteresis measurements on micron sized Pb(Zr,Ti)O3 capacitors. Review of Scientific Instruments, 2003, 74, 4429-4435.	0.6	17
38	Influence of the ferroelectric polarization on the electronic structure of BaTiO₃ thin films. Surface and Interface Analysis, 2010, 42, 1690-1694.	0.8	17
39	Ferroelectricity in a quasiamorphous ultrathin BaTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>film. Physical Review B, 2011, 84, .	1.1	17
40	Effect of Sr doping on LaTiO3 thin films. Applied Surface Science, 2005, 244, 494-497.	3.1	15
41	Control of p-type conductivity in Sr doped LaTiO3 thin films. Solid State Communications, 2005, 136, 328-332.	0.9	14
42	Crystallographic and optical properties of epitaxial Pb(Zr[sub 0.6],Ti[sub 0.4])O[sub 3] thin films grown on LaAlO[sub 3] substrates. Journal of Applied Physics, 2003, 94, 5167.	1.1	13
43	Direct epitaxial growth of SrTiO3 on Si (001): Interface, crystallization and IR evidence of phase transition. Thin Solid Films, 2011, 519, 5722-5725.	0.8	12
44	Pulsed laser deposition of epitaxial ferroelectric Pb(Zr,Ti)O3 films on silicon substrates. Thin Solid Films, 2012, 520, 4604-4607.	0.8	12
45	Epitaxial inversion on ferromagnetic (Fe,Zn)3O4 /ferroelectric BiFeO3 core-shell nanodot arrays using three dimensional nano-seeding assembly. Journal of Applied Physics, 2013, 113, .	1.1	12
46	Functional spinel oxide heterostructures on silicon. CrystEngComm, 2014, 16, 10741-10745.	1.3	12
47	Phase transitions in [001]-oriented morphotropic PbZr0.52Ti0.48O3 thin film deposited onto SrTiO3-buffered Si substrate. Journal of Applied Physics, 2014, 115, .	1.1	12
48	Application of a sensitive catalytic reactor to the study of CO oxidation over SrTiO₃(100) and BaTiO₃/SrTiO₃(100) ferroelectric surfaces. Surface and Interface Analysis, 2014, 46, 721-725.	0.8	11
49	Epitaxial manganite freestanding bridges for low power pressure sensors. Journal of Applied Physics, 2015, 118, .	1.1	11
50	Comparison between the ferroelectric/electric properties of the PbZr0.52Ti0.48O3 films grown on Si (100) and on STO (100) substrates. Journal of Materials Science, 2015, 50, 3883-3894.	1.7	11
51	Huge gain in pyroelectric energy conversion through epitaxy for integrated self-powered nanodevices. Nano Energy, 2017, 41, 43-48.	8.2	11
52	Photoinduced Metal-Like Phase of VO₂ with Subns Recovery. ACS Photonics, 2020, 7, 2395-2404.	3.2	11
53	Structural and magnetic properties of Nd0.7Ce0.3MnO3 thin films. Journal of Applied Physics, 2006, 99, 053908.	1.1	10
54	Ultralow equivalent oxide thickness obtained for thin amorphous LaAlO3 layers grown on Si(001). Applied Physics Letters, 2007, 91, .	1.5	10

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55	Influence of Li substitution on structural and magnetic properties of LixNi0.2Mg0.8â˜'2xFe2+xO4. Materials Chemistry and Physics, 2012, 133, 941-945.	2.0	10
56	Compositionally graded Pb(Zr,Ti)O3 thin films with different crystallographic orientations. Thin Solid Films, 2003, 436, 157-161.	0.8	9
57	Large anisotropy of ferroelectric and pyroelectric properties in heteroepitaxial oxide layers. Scientific Reports, 2018, 8, 4332.	1.6	9
58	Epitaxial growth of germanium on silicon using a Gd2O3/Si (111) crystalline template. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1187-1190.	0.9	8
59	Prospects for energy-efficient edge computing with integrated HfO<inf>2</inf>-based ferroelectric devices. , 2018, , .		8
60	Structural studies of epitaxial BaTiO3 thin film on silicon. Thin Solid Films, 2020, 693, 137636.	0.8	8
61	Influence of Orientation and Oxygen Content on Electrical Properties of In Situ Deposited PZT Thin Films. Ferroelectrics, 2003, 288, 111-120.	0.3	7
62	Epitaxial growth of high-Îº oxides on silicon. Thin Solid Films, 2008, 517, 197-200.	0.8	7
63	In situ monitoring of La_{0.67}Sr_{0.33}MnO₃ monolayers grown by pulsed laser deposition. Physica Status Solidi (B): Basic Research, 2010, 247, 1956-1959.	0.7	7
64	Insulatorâ€“metal transition of VO2ultrathin films on silicon: evidence for an electronic origin by infrared spectroscopy. Journal of Physics Condensed Matter, 2013, 25, 445402.	0.7	7
65	Epitaxial systems combining oxides and semiconductors. , 2013, , 451-475.		7
66	Nanoscale study of perovskite BiFeO3/spinel (Fe,Zn)3O4 co-deposited thin film by electrical scanning probe methods. Applied Surface Science, 2015, 351, 531-536.	3.1	7
67	X-ray photoelectron spectroscopy and diffraction investigation of a metalâ€“oxide-semiconductor heterostructure: Pt/Gd2O3/Si(111). Journal of Crystal Growth, 2015, 416, 118-125.	0.7	7
68	Electrode interface controlled electrical properties in epitaxial Pb(Zr0.52Ti0.48)O3 films grown on Si substrates with SrTiO3 buffer layer. Thin Solid Films, 2015, 593, 124-130.	0.8	6
69	Insertion of an Ultrathin Interfacial Aluminum Layer for the Realization of a Hf0.5Zr0.5O2 Ferroelectric Tunnel Junction. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	6
70	Response to â€œComment on â€˜Graded ferroelectric thin films: Possible origin of the shift along the polarization axisâ€™â€Šâ€•[Appl. Phys. Lett. 83, 809 (2003)]. Applied Physics Letters, 2003, 83, 811-811.	1.5	5
71	Impact of a Î³-Al[sub 2]O[sub 3](001) barrier on LaAlO[sub 3] metal-oxide-semiconductor capacitor electrical properties. Journal of Vacuum Science & Technology B, 2009, 27, 384.	1.3	5
72	Phase transition in ferroelectric Pb(Zr0.52Ti0.48)O3 epitaxial thin films. Thin Solid Films, 2014, 553, 85-88.	0.8	5

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73	Novel Concept of Gas Sensitivity Characterization of Materials Suited for Implementation in FET-Based Gas Sensors. Nanoscale Research Letters, 2016, 11, 481.	3.1	5
74	Impact of the channel length on molybdenum disulfide field effect transistors with hafnia-based high-k dielectric gate. AIP Advances, 2021, 11, .	0.6	5
75	Properties of oriented and graded PZT thin films. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 104, 176-179.	1.7	4
76	Solâ€“gel deposition of Pb(Zr,Ti)O3 on GaAs/InGaAs quantum well heterostructure via SrTiO3 templates: Stability of the semiconductor during oxide growth. Thin Solid Films, 2016, 617, 67-70.	0.8	4
77	Effect of strain and stoichiometry on the ferroelectric and pyroelectric properties of the epitaxial Pb(Zr0.2Ti0.8)O3 films deposited on Si wafers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 266, 115042.	1.7	4
78	Low-voltage, broadband graphene-coated Bragg mirror electro-optic modulator at telecom wavelengths. Optics Express, 2020, 28, 27506.	1.7	4
79	Transport and magnetic properties of Ce-doped LaMnO3 thin films. Applied Surface Science, 2005, 244, 355-358.	3.1	3
80	Surface atomic and chemical structure of relaxor Sr0.63Ba0.37Nb2O6(001). Applied Physics Letters, 2015, 106, 242901.	1.5	3
81	Realization of a graphene gate field effect transistor for electrochemical detection and biosensors. Thin Solid Films, 2016, 617, 150-155.	0.8	3
82	Chemical reactivity between solâ€“gel deposited Pb(Zr,Ti)O3layers and their GaAs substrates. CrystEngComm, 2016, 18, 7494-7500.	1.3	3
83	Epitaxial Systems Combining Oxides and Semiconductors. , 2018, , 377-402.		3
84	Ferroelectricity Improvement in Ultraâ€Thin Hf_{0.5}Zr_{0.5}O₂ Capacitors by the Insertion of a Ti Interfacial Layer. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	3
85	Investigation on Ce-doped LnMnO3 (, Nd) thin films by laser molecular beam epitaxy method. Vacuum, 2006, 80, 780-782.	1.6	2
86	Morphological and structural properties of InP/Gd2O3 nanowires grown by molecular beam epitaxy on silicon substrate. Journal of Crystal Growth, 2012, 347, 49-52.	0.7	2
87	Time-resolved photoemission spectroscopy on a metal/ferroelectric heterostructure. Physical Review B, 2013, 88, .	1.1	2
88	Room temperature optical response of zinc oxide nanowires synthesized by chemical bath deposition to toluene vapors. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1115-1119.	0.8	2
89	Structural, transport and magnetic properties of R1â^'xAxMnO3â^'Î´ (R=La, Nd, A=Ce) thin films fabricated by laser MBE method. Thin Solid Films, 2005, 486, 122-124.	0.8	1
90	Investigation on transport properties of strained La0.85Ba0.15MnO3 thin films using hall measurement. Applied Surface Science, 2005, 244, 481-484.	3.1	1

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91	Scaling Effects on Ferro-Electrics: Application in Nanoelectronics and Characterization. , 2009, , .		1
92	Slot waveguide electro-optic modulator with ferroelectric oxide BaTiO₃ on silicon. , 2014, , .		1
93	Realization and Characterization of Graphene on 4H-SiC for Tera-Hertz Transistors. Materials Science Forum, 2015, 821-823, 941-944.	0.3	1
94	Strain dependence of dissociative adsorption of H2O on epitaxially strained, out-of-plane polarized, BaTiO3(001) thin films. Thin Solid Films, 2021, 717, 138428.	0.8	1
95	Towards low-power near-infrared modulators operating at telecom wavelengths: when graphene plasmons frustrate their metallic counterparts. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 1563.	0.9	1
96	Strategies for CMOS Low Equivalent Oxide Thickness Achievement with High-Î¹ Oxides Grown on Si(001) by MBE. Materials Research Society Symposia Proceedings, 2008, 1073, 1.	0.1	0
97	Electrical Characteristics of Crystalline Gd2O3 Film on Si (111): Impacts of Growth Temperature and Post Deposition Annealing. Materials Research Society Symposia Proceedings, 2010, 1252, 9.	0.1	0
98	Integration of functional oxides on silicon for novel devices. , 2011, , .		0
99	Dry etching of magnetic tunnel junctions monitored by spectroscopic reflectance. Materials Science in Semiconductor Processing, 2011, 14, 278-286.	1.9	0
100	Pizeoelectric epitaxial sol-gel Pb(Zr<inf>0.52</inf>Ti<inf>0.48</inf>)O<inf>3</inf> film on Si(001). , 2012, , .		0
101	Single crystal PZT thin film membrane with highly conductive electrodes. , 2012, , .		0
102	Nanowires on a Film for Photoelectrochemical Water Splitting. , 2012, , .		0
103	Silicon CMOS compatible transition metal dioxide technology for boosting highly integrated photonic devices with disruptive performance. , 2014, , .		0
104	Hybrid silicon-ferroelectric oxide platform for tunable nanophotonics on silicon. , 2016, , .		0
105	Wideband Graphene Electro-Optic Modulator on 1D Photonic Crystal Cavity. , 2019, , .		0
106	Integration of Amorphous Low Refractive Index Active Materials in Silicon Photonics. , 2019, , .		0
107	Use of epitaxial PZT thin films for La2/3Sr1/3MnO3based MEMs devices on SrTiO3/Si. , 2021, , .		0
108	Comparison of Epitaxial and Textured Ferroelectric BaTiO₃ Thin Films. Journal of Modern Physics, 2020, 11, 509-516.	0.3	0

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109	Towards active photonic dispersion control using graphene-induced non-radiative loss. , 2020, , .		0