

# Switching of ferroelectric polarization in epitaxial BaTiO<sub>3</sub> with a conducting bottom electrode

Nature Nanotechnology

8, 748-754

DOI: [10.1038/nnano.2013.192](https://doi.org/10.1038/nnano.2013.192)

Citation Report

#	ARTICLE	IF	CITATIONS
2	Ferroelectric Pb(Zr,Ti)O <sub>3</sub> epitaxial layers on GaAs. Applied Physics Letters, 2013, 103, .	1.5	23
3	Structural study and ferroelectricity of epitaxial BaTiO <sub>3</sub> films on silicon grown by molecular beam epitaxy. Journal of Applied Physics, 2014, 116, .	1.1	20
4	Magnetic properties of BaTiO <sub>3</sub> /La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> thin films integrated on Si(100). Journal of Applied Physics, 2014, 116, 224104.	1.1	22
5	Polarization switching in perforated ferroelectric films. Physics of the Solid State, 2014, 56, 2005-2009.	0.2	2
6	Tunable electrical properties of TaN <sub>x</sub> thin films grown by ionized physical vapor deposition. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, 051202.	0.6	2
7	Epitaxial <i>c</i> -axis oriented BaTiO <sub>3</sub> thin films on SrTiO <sub>3</sub> -buffered Si(001) by atomic layer deposition. Applied Physics Letters, 2014, 104, .	1.5	59
8	Atomic and electronic structure of the ferroelectric BaTiO <sub>3</sub> /Ge(001) interface. Applied Physics Letters, 2014, 104, .	1.5	45
9	Negative differential resistance and resistance switching behaviors in BaTiO <sub>3</sub> thin films. Journal of Applied Physics, 2014, 115, .	1.1	41
10	Epitaxial ferromagnetic oxide thin films on silicon with atomically sharp interfaces. Applied Physics Letters, 2014, 105, .	1.5	5
11	Incorporation of La in epitaxial SrTiO <sub>3</sub> thin films grown by atomic layer deposition on SrTiO <sub>3</sub> -buffered Si (001) substrates. Journal of Applied Physics, 2014, 115, .	1.1	15
12	Direct Synthesis of Chromium Perovskite Oxyhydride with a High Magnetic Transition Temperature. Angewandte Chemie - International Edition, 2014, 53, 10377-10380.	7.2	84
14	Hysteretic electrical transport in BaTiO <sub>3</sub> /Ba <sub>1-x</sub> Sr <sub>x</sub> TiO <sub>3</sub> /Ge heterostructures. Applied Physics Letters, 2014, 104, .	1.5	23
15	An Epitaxial Ferroelectric Tunnel Junction on Silicon. Advanced Materials, 2014, 26, 7185-7189.	11.1	61
16	Polar state in freestanding strontium titanate nanoparticles. Applied Physics Letters, 2014, 105, 091901.	1.5	10
17	Arising applications of ferroelectric materials in photovoltaic devices. Journal of Materials Chemistry A, 2014, 2, 6027-6041.	5.2	408
18	Structural characterisation of BaTiO <sub>3</sub> thin films deposited on SrRuO <sub>3</sub> /YSZ buffered silicon substrates and silicon microcantilevers. Journal of Applied Physics, 2014, 115, 053506.	1.1	14
19	The Quantum Metal Ferroelectric Field-Effect Transistor. IEEE Transactions on Electron Devices, 2014, 61, 2145-2153.	1.6	42
20	Ferroelectricity in Si-Doped HfO <sub>2</sub> Revealed: A Binary Lead-Free Ferroelectric. Advanced Materials, 2014, 26, 8198-8202.	11.1	147

#	ARTICLE	IF	CITATIONS
21	Ferroelectric and ferromagnetic properties in BaTiO <sub>3</sub> thin films on Si (100). Journal of Applied Physics, 2014, 116, .	1.1	24
22	Voltage induced local hysteretic phase switching in silicon. Applied Physics Letters, 2014, 104, .	1.5	43
23	Growth of SrTiO <sub>3</sub> on Si(001) by hybrid molecular beam epitaxy. Physica Status Solidi - Rapid Research Letters, 2014, 8, 917-923.	1.2	32
24	Room-Temperature Negative Capacitance in a Ferroelectric/Dielectric Superlattice Heterostructure. Nano Letters, 2014, 14, 5814-5819.	4.5	123
25	Active Silicon Integrated Nanophotonics: Ferroelectric BaTiO <sub>3</sub> Devices. Nano Letters, 2014, 14, 1419-1425.	4.5	208
26	Prospective of Semiconductor Memory Devices: from Memory System to Materials. Advanced Electronic Materials, 2015, 1, 1400056.	2.6	152
27	Initial growth of Ba on Ge on Si(001) by hybrid molecular beam epitaxy. An STM and DFT study. Physical Review B, 2015, 91, .		
28	Multifunctional heterostructures integrated on Si (100). Emerging Materials Research, 2015, 4, 50-70.	0.4	6
29	Extending CMOS with negative capacitance. , 2014, , 56-76.		5
30	Polarization and leakage current properties of high quality bismuth sodium titanate single crystals and polycrystalline ceramics. Journal of the Ceramic Society of Japan, 2015, 123, 9-16.	0.5	5
31	Atomic layer deposition of perovskite oxides and their epitaxial integration with Si, Ge, and other semiconductors. Applied Physics Reviews, 2015, 2, .	5.5	76
32	Electric field control of magnetic properties and electron transport in BaTiO <sub>3</sub> -based multiferroic heterostructures. Journal of Physics Condensed Matter, 2015, 27, 504004.	0.7	9
33	Integrated films of transition metal oxides for information technology. Microelectronic Engineering, 2015, 147, 285-289.	1.1	12
34	Carrier density modulation in a germanium heterostructure by ferroelectric switching. Nature Communications, 2015, 6, 6067.	5.8	75
35	Band-Gap Engineering at a Semiconductor/Crystalline Oxide Interface. Advanced Materials Interfaces, 2015, 2, 1400497.	1.9	31
36	Integration of lead-free ferroelectric on HfO <sub>2</sub> /Si (100) for high performance non-volatile memory applications. Scientific Reports, 2015, 5, 8494.	1.6	43
37	Optoelectrical Molybdenum Disulfide (MoS <sub>2</sub> )-Ferroelectric Memories. ACS Nano, 2015, 9, 8089-8098.	7.3	193
38	Evaluation and optimization of short channel ferroelectric MOSFET for low power circuit application with BSIM4 and Landau theory. Solid-State Electronics, 2015, 114, 17-22.	0.8	42

#	ARTICLE	IF	CITATIONS
39	Model of two-dimensional electron gas formation at ferroelectric interfaces. Physical Review B, 2015, 92, .	1.1	30
40	Lead-free epitaxial ferroelectric material integration on semiconducting (100) Nb-doped SrTiO <sub>3</sub> for low-power non-volatile memory and efficient ultraviolet ray detection. Scientific Reports, 2015, 5, 12415.	1.6	42
41	A review of molecular beam epitaxy of ferroelectric BaTiO <sub>3</sub> films on Si, Ge and GaAs substrates and their applications. Science and Technology of Advanced Materials, 2015, 16, 036005.	2.8	89
42	Analysis of the Pockels effect in ferroelectric barium titanate thin films on Si(0 0 1). Microelectronic Engineering, 2015, 147, 215-218.	1.1	34
43	Ferroelectricity and Antiferroelectricity of Doped Thin HfO <sub>2</sub> -Based Films. Advanced Materials, 2015, 27, 1811-1831.	11.1	777
44	Ferroelectric Polarization in CH <sub>3</sub> NH <sub>3</sub> Pb <sub>3</sub> Perovskite. Journal of Physical Chemistry Letters, 2015, 6, 1729-1735.	2.1	180
45	Partially depleted silicon-on-ferroelectric insulator field effect transistor (PD-SOFFET). , 2015, , .		3
46	Focus on materials challenges for protection - environment and health. Science and Technology of Advanced Materials, 2015, 16, 030301.	2.8	1
47	On-axis radio frequency magnetron sputtering of stoichiometric BaTiO <sub>3</sub> target: Localized re-sputtering and substrate etching during thin film growth. Thin Solid Films, 2015, 596, 77-82.	0.8	8
48	Quasi-two-dimensional electron gas at the epitaxial alumina/SrTiO <sub>3</sub> interface: Control of oxygen vacancies. Journal of Applied Physics, 2015, 117, .	1.1	37
49	Current-voltage characterization of epitaxial grown barium titanate thin films on Si substrate. Journal of Materials Science: Materials in Electronics, 2015, 26, 8315-8318.	1.1	4
50	Negative capacitance in a ferroelectric capacitor. Nature Materials, 2015, 14, 182-186.	13.3	611
51	Lead-free Bi <sub>5-x</sub> La <sub>x</sub> Ti <sub>3</sub> FeO <sub>15</sub> (x = 0, 1) nanofibers toward wool keratin-based biocompatible piezoelectric nanogenerators. Journal of Materials Chemistry C, 2016, 4, 7324-7331.	2.7	35
52	Coherent Epitaxy of a Ferroelectric Heterostructure on a Trilayered Buffer for Integration into Silicon. Advanced Electronic Materials, 2016, 2, 1500334.	2.6	8
53	Electrical Switching of Magnetization in the Artificial Multiferroic CoFeB/BaTiO <sub>3</sub> . Advanced Electronic Materials, 2016, 2, 1600085.	2.6	25
54	Toward the Atomically Abrupt Interfaces of SiO <sub>x</sub> /Semiconductor Junctions. Advanced Materials Interfaces, 2016, 3, 1500510.	1.9	3
55	Improving the structural quality and electrical resistance of SrTiO <sub>3</sub> thin films on Si (001) via a two-step anneal. Journal of Applied Physics, 2016, 119, .	1.1	14
56	Low voltage Flash memory design based on floating gate SOFFET. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
57	Ferroelectric-like hysteresis loop originated from non-ferroelectric effects. Applied Physics Letters, 2016, 109, .	1.5	32
58	High ferroelectric polarization in <i>c</i> -oriented BaTiO <sub>3</sub> epitaxial thin films on SrTiO <sub>3</sub> /Si(001). Applied Physics Letters, 2016, 109, .	1.5	24
59	Multifunctional epitaxial systems on silicon substrates. Applied Physics Reviews, 2016, 3, 031301.	5.5	30
60	Control of SrO buffer-layer formation on Si(001) using the pulsed-laser deposition technique. RSC Advances, 2016, 6, 82150-82156.	1.7	7
61	Anti-phase boundaries at the SrTiO <sub>3</sub> /Si(001) interface studied using aberration-corrected scanning transmission electron microscopy. Applied Physics Letters, 2016, 108, .	1.5	16
62	Detection of biochemical molecules using CM-SOFFET based biosensor. , 2016, , .		0
63	Theoretical modeling and experimental observations of the atomic layer deposition of SrO using a cyclopentadienyl Sr precursor. Journal of Chemical Physics, 2016, 145, 064701.	1.2	3
64	Crystal structure and polarization hysteresis properties of ferroelectric BaTiO <sub>3</sub> thin-film capacitors on (Ba,Sr)TiO <sub>3</sub> -buffered substrates. Japanese Journal of Applied Physics, 2016, 55, 10TA03.	0.8	4
65	Sol-gel deposition of Pb(Zr,Ti)O <sub>3</sub> on GaAs/InGaAs quantum well heterostructure via SrTiO <sub>3</sub> templates: Stability of the semiconductor during oxide growth. Thin Solid Films, 2016, 617, 67-70.	0.8	4
66	Chemical reactivity between sol-gel deposited Pb(Zr,Ti)O <sub>3</sub> layers and their GaAs substrates. CrystEngComm, 2016, 18, 7494-7500.	1.3	3
67	Electro-Optically Active Oxides on Silicon for Photonics. Materials and Energy, 2016, , 455-501.	2.5	9
68	GaAs nanowires with oxidation-proof arsenic capping for the growth of an epitaxial shell. Nanoscale, 2016, 8, 15637-15644.	2.8	6
69	Self-Positioned Nanosized Mask for Transparent and Flexible Ferroelectric Polymer Nanodiodes Array. ACS Applied Materials & Interfaces, 2016, 8, 27074-27080.	4.0	9
71	Tuning polarization states and interface properties of BaTiO <sub>3</sub> by metal capping layers. Physical Review B, 2016, 93, .		
72	Contradictory nature of Co doping in ferroelectric BaTiO <sub>3</sub> . Physical Review B, 2016, 94, .	1.1	8
73	Integration of BiFeO <sub>3</sub> /La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> heterostructures with III-V semiconductors for low-power non-volatile memory and multiferroic field effect transistors. Journal of Materials Chemistry C, 2016, 4, 10386-10394.	2.7	18
74	Nonlinear-optical study of magnetoelectric interactions in multilayer structures. Ferroelectrics, 2016, 500, 37-46.	0.3	6
75	Monolithic integration of room-temperature multifunctional BaTiO <sub>3</sub> -CoFe <sub>2</sub> O <sub>4</sub> epitaxial heterostructures on Si(001). Scientific Reports, 2016, 6, 31870.	1.6	19

#	ARTICLE	IF	CITATIONS
76	New Trends in Magnetic Memories. , 2016, , 457-509.		1
77	Crystallographic orientation dependent dielectric properties of epitaxial BaTiO <sub>3</sub> thin films. Ceramics International, 2016, 42, 4400-4405.	2.3	37
78	A Hybrid Barium Titanate-Silicon Photonics Platform for Ultraefficient Electro-Optic Tuning. Journal of Lightwave Technology, 2016, 34, 1688-1693.	2.7	81
79	Electro-Optical Modulation Based on Pockels Effect in BaTiO <sub>3</sub> With a Multi-Domain Structure. IEEE Photonics Technology Letters, 2016, 28, 990-993.	1.3	33
80	GaAs Core/SrTiO <sub>3</sub> Shell Nanowires Grown by Molecular Beam Epitaxy. Nano Letters, 2016, 16, 2393-2399.	4.5	10
81	Single crystal functional oxides on silicon. Nature Communications, 2016, 7, 10547.	5.8	156
82	A Low-Leakage Epitaxial High- $\kappa$ Gate Oxide for Germanium Metal-Oxide-Semiconductor Devices. ACS Applied Materials & Interfaces, 2016, 8, 5416-5423.	4.0	9
83	Ferroelectric, piezoelectric properties and magnetoelectric coupling behavior in aurivillius Bi <sub>5</sub> Ti <sub>3</sub> FeO <sub>15</sub> multiferroic nanofibers by electrospinning. Journal of Alloys and Compounds, 2016, 675, 441-447.	2.8	35
84	Microstructure and ferroelectricity of BaTiO <sub>3</sub> thin films on Si for integrated photonics. Nanotechnology, 2017, 28, 075706.	1.3	76
85	Monolithic integration of metal-ferroelectric-semiconductor heterostructure using atomic layer deposition. Proceedings of SPIE, 2017, , .	0.8	3
86	Designing nanocomposites using supercritical CO <sub>2</sub> to insert Ni nanoparticles into the pores of nanopatterned BaTiO <sub>3</sub> thin films. Journal of Materials Chemistry C, 2017, 5, 1083-1089.	2.7	8
87	Polarization-induced interfacial coupling modulations in BaTiO <sub>3</sub> /GaN heterojunction devices. Journal Physics D: Applied Physics, 2017, 50, 275101.	1.3	10
88	Room-temperature soft mode and ferroelectric like polarization in SrTiO <sub>3</sub> ultrathin films: Infrared and ab initio study. Scientific Reports, 2017, 7, 2160.	1.6	19
89	BaTiO <sub>3</sub> /SrTiO <sub>3</sub> heterostructures for ferroelectric field effect transistors. Applied Physics Letters, 2017, 110, .	1.5	33
90	Epitaxial integration of tetragonal BiFeO <sub>3</sub> with silicon for nonvolatile memory applications. Journal of Crystal Growth, 2017, 459, 178-184.	0.7	7
91	Water-Soluble Epitaxial NaCl Thin Film for Fabrication of Flexible Devices. Scientific Reports, 2017, 7, 8716.	1.6	27
92	<i>Ab initio</i> study of the $\text{BaTiO}_3$ interface. Physical Review B, 2017, 96, .		
93	Epitaxial growth of barium titanate thin films on germanium via atomic layer deposition. Journal of Crystal Growth, 2017, 476, 6-11.	0.7	13

#	ARTICLE	IF	CITATIONS
94	Electric and Mechanical Switching of Ferroelectric and Resistive States in Semiconducting BaTiO <sub>3</sub> Films on Silicon. Small, 2017, 13, 1701614.	5.2	28
95	An intelligent universal system yields double results with half the effort for engineering a DNA-Contrary Logic Pairs-library and various DNA combinatorial logic circuits. Materials Horizons, 2017, Chemical pressure-driven orthorhombic distortion and significant enhancement of ferroelectric polarization in $\text{Ca}_{1-x}\text{La}_x\text{BaCo}_4\text{O}_{12}$	6.4	39
96	Controlled orientation of molecular-beam-epitaxial BaTiO <sub>3</sub> on Si(001) using thickness engineering of BaTiO <sub>3</sub> and SrTiO <sub>3</sub> buffer layers. Applied Physics Express, 2017, 10, 065501.	1.1	13
97	Integration of ferroelectric BaTiO <sub>3</sub> with Ge: The role of a SrTiO <sub>3</sub> buffer layer investigated using aberration-corrected STEM. Applied Physics Letters, 2017, 110, . Large Spin Splitting and Interfacial States in a $\text{Ca}_{1-x}\text{La}_x\text{BaCo}_4\text{O}_{12}$	1.5	5
98	Physical Review Applied, 2017, 7, .		
99	Microstructure Patterns by Switching Spectroscopy Piezo-response Force Microscopy of Lead Free Perovskite-type Polycrystalline Thin Films. Microscopy and Microanalysis, 2017, 23, 1648-1649.	0.2	4
100	Orientation-dependent electro-optical response of BaTiO <sub>3</sub> on SrTiO <sub>3</sub> -buffered Si(001) studied via spectroscopic ellipsometry. Optical Materials Express, 2017, 7, 2030.	1.6	19
101	Surface structure analysis of Eu Zintl template on Ge(001). Surface Science, 2018, 674, 94-102.	0.8	9
102	Steep-slope hysteresis-free negative capacitance MoS <sub>2</sub> transistors. Nature Nanotechnology, 2018, 13, 24-28.	15.6	422
103	Chemical Synthesis of Multilayered Nanostructured Perovskite Thin Films with Dielectric Features for Electric Capacitors. ACS Applied Nano Materials, 2018, 1, 915-921.	2.4	11
104	Continuously Tuning Epitaxial Strains by Thermal Mismatch. ACS Nano, 2018, 12, 1306-1312.	7.3	44
105	High-performance BaZr <sub>0.35</sub> Ti <sub>0.65</sub> O <sub>3</sub> thin film capacitors with ultrahigh energy storage density and excellent thermal stability. Journal of Materials Chemistry A, 2018, 6, 12291-12297.	5.2	96
106	Single Atomic Layer Ferroelectric on Silicon. Nano Letters, 2018, 18, 241-246.	4.5	26
107	Properties of the Barium-Strontium Titanate Films Deposited onto the Silicon Substrate by rf Cathode Sputtering. Technical Physics Letters, 2018, 44, 1157-1159.	0.2	0
108	Temperature-Power Simultaneous Effect on Physical Properties of Ba <sub>x</sub> Sr <sub>1-x</sub> TiO <sub>3</sub> Thin Films Deposited by RF-Magnetron Cosputtering for 0 ≤ x ≤ 1. Coatings, 2018, 8, 362.	1.2	3
109	Unveiling the dual role of chemically synthesized copper doped zinc oxide for resistive switching applications. Journal of Applied Physics, 2018, 124, .	1.1	25
110	Dispersion in Ferroelectric Switching Performance of Polycrystalline Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 35374-35384.	4.0	55
111			

#	ARTICLE	IF	CITATIONS
112	Piezoelectric modulation of nonlinear optical response in BaTiO <sub>3</sub> thin film. Applied Physics Letters, 2018, 113, 132902.	1.5	13
113	Enhancing Photocurrent of Radially Polarized Ferroelectric BaTiO <sub>3</sub> Materials by Ferro-Pyro-Phototronic Effect. IScience, 2018, 3, 208-216.	1.9	79
114	Ferroelectricity in epitaxial Y-doped HfO <sub>2</sub> thin film integrated on Si substrate. Applied Physics Letters, 2018, 112, .	1.5	36
115	Monolithic integration of patterned BaTiO <sub>3</sub> thin films on Ge wafers. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	6
116	distortion-driven ferroelectric order in $\text{CrO}_4$		



#	ARTICLE	IF	CITATIONS
130	Epitaxial growth and strain relaxation studies of BaTiO <sub>3</sub> and BaTiO <sub>3</sub> /SrTiO <sub>3</sub> superlattices grown by MBE on SrTiO <sub>3</sub> -buffered Si(001) substrate. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	14
131	Recent progress on flexible inorganic single-crystalline functional oxide films for advanced electronics. Materials Horizons, 2019, 6, 911-930.	6.4	46
132	Ferroelectric ZrO <sub>2</sub> Monolayers as Buffer Layers between SrTiO <sub>3</sub> and Si. Journal of Physical Chemistry C, 2019, 123, 15053-15061.	1.5	3
133	Theory of Ferroelectric ZrO <sub>2</sub> Monolayers on Si. Journal of Physical Chemistry C, 2019, 123, 14350-14361.	1.5	15
134	Polymorphic phase transition in BaTiO <sub>3</sub> by Ni doping. Ceramics International, 2019, 45, 16305-16310.	2.3	21
135	Composition-Dependent Ferroelectric Properties in Sputtered Hf <sub>x</sub> Zr <sub>1-x</sub> O <sub>2</sub> Thin Films. IEEE Electron Device Letters, 2019, 40, 570-573.	2.2	35
136	Strain-dependence of $\epsilon''(2)$ in thin film barium strontium titanate. AIP Advances, 2019, 9, .	0.6	3
137	Dynamic Waveguiding in Silicon-Integrated Barium Titanate Thin Films. , 2019, , .		0
138	Large Pockels effect in micro- and nanostructured barium titanate integrated on silicon. Nature Materials, 2019, 18, 42-47.	13.3	311
139	Plasmonic Ferroelectric Modulators. Journal of Lightwave Technology, 2019, 37, 281-290.	2.7	54
140	Structural studies of epitaxial BaTiO <sub>3</sub> thin film on silicon. Thin Solid Films, 2020, 693, 137636.	0.8	8
141	Epitaxial Oxides on Semiconductors: From Fundamentals to New Devices. Advanced Functional Materials, 2020, 30, 1901597.	7.8	65
142	Interface structures of inclined ZnO thin film on (0 $\bar{1}$ 1)-MgO substrate with bulk-like optical properties. Applied Surface Science, 2020, 509, 144781.	3.1	7
144	Design rules for strong electro-optic materials. Npj Computational Materials, 2020, 6, .	3.5	27
145	Fermi Level Engineering for Large Permittivity in BaTiO <sub>3</sub> -Based Multilayers. Surfaces, 2020, 3, 567-578.	1.0	2
146	Nanoscale imaging of ferroelectric domain and resistance switching in hybrid improper ferroelectric Ca <sub>3</sub> Ti <sub>2</sub> O <sub>7</sub> thin films. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126609.	0.9	6
147	Direct Observation of Large Atomic Polar Displacements in Epitaxial Barium Titanate Thin Films. Advanced Materials Interfaces, 2020, 7, 2000555.	1.9	8
148	Trends of epitaxial perovskite oxide films catalyzing the oxygen evolution reaction in alkaline media. JPhys Energy, 2020, 2, 032003.	2.3	37

#	ARTICLE	IF	CITATIONS
149	Switching On/Off Negative Capacitance in Ultrathin Ferroelectric/Dielectric Capacitors. ACS Applied Materials & Interfaces, 2020, 12, 9902-9908.	4.0	4
150	Reliable resistive switching of epitaxial single crystalline cubic Y-HfO <sub>2</sub> RRAMs with Si as bottom electrodes. Nanotechnology, 2020, 31, 205203.	1.3	10
151	A tunable ferroelectric based unreleased RF resonator. Microsystems and Nanoengineering, 2020, 6, 8.	3.4	21
152	Epitaxial integration of ferroelectric and conductive perovskites on silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	5
153	Local hardening of Raman phonons in Ba <sub>x</sub> Sr <sub>1-x</sub> TiO <sub>3</sub> thin films deposited by r.f. sputtering. Materials Research Express, 2020, 7, 046402.	0.8	1
154	Enhanced ferroelectricity in ultrathin films grown directly on silicon. Nature, 2020, 580, 478-482.	13.7	486
155	A low-temperature route for producing epitaxial perovskite superlattice structures on (001)-oriented SrTiO <sub>3</sub> /Si substrates. Journal of Materials Chemistry C, 2021, 9, 13115-13122.	2.7	3
156	Pockels effect in low-temperature rhombohedral BaTiO <sub>3</sub> . Physical Review B, 2021, 103, .	1.1	11
157	Electrospun lanthanum-doped barium titanate ceramic fibers with excellent dielectric performance. Materials Characterization, 2021, 172, 110859.	1.9	11
158	Universal Interface between Functional Oxides and Silicon. Advanced Functional Materials, 2021, 31, 2010269.	7.8	13
159	Ultrathin Ferroelectricity and Its Application in Advanced Logic and Memory Devices. , 2021, , .		2
160	Ultrathin HfAlO ferroelectrics enhancing electron transport and perovskite solar cell performance. Journal of Materials Research, 2021, 36, 1855-1865.	1.2	2
161	Electro-optic response in epitaxially stabilized orthorhombic BaTiO <sub>3</sub> . Physical Review Materials, 2021, 5, .	0.9	8
162	Accidental Impurities in Epitaxial Pb(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> Thin Films Grown by Pulsed Laser Deposition and Their Impact on the Macroscopic Electric Properties. Nanomaterials, 2021, 11, 1177.	1.9	7
163	Epitaxial ferroelectric oxides on silicon with perspectives for future device applications. APL Materials, 2021, 9, .	2.2	23
164	Epitaxial integration of BaTiO <sub>3</sub> on Si for electro-optic applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	25
165	Oxide-Based Optoelectronics. Physica Status Solidi (B): Basic Research, 2021, 258, 2000497.	0.7	6
166	Chaos at Interface Brings Order into Oxide/Silicon Structure. Advanced Functional Materials, 2021, 31, 2104925.	7.8	4

#	ARTICLE	IF	CITATIONS
167	Temperature and initial polarization dependences of the electrooptic coefficient of BaTiO <sub>3</sub> crystal film. Optical Materials Express, 2021, 11, 2730.	1.6	3
168	Analytical properties of switching current transients in ferroelectrics. Physica Scripta, 2021, 96, 115805.	1.2	0
169	Magnetolectric coupling in micropatterned BaTiO <sub>3</sub> /CoFe <sub>2</sub> O <sub>4</sub> epitaxial thin film structures: Augmentation and site-dependency. Applied Physics Letters, 2021, 119, .	1.5	10
170	Materials for emergent silicon-integrated optical computing. Journal of Applied Physics, 2021, 130, 070907.	1.1	27
171	Gate energy efficiency and negative capacitance in ferroelectric 2D/2D TFET from cryogenic to high temperatures. Npj 2D Materials and Applications, 2021, 5, .	3.9	16
172	Fabrication and characterization of Sr <sub>0.8</sub> Bi <sub>2.2</sub> Ta <sub>2</sub> O <sub>9</sub> /Al <sub>2</sub> O <sub>3</sub> gate stack for ferroelectric field effect transistors. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	0
173	Tuning the magnetism of epitaxial cobalt oxide thin films by electron beam irradiation. Physical Review Materials, 2017, 1, .	0.9	14
174	Electrically controlled switching of the magnetization state in multiferroic BaTiO <sub>3</sub> /CoFe <sub>2</sub> O <sub>4</sub> submicrometer structures. Physical Review Materials, 2018, 2, .	0.9	10
175	Volatile two-dimensional electron gas in ultrathin BaTiO <sub>3</sub> films. Physical Review Materials, 2018, 2, .	0.9	5
176	First-principles study of the linear electro-optical response in strained SrTiO <sub>3</sub> . Physical Review Materials, 2018, 2, .	0.9	14
177	Ferroelectric domain architecture and poling of BaTiO <sub>3</sub> on Si. Physical Review Materials, 2020, 4, .	0.9	20
178	Designing near-infrared electro-optical devices from the SrTiO <sub>3</sub> /LaAlO <sub>3</sub> materials system. Optical Materials Express, 2019, 9, 2982.	1.6	9
179	Broadband mid-infrared second harmonic generation using epitaxial polydomain barium titanate thin films. Photonics Research, 2019, 7, 1193.	3.4	8
180	Thick BaTiO <sub>3</sub> Epitaxial Films Integrated on Si by RF Sputtering for Electro-Optic Modulators in Si Photonics. ACS Applied Materials & Interfaces, 2021, 13, 51230-51244.	4.0	20
181	Epitaxial ferroelectric interfacial devices. Applied Physics Reviews, 2021, 8, .	5.5	15
182	Critical Issues in Oxide-Semiconductor Heteroepitaxy. , 2014, , 25-44.		1
183	Integration of Functional Oxides on SrTiO <sub>3</sub> /Si Pseudo-Substrates. , 2014, , 159-203.		0
184	Structural Properties of ZnO Thin Films Grown on MgO(110) Substrates by Molecular Beam Epitaxy. Material Sciences, 2019, 09, 466-472.	0.0	0

#	ARTICLE	IF	CITATIONS
185	Comparison of Epitaxial and Textured Ferroelectric BaTiO <sub>3</sub> Thin Films. Journal of Modern Physics, 2020, 11, 509-516.	0.3	0
186	Dielectric and Electric Properties of Ba <sub>0.996</sub> La <sub>0.004</sub> Ti <sub>0.999</sub> O <sub>3</sub> Ceramics Doped with Europium and Hafnium Ions. Materials, 2022, 15, 413.	1.3	5
187	Signatures of enhanced out-of-plane polarization in asymmetric BaTiO <sub>3</sub> superlattices integrated on silicon. Nature Communications, 2022, 13, 265.	5.8	13
188	Thin-Film Ferroelectrics. Advanced Materials, 2022, 34, e2108841.	11.1	33
189	Fluorite-Structured Ferroelectric and Antiferroelectric Materials: A Gateway of Miniaturized Electronic Devices. Advanced Functional Materials, 2022, 32, .	7.8	20
190	Enabling ultra-low-voltage switching in BaTiO <sub>3</sub> . Nature Materials, 2022, 21, 779-785.	13.3	28
191	Highly heterogeneous epitaxy of flexoelectric BaTiO <sub>3</sub> - $\hat{\Gamma}$ membrane on Ge. Nature Communications, 2022, 13, .	5.8	22
192	Magneto-Optical Coupling in Multiferroic BiFeO <sub>3</sub> -Based Films. Advanced Materials, 2022, 34, .	11.1	13
193	A robust high-performance electronic synapse based on epitaxial ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films with uniform polarization and high Curie temperature. Applied Materials Today, 2022, 29, 101587.	2.3	16
194	Nonvolatile ferroelectric domain wall memory integrated on silicon. Nature Communications, 2022, 13, .	5.8	38
195	Microstructural analysis and electro-optic properties of thick epitaxial BaTiO <sub>3</sub> films integrated on silicon (001). Physical Review Materials, 2022, 6, .	0.9	6
196	Domain morphology and electro-optic effect in Si-integrated epitaxial BaTiO <sub>3</sub> films. Physical Review Materials, 2022, 6, .	0.9	6
197	First-Principles Investigation of Interfacial Reconstruction in Epitaxial SrTiO <sub>3</sub> /Si Photocathodes. Journal of Physical Chemistry C, 2022, 126, 18813-18821.	1.5	1
198	Evolution of epitaxial BaTiO <sub>3</sub> on SrTiO <sub>3</sub> -buffered Si: Phase field analysis. Journal of Applied Physics, 2022, 132, .	1.1	1
199	High-performance self-powered amorphous-BaTiO <sub>3</sub> /p-Si heterojunction photodetector controlled by ferroelectric effect. Applied Surface Science, 2023, 615, 156371.	3.1	3
200	Tunable Anisotropic Oxygen Ion Migration in SrCoO <sub>x</sub> : Toward Emerging Oxide-Based Artificial Synapses. Advanced Intelligent Systems, 2023, 5, .	3.3	7
201	Domain effects on the electro-optic properties of thin-film barium titanate. Optical Materials Express, 2023, 13, 956.	1.6	4
202	Optimization of sintering temperature for dielectric studies of La doped BZT ceramics. Materials Today: Proceedings, 2023, , .	0.9	0

#	ARTICLE	IF	CITATIONS
203	The effect of bottom electrode on structure and electrical properties of BaZr <sub>0.15</sub> Ti <sub>0.85</sub> O <sub>3</sub> films on SrTiO <sub>3</sub> substrates. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	2
204	Stoichiometric Control and Optical Properties of BaTiO <sub>3</sub> Thin Films Grown by Hybrid MBE. Advanced Materials Interfaces, 2023, 10, .	1.9	4