

Bertrand Vilquin

List of Publications by Year in descending order

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109
papers

1,655
citations

279487

23
h-index

360668

35
g-index

112
all docs

112
docs citations

112
times ranked

2150
citing authors

#	ARTICLE	IF	CITATIONS
1	Insertion of an Ultrathin Interfacial Aluminum Layer for the Realization of a Hf _{0.5} Zr _{0.5} O ₂ Ferroelectric Tunnel Junction. <i>Physica Status Solidi - Rapid Research Letters</i> , 2022, 16, .	1.2	6
2	Ferroelectricity Improvement in Ultra-thin Hf _{0.5} Zr _{0.5} O ₂ Capacitors by the Insertion of a Ti Interfacial Layer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2022, 16, .	1.2	3
3	Strain dependence of dissociative adsorption of H ₂ O on epitaxially strained, out-of-plane polarized, BaTiO ₃ (001) thin films. <i>Thin Solid Films</i> , 2021, 717, 138428.	0.8	1
4	Imprint issue during retention tests for HfO ₂ -based FRAM: An industrial challenge?. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	23
5	Effect of strain and stoichiometry on the ferroelectric and pyroelectric properties of the epitaxial Pb(Zr _{0.2} Ti _{0.8})O ₃ films deposited on Si wafers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 266, 115042.	1.7	4
6	Impact of the channel length on molybdenum disulfide field effect transistors with hafnia-based high- κ dielectric gate. <i>AIP Advances</i> , 2021, 11, .	0.6	5
7	Use of epitaxial PZT thin films for La _{2/3} Sr _{1/3} MnO ₃ based MEMs devices on SrTiO ₃ /Si. , 2021, , .		0
8	Structural studies of epitaxial BaTiO ₃ thin film on silicon. <i>Thin Solid Films</i> , 2020, 693, 137636.	0.8	8
9	Photoinduced Metal-Like Phase of VO ₂ with Subns Recovery. <i>ACS Photonics</i> , 2020, 7, 2395-2404.	3.2	11
10	Low-voltage, broadband graphene-coated Bragg mirror electro-optic modulator at telecom wavelengths. <i>Optics Express</i> , 2020, 28, 27506.	1.7	4
11	Towards low-power near-infrared modulators operating at telecom wavelengths: when graphene plasmons frustrate their metallic counterparts. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2020, 37, 1563.	0.9	1
12	Comparison of Epitaxial and Textured Ferroelectric BaTiO ₃ Thin Films. <i>Journal of Modern Physics</i> , 2020, 11, 509-516.	0.3	0
13	Towards active photonic dispersion control using graphene-induced non-radiative loss. , 2020, , .		0
14	Dramatic impact of pressure and annealing temperature on the properties of sputtered ferroelectric HZO layers. <i>APL Materials</i> , 2019, 7, .	2.2	24
15	Huge Reduction of the Wake-Up Effect in Ferroelectric HZO Thin Films. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1740-1745.	2.0	36
16	Characterization of ferroelectric hafnium/zirconium oxide solid solutions deposited by reactive magnetron sputtering. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019, 37, .	0.6	22
17	Wideband Graphene Electro-Optic Modulator on 1D Photonic Crystal Cavity. , 2019, , .		0
18	Integration of Amorphous Low Refractive Index Active Materials in Silicon Photonics. , 2019, , .		0

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19	Narrowband Thermal Emission Realized through the Coupling of Cavity and Tamm Plasmon Resonances. ACS Photonics, 2018, 5, 2446-2452.	3.2	74
20	Large anisotropy of ferroelectric and pyroelectric properties in heteroepitaxial oxide layers. Scientific Reports, 2018, 8, 4332.	1.6	9
21	Prospects for energy-efficient edge computing with integrated HfO ₂ -based ferroelectric devices. , 2018, , .		8
22	Narrowband thermal emission from Tamm plasmons of a modified distributed Bragg reflector. Applied Physics Letters, 2018, 113, .	1.5	20
23	Epitaxial Systems Combining Oxides and Semiconductors. , 2018, , 377-402.		3
24	Room-temperature soft mode and ferroelectric like polarization in SrTiO ₃ ultrathin films: Infrared and ab initio study. Scientific Reports, 2017, 7, 2160.	1.6	19
25	Huge gain in pyroelectric energy conversion through epitaxy for integrated self-powered nanodevices. Nano Energy, 2017, 41, 43-48.	8.2	11
26	Barium titanate (BaTiO ₃) RF characterization for application in electro-optic modulators. Optical Materials Express, 2017, 7, 4328.	1.6	31
27	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
28	Sol-gel deposition of Pb(Zr,Ti)O ₃ on GaAs/InGaAs quantum well heterostructure via SrTiO ₃ templates: Stability of the semiconductor during oxide growth. Thin Solid Films, 2016, 617, 67-70.	0.8	4
29	Realization of a graphene gate field effect transistor for electrochemical detection and biosensors. Thin Solid Films, 2016, 617, 150-155.	0.8	3
30	Chemical reactivity between sol-gel deposited Pb(Zr,Ti)O ₃ layers and their GaAs substrates. CrystEngComm, 2016, 18, 7494-7500.	1.3	3
31	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
32	Hybrid silicon-ferroelectric oxide platform for tunable nanophotonics on silicon. , 2016, , .		0
33	Dramatic effect of thermal expansion mismatch on the structural, dielectric, ferroelectric and pyroelectric properties of low-cost epitaxial PZT films on SrTiO ₃ and Si. CrystEngComm, 2016, 18, 1887-1891.	1.3	19
34	Epitaxial manganite freestanding bridges for low power pressure sensors. Journal of Applied Physics, 2015, 118, .	1.1	11
35	Surface atomic and chemical structure of relaxor Sr _{0.63} Ba _{0.37} Nb ₂ O ₆ (001). Applied Physics Letters, 2015, 106, 242901.	1.5	3
36	A Review on the Efficiency of Graphene-Based BHJ Organic Solar Cells. Journal of Nanomaterials, 2015, 2015, 1-15.	1.5	24

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37	Realization and Characterization of Graphene on 4H-SiC for Tera-Hertz Transistors. Materials Science Forum, 2015, 821-823, 941-944.	0.3	1
38	Nanoscale study of perovskite BiFeO ₃ /spinel (Fe,Zn) ₃ O ₄ co-deposited thin film by electrical scanning probe methods. Applied Surface Science, 2015, 351, 531-536.	3.1	7
39	X-ray photoelectron spectroscopy and diffraction investigation of a metal-oxide-semiconductor heterostructure: Pt/Gd ₂ O ₃ /Si(111). Journal of Crystal Growth, 2015, 416, 118-125.	0.7	7
40	Comparison between the ferroelectric/electric properties of the PbZr _{0.52} Ti _{0.48} O ₃ films grown on Si (100) and on STO (100) substrates. Journal of Materials Science, 2015, 50, 3883-3894.	1.7	11
41	Electrode interface controlled electrical properties in epitaxial Pb(Zr _{0.52} Ti _{0.48})O ₃ films grown on Si substrates with SrTiO ₃ buffer layer. Thin Solid Films, 2015, 593, 124-130.	0.8	6
42	Functional spinel oxide heterostructures on silicon. CrystEngComm, 2014, 16, 10741-10745.	1.3	12
43	Phase transitions in [001]-oriented morphotropic PbZr _{0.52} Ti _{0.48} O ₃ thin film deposited onto SrTiO ₃ -buffered Si substrate. Journal of Applied Physics, 2014, 115, .	1.1	12
44	Electromechanical response of amorphous LaAlO ₃ thin film probed by scanning probe microscopies. Applied Physics Letters, 2014, 105, .	1.5	25
45	Slot waveguide electro-optic modulator with ferroelectric oxide BaTiO ₃ on silicon. , 2014, , .		1
46	Application of a sensitive catalytic reactor to the study of CO oxidation over SrTiO ₃ (100) and BaTiO ₃ /SrTiO ₃ (100) ferroelectric surfaces. Surface and Interface Analysis, 2014, 46, 721-725.	0.8	11
47	Phase transition in ferroelectric Pb(Zr _{0.52} Ti _{0.48})O ₃ epitaxial thin films. Thin Solid Films, 2014, 553, 85-88.	0.8	5
48	Silicon CMOS compatible transition metal dioxide technology for boosting highly integrated photonic devices with disruptive performance. , 2014, , .		0
49	Chemistry and structure of BaTiO ₃ ultra-thin films grown by different O ₂ plasma power. Chemical Physics Letters, 2014, 592, 206-210.	1.2	21
50	Full field electron spectromicroscopy applied to ferroelectric materials. Journal of Applied Physics, 2013, 113, .	1.1	43
51	Time-resolved photoemission spectroscopy on a metal/ferroelectric heterostructure. Physical Review B, 2013, 88, .	1.1	2
52	Insulator-metal transition of VO ₂ ultrathin films on silicon: evidence for an electronic origin by infrared spectroscopy. Journal of Physics Condensed Matter, 2013, 25, 445402.	0.7	7
53	Epitaxial inversion on ferromagnetic (Fe,Zn) ₃ O ₄ /ferroelectric BiFeO ₃ core-shell nanodot arrays using three dimensional nano-seeding assembly. Journal of Applied Physics, 2013, 113, .	1.1	12
54	Epitaxial systems combining oxides and semiconductors. , 2013, , 451-475.		7

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55	Interface electronic structure in a metal/ferroelectric heterostructure under applied bias. Physical Review B, 2013, 87, .	1.1	40
56	Screening of ferroelectric domains on BaTiO ₃ (001) surface by ultraviolet photo-induced charge and dissociative water adsorption. Applied Physics Letters, 2012, 101, 092902.	1.5	45
57	Surface investigations on different nucleation pathways for diamond heteroepitaxial growth on iridium. Diamond and Related Materials, 2012, 22, 52-58.	1.8	22
58	Chemistry and Atomic Distortion at the Surface of an Epitaxial BaTiO ₃ Thin Film after Dissociative Adsorption of Water. Journal of Physical Chemistry C, 2012, 116, 21802-21809.	1.5	60
59	Morphological and structural properties of InP/Gd ₂ O ₃ nanowires grown by molecular beam epitaxy on silicon substrate. Journal of Crystal Growth, 2012, 347, 49-52.	0.7	2
60	Pizeoelectric epitaxial sol-gel Pb(Zr _{0.52} Ti _{0.48})O ₃ film on Si(001). , 2012, , .		0
61	Single crystal PZT thin film membrane with highly conductive electrodes. , 2012, , .		0
62	Nanowires on a Film for Photoelectrochemical Water Splitting. , 2012, , .		0
63	Influence of Li substitution on structural and magnetic properties of Li _x Ni _{0.2} Mg _{0.8-2x} Fe _{2+x} O ₄ . Materials Chemistry and Physics, 2012, 133, 941-945.	2.0	10
64	Pulsed laser deposition of epitaxial ferroelectric Pb(Zr,Ti)O ₃ films on silicon substrates. Thin Solid Films, 2012, 520, 4604-4607.	0.8	12
65	Molecular beam epitaxy growth of BaTiO ₃ thin films and crucial impact of oxygen content conditions on the electrical characteristics. Thin Solid Films, 2012, 520, 4595-4599.	0.8	27
66	Epitaxial growth and electrical measurement of single crystalline Pb(Zr _{0.52} Ti _{0.48})O ₃ thin film on Si(001) for micro-electromechanical systems. Thin Solid Films, 2012, 520, 4572-4575.	0.8	32
67	Integration of functional oxides on silicon for novel devices. , 2011, , .		0
68	Dry etching of magnetic tunnel junctions monitored by spectroscopic reflectance. Materials Science in Semiconductor Processing, 2011, 14, 278-286.	1.9	0
69	Epitaxy of BaTiO ₃ thin film on Si(001) using a SrTiO ₃ buffer layer for non-volatile memory application. Microelectronic Engineering, 2011, 88, 1232-1235.	1.1	99
70	Effect of Li substitution on the magnetic properties of Li _x Mg _{0.40} Ni _{0.60-2x} Fe _{2+x} O ₄ ferrites. Physica B: Condensed Matter, 2011, 406, 1506-1512.	1.3	20
71	Direct epitaxial growth of SrTiO ₃ on Si (001): Interface, crystallization and IR evidence of phase transition. Thin Solid Films, 2011, 519, 5722-5725.	0.8	12
72	Evidence for the formation of two phases during the growth of SrTi ₃ on silicon. Physical Review B, 2011, 83, .	1.1	28

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73	Ferroelectricity in a quasicrystalline ultrathin BaTiO_3 film. <i>Physical Review B</i> , 2011, 84, .	1.1	17
74	Heteroepitaxy of SrTiO_3 thin films on Si (001) using different growth strategies: Toward substrate-like quality. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011, 29, .	0.6	20
75	<i>In situ</i> monitoring of $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ monolayers grown by pulsed laser deposition. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1956-1959.	0.7	7
76	Influence of the ferroelectric polarization on the electronic structure of BaTiO_3 thin films. <i>Surface and Interface Analysis</i> , 2010, 42, 1690-1694.	0.8	17
77	Electrical Characteristics of Crystalline Gd_2O_3 Film on Si (111): Impacts of Growth Temperature and Post Deposition Annealing. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1252, 9.	0.1	0
78	Epitaxial growth of germanium on silicon using a $\text{Gd}_2\text{O}_3/\text{Si}$ (111) crystalline template. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 1187-1190.	0.9	8
79	Oxides heterostructures for nanoelectronics. <i>International Journal of Nanotechnology</i> , 2010, 7, 320.	0.1	25
80	Molecular beam epitaxy of SrTiO_3 on Si (001): Early stages of the growth and strain relaxation. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	83
81	Scaling Effects on Ferro-Electrics: Application in Nanoelectronics and Characterization. , 2009, , .		1
82	Impact of a $\text{Al}_2\text{O}_3(001)$ barrier on LaAlO_3 metal-oxide-semiconductor capacitor electrical properties. <i>Journal of Vacuum Science & Technology B</i> , 2009, 27, 384.	1.3	5
83	Growth temperature dependence of epitaxial Gd_2O_3 films on Si(111). <i>Microelectronic Engineering</i> , 2009, 86, 1700-1702.	1.1	18
84	Epitaxial growth of high- κ oxides on silicon. <i>Thin Solid Films</i> , 2008, 517, 197-200.	0.8	7
85	Strategies for CMOS Low Equivalent Oxide Thickness Achievement with High- κ Oxides Grown on Si(001) by MBE. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1073, 1.	0.1	0
86	Ultralow equivalent oxide thickness obtained for thin amorphous LaAlO_3 layers grown on Si(001). <i>Applied Physics Letters</i> , 2007, 91, .	1.5	10
87	Investigation on Ce-doped LnMnO_3 (, Nd) thin films by laser molecular beam epitaxy method. <i>Vacuum</i> , 2006, 80, 780-782.	1.6	2
88	Structural and magnetic properties of $\text{Nd}_{0.7}\text{Ce}_{0.3}\text{MnO}_3$ thin films. <i>Journal of Applied Physics</i> , 2006, 99, 053908.	1.1	10
89	Structural, transport and magnetic properties of $\text{R}_1\text{A}_x\text{MnO}_3$ ($\text{R}=\text{La, Nd, A}=\text{Ce}$) thin films fabricated by laser MBE method. <i>Thin Solid Films</i> , 2005, 486, 122-124.	0.8	1
90	Control of p-type conductivity in Sr doped LaTiO_3 thin films. <i>Solid State Communications</i> , 2005, 136, 328-332.	0.9	14

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91	Transport and magnetic properties of Ce-doped LaMnO ₃ thin films. Applied Surface Science, 2005, 244, 355-358.	3.1	3
92	Investigation on transport properties of strained La _{0.85} Ba _{0.15} MnO ₃ thin films using hall measurement. Applied Surface Science, 2005, 244, 481-484.	3.1	1
93	Effect of Sr doping on LaTiO ₃ thin films. Applied Surface Science, 2005, 244, 494-497.	3.1	15
94	Transport and magnetic properties of La _{0.9} Ce _{0.1} MnO ₃ thin films. Journal of Applied Physics, 2005, 97, 033905.	1.1	21
95	Hall effect in strained La _{0.85} Ba _{0.15} MnO ₃ thin films. Physical Review B, 2005, 71, .	1.1	28
96	La _{0.7} Ce _{0.3} MnO ₃ epitaxial films fabricated by a pulsed laser deposition method. Solid State Communications, 2004, 129, 785-790.	0.9	27
97	Metal-insulator transition and ferromagnetism phenomena in La _{0.7} Ce _{0.3} MnO ₃ thin films: ϵ_f Formation of Ce-rich nanoclusters. Physical Review B, 2004, 70, .	1.1	45
98	Compositionally graded Pb(Zr,Ti)O ₃ thin films with different crystallographic orientations. Thin Solid Films, 2003, 436, 157-161.	0.8	9
99	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
100	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
101	Influence of Orientation and Oxygen Content on Electrical Properties of In Situ Deposited PZT Thin Films. Ferroelectrics, 2003, 288, 111-120.	0.3	7
102	Crystallographic and optical properties of epitaxial Pb(Zr _{0.6} ,Ti _{0.4})O ₃ thin films grown on LaAlO ₃ substrates. Journal of Applied Physics, 2003, 94, 5167.	1.1	13
103	Response to ϵ_f Comment on ϵ_f Graded ferroelectric thin films: Possible origin of the shift along the polarization axis ϵ_f [Appl. Phys. Lett. 83, 809 (2003)]. Applied Physics Letters, 2003, 83, 811-811.	1.5	5
104	Sawyer ϵ_f Tower hysteresis measurements on micron sized Pb(Zr,Ti)O ₃ capacitors. Review of Scientific Instruments, 2003, 74, 4429-4435.	0.6	17
105	Graded ferroelectric thin films: Possible origin of the shift along the polarization axis. Applied Physics Letters, 2002, 81, 5015-5017.	1.5	31
106	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
107	Epitaxial PZT thin films on TiO _x covered Pt/MgO substrate by RF magnetron sputtering. Ferroelectrics, 2001, 256, 47-68.	0.3	21
108	Orientation control of rhomboedral PZT thin films on Pt/Ti/SiO ₂ /Si substrates. EPJ Applied Physics, 2001, 15, 153-165.	0.3	24

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109	Orientation control of textured PZT thin films sputtered on silicon substrate with TiOx seeding. Materials Research Bulletin, 2000, 35, 1381-1390.	2.7	74