

Ashish Garg

List of Publications by Year in descending order

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126
papers

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citations

136940

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4597
citing authors

#	ARTICLE	IF	CITATIONS
1	In situ fabrication of barium titanate@polyvinyl pyrrolidone in polyvinylidene fluoride polymer nanocomposites for dielectric capacitor applications. Journal of Polymer Science, 2022, 60, 961-967.	3.8	13
2	Development of MoO₃/Au/MoO₃ Top Transparent Conducting Electrode for Organic Solar Cells on Opaque Substrates. Energy Technology, 2022, 10, 2100689.	3.8	7
3	Spray deposited gallium doped zinc oxide (GZO) thin film as the electron transport layer in inverted organic solar cells. Solar Energy, 2022, 231, 458-463.	6.1	17
4	Low-Temperature Microwave Processed TiO₂ as an Electron Transport Layer for Enhanced Performance and Atmospheric Stability in Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 2679-2696.	5.1	11
5	Role of DIO vis-à-vis microstructural kinetics during thermal annealing on the performance of PTB7:PC71BM organic solar cells. Solar Energy, 2021, 213, 27-35.	6.1	5
6	The effect of dimensionality on the charge carrier mobility of halide perovskites. Journal of Materials Chemistry A, 2021, 9, 21551-21575.	10.3	49
7	Unveiling the Role of Graphene Oxide as an Interface Interlocking Ingredient in Polyvinylidene Fluoride-Based Multilayered Thin-Film Capacitors for High Energy Density and Ultrafast Discharge Applications. Energy Technology, 2021, 9, 2000905.	3.8	11
8	Enhanced room temperature multiferroic behaviour of Ni-doped Na_{0.5}Bi_{0.5}TiO₃ ceramics. Journal of Materials Science: Materials in Electronics, 2021, 32, 10255-10265.	2.2	5
9	Effects of 10 MeV Al⁴⁺ ions irradiation on fluorine-doped tin oxide substrates for photovoltaic device applications. Journal Physics D: Applied Physics, 2021, 54, 275502.	2.8	6
10	Determination of defect states and surface photovoltage in PTB7:PC71BM based bulk heterojunction solar cells. Solar Energy Materials and Solar Cells, 2021, 224, 110994.	6.2	10
11	Enhanced thermal and moisture stability via dual additives approach in methylammonium lead iodide based planar perovskite solar cells. Solar Energy, 2021, 225, 200-210.	6.1	9
12	Hole transporting layer optimization for an efficient lead-free double perovskite solar cell by numerical simulation. Optical Materials, 2021, 121, 111645.	3.6	36
13	Role of PC60BM in defect passivation and improving degradation behaviour in planar perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 207, 110335.	6.2	23
14	Temperature dependent X-ray diffraction and Raman spectroscopy studies of polycrystalline YCrO₃ ceramics across the T_C ~ 460 K. Journal of Raman Spectroscopy, 2020, 51, 537-545.	2.5	10
15	Effect of NiO Precursor Solution Ageing on the Perovskite Film Formation and Their Integration as Hole Transport Material for Perovskite Solar Cells. Journal of Nanoscience and Nanotechnology, 2020, 20, 3710-3717.	0.9	9
16	Probing the Interface Activation in Designing Defect-Free Multilayered Polymer Nanocomposites for Dielectric Capacitor Applications. Journal of Physical Chemistry C, 2020, 124, 22914-22924.	3.1	18
17	Grain size dependence of electrical transport in magnetoelectric gallium ferrite ceramics. Journal of Alloys and Compounds, 2020, 847, 156499.	5.5	5
18	Interface modulation in multi-layered BaTiO₃ nanofibers/PVDF using the PVP linker layer as an adhesive for high energy density capacitor applications. Materials Advances, 2020, 1, 680-688.	5.4	24

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19	Triboelectric generators made of mechanically robust PVDF films as self-powered autonomous sensors for wireless transmission based remote security systems. Journal of Materials Chemistry A, 2020, 8, 15023-15033.	10.3	30
20	Improved ferroelectric response of pulsed laser deposited BiFeO ₃ -PbTiO ₃ thin films around morphotropic phase boundary with interfacial PbTiO ₃ buffer layer. Journal of Applied Physics, 2020, 127, .	2.5	12
21	Poly(vinylpyrrolidone)/Poly(vinylidene fluoride) as Guest/Host Polymer Blends: Understanding the Role of Compositional Transformation on Nanoscale Dielectric Behavior through a Simple Solutionâ€“Process Route. ACS Applied Energy Materials, 2019, 2, 6146-6152.	5.1	38
22	Maghemite/Polyvinylidene Fluoride Nanocomposite for Transparent, Flexible Triboelectric Nanogenerator and Noncontact Magneto-Triboelectric Nanogenerator. ACS Sustainable Chemistry and Engineering, 2019, 7, 14856-14866.	6.7	26
23	Dicyanovinylene and Thiazolo[5,4- <i>d</i>]thiazole Core Containing Dâ€“D Type Hole-Transporting Materials for Spiro-OMeTAD-Free Perovskite Solar Cell Applications with Superior Atmospheric Stability. ACS Applied Energy Materials, 2019, 2, 7609-7618.	5.1	26
24	Temperature dependent structural and electrical analysis of Cr-doped multiferroic GaFeO ₃ ceramics. Materials Research Express, 2019, 6, 115704.	1.6	3
25	Thiazolothiazoleâ€“Based Fluorescence Probe towards Detection of Copper and Iron Ions through Formation of Radical Cations. ChemistrySelect, 2019, 4, 11718-11725.	1.5	20
26	Multifunctional and Flexible Polymeric Nanocomposite Films with Improved Ferroelectric and Piezoelectric Properties for Energy Generation Devices. ACS Applied Energy Materials, 2019, 2, 6364-6374.	5.1	52
27	Enhanced efficiency and thermal stability of mesoscopic perovskite solar cells by adding PC70BM acceptor. Solar Energy Materials and Solar Cells, 2019, 202, 110130.	6.2	23
28	Milli-Watt Power Harvesting from Dual Triboelectric and Piezoelectric Effects of Multifunctional Green and Robust Reduced Graphene Oxide/P(VDF-TrFE) Composite Flexible Films. ACS Applied Materials & Interfaces, 2019, 11, 38177-38189.	8.0	56
29	Control of electrical leakage in magnetoâ€“electric gallium ferrite via aliovalent substitution. Journal of the American Ceramic Society, 2019, 102, 7414-7427.	3.8	5
30	Significantly Enhanced Energy Density by Tailoring the Interface in Hierarchically Structured TiO ₂ â€“BaTiO ₃ â€“TiO ₂ Nanofillers in PVDF-Based Thin-Film Polymer Nanocomposites. ACS Applied Materials & Interfaces, 2019, 11, 14329-14339.	8.0	121
31	Engineered thiol anchored Au-BaTiO ₃ /PVDF polymer nanocomposite as efficient dielectric for electronic applications. Composites Science and Technology, 2019, 174, 158-168.	7.8	89
32	Origin of ferroelectricity in orthorhombic LuFeO_3 . Physical Review B, 2019, 100, .	3.2	14
33	Impedance spectroscopy on degradation analysis of polymer/fullerene solar cells. Solar Energy, 2019, 178, 133-141.	6.1	30
34	Modeling of degradation in normal and inverted OSC devices. Solar Energy Materials and Solar Cells, 2019, 191, 329-338.	6.2	7
35	Flexible and Robust Piezoelectric Polymer Nanocomposites Based Energy Harvesters. ACS Applied Materials & Interfaces, 2018, 10, 2793-2800.	8.0	100
36	Organic solar cells on Al electroded opaque substrates: Assessing the need of ZnO as electron transport layer. Solar Energy, 2018, 160, 396-403.	6.1	16

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37	Electrical and impedance spectroscopy analysis of sol-gel derived spin coated Cu ₂ ZnSnS ₄ solar cell. Journal of Applied Physics, 2018, 123, .	2.5	34
38	Screen printed PEDOT:PSS films as transparent electrode and its application in organic solar cells on opaque substrates. Journal of Materials Science: Materials in Electronics, 2018, 29, 11030-11038.	2.2	16
39	A fluorene-core-based electron acceptor for fullerene-free BHJ organic solar cells towards power conversion efficiencies over 10%. Chemical Communications, 2018, 54, 4001-4004.	4.1	26
40	Nd and Ru co-doped bismuth titanate polycrystalline thin films with improved ferroelectric properties. Journal Physics D: Applied Physics, 2018, 51, 055301.	2.8	4
41	Effect of sintering temperature on structure and properties of GaFeO ₃ . Journal of Alloys and Compounds, 2018, 737, 646-654.	5.5	15
42	Effect of tantalum doping in a TiO ₂ compact layer on the performance of planar spiro-OMeTAD free perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 1037-1047.	10.3	86
43	Effect of Zn doping on structural and ferroelectric properties of GaFeO ₃ for futuristic spintronic applications. , 2018, , .		0
44	Study of structural and magnetic characterization of polycrystalline Y _{0.5} Ho _{0.5} CrO ₃ . AIP Conference Proceedings, 2018, , .	0.4	0
45	Progress in tailoring perovskite based solar cells through compositional engineering: Materials properties, photovoltaic performance and critical issues. Materials Today Energy, 2018, 9, 440-486.	4.7	58
46	Synthesis, growth, and characterizations of CuO single crystal. AIP Conference Proceedings, 2018, , .	0.4	3
47	Dielectric relaxation and ac conductivity in magnetoelectric YCrO ₃ ceramics: A temperature dependent impedance spectroscopy analysis. Journal of the European Ceramic Society, 2018, 38, 5359-5366.	5.7	23
48	Recent Progress on Hole-Transporting Materials for Perovskite-Sensitized Solar Cells. , 2018, , 279-324.		12
49	Sr and Mn co-doped sol-gel derived BiFeO ₃ ceramics with enhanced magnetism and reduced leakage current. Materials Research Express, 2017, 4, 015702.	1.6	33
50	An efficient route to fabricate fatigue-free P(VDF-TrFE) capacitors with enhanced piezoelectric and ferroelectric properties and excellent thermal stability for sensing and memory applications. Physical Chemistry Chemical Physics, 2017, 19, 7743-7750.	2.8	24
51	Modifications of the structure and magnetic properties of ceramic YCrO ₃ with Fe/Ni doping. Materials Research Express, 2017, 4, 076104.	1.6	20
52	Temperature and grain size effect on electrical properties of gallium ferrite polycrystalline ceramic. AIP Conference Proceedings, 2017, , .	0.4	2
53	Room temperature multiferroism in polycrystalline thin films of gallium ferrite. Journal of Alloys and Compounds, 2017, 721, 593-599.	5.5	12
54	Synthesis of a NbO Type Homochiral Cu(II) Metal-Organic Framework: Ferroelectric Behavior and Heterogeneous Catalysis of Three-Component Coupling and Pechmann Reactions. Inorganic Chemistry, 2017, 56, 4697-4705.	4.0	42

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55	Solution-Processed Organic Solar Cells Using New Electron Acceptor Derived from Naphthalene and Fluorene Unit. ChemistrySelect, 2017, 2, 7913-7917.	1.5	4
56	Effect of annealing atmosphere on leakage and dielectric characteristics of multiferroic gallium ferrite. Journal of the American Ceramic Society, 2017, 100, 5226-5238.	3.8	34
57	Significant reduction in the leakage current of Cr-doped GaFeO ₃ synthesized by sol-gel method. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	13
58	One-Step Synthesis of New Electron Acceptor for High Efficiency Solution Processable Organic Solar Cells. Journal of Physical Chemistry C, 2017, 121, 26615-26621.	3.1	11
59	Temperature dependent electron paramagnetic resonance study on magnetoelectric YCrO ₃ . Journal of Physics Condensed Matter, 2017, 29, 495805.	1.8	14
60	Inkjet printing of NiO films and integration as hole transporting layers in polymer solar cells. Scientific Reports, 2017, 7, 1775.	3.3	41
61	The combined effect of mechanical strain and electric field cycling on the ferroelectric performance of P(VDF-TrFE) thin films on flexible substrates and underlying mechanisms. Physical Chemistry Chemical Physics, 2016, 18, 29478-29485.	2.8	11
62	High temperature X-ray diffraction, Raman spectroscopy and dielectric studies on yttrium orthochromites. AIP Conference Proceedings, 2016, , .	0.4	3
63	Inverted polymer bulk heterojunction solar cells with ink-jet printed electron transport and active layers. Organic Electronics, 2016, 35, 118-127.	2.6	16
64	Inverted P3HT:PCBM organic solar cells on low carbon steel substrates. Solar Energy, 2016, 133, 339-348.	6.1	17
65	Buffer layers in inverted organic solar cells and their impact on the interface and device characteristics: An experimental and modeling analysis. Organic Electronics, 2016, 37, 228-238.	2.6	14
66	Ferroelectric polarization switching with a remarkably high activation energy in orthorhombic GaFeO ₃ thin films. NPG Asia Materials, 2016, 8, e242-e242.	7.9	72
67	Electrical and magnetic characterization of multiferroic BiFeO ₃ -PbTiO ₃ thin films. AIP Conference Proceedings, 2015, , .	0.4	1
68	Effect of isovalent non-magnetic Fe-site doping on the electronic structure and spontaneous polarization of BiFeO ₃ . Journal of Applied Physics, 2015, 117, 184104.	2.5	11
69	Metal-Organic Frameworks Built from a Linear Rigid Dicarboxylate and Different Colinkers: Trap of the Keto Form of Ethylacetoacetate, Luminescence and Ferroelectric Studies. Crystal Growth and Design, 2015, 15, 4526-4535.	3.0	29
70	Microscopic Investigations into the Effect of Surface Treatment of Cathode and Electron Transport Layer on the Performance of Inverted Organic Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 16418-16427.	8.0	19
71	Enhancement in magnetic properties of Ba-doped BiFeO ₃ ceramics by mechanical activation. Journal of Alloys and Compounds, 2015, 651, 294-301.	5.5	27
72	Understanding the formation of PEDOT:PSS films by ink-jet printing for organic solar cell applications. RSC Advances, 2015, 5, 78677-78685.	3.6	45

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73	Improved lifetimes of organic solar cells with solution-processed molybdenum oxide anode-modifying layers. Progress in Photovoltaics: Research and Applications, 2015, 23, 989-996.	8.1	22
74	Aging and memory effect in magnetoelectric gallium ferrite single crystals. Journal of Magnetism and Magnetic Materials, 2015, 375, 49-53.	2.3	9
75	Suppression of grain boundary relaxation in Zr-doped BiFeO ₃ thin films. Journal of Applied Physics, 2014, 115, .	2.5	14
76	Interface morphology driven control of electrical properties of P(VDF-TrFE) and PMMA blend MIM capacitors. Organic Electronics, 2014, 15, 3811-3817.	2.6	10
77	Structure and Properties of Magnetoelectric Gallium Ferrite: A Brief Review. Ferroelectrics, 2014, 473, 154-170.	0.6	9
78	Structural investigation of multiferroic BiFeO ₃ -PbTiO ₃ solid solution. , 2014, , .		1
79	Optical anisotropy in bismuth titanate: An experimental and theoretical study. Journal of Applied Physics, 2014, 115, 133509.	2.5	3
80	Phonons and magnetic excitation correlations in weak ferromagnetic YCrO ₃ . Journal of Applied Physics, 2014, 115, .	2.5	57
81	A novel 3D 10-fold interpenetrated homochiral coordination polymer: large spontaneous polarization, dielectric loss and emission studies. CrystEngComm, 2014, 16, 4766.	2.6	18
82	Cooling rate controlled microstructure evolution and reduced coercivity in P(VDF-TrFE) devices for memory applications. Organic Electronics, 2014, 15, 82-90.	2.6	19
83	Large ferroelectric polarization of chemical solution processed BiFeO ₃ -PbTiO ₃ thin films. Solid State Communications, 2014, 177, 103-107.	1.9	9
84	Electrophoretic deposition of nanocrystalline hydroxyapatite on Ti6Al4V/TiO ₂ substrate. Journal of Coatings Technology Research, 2013, 10, 263-275.	2.5	15
85	Room Temperature Nanoscale Ferroelectricity in Magnetoelectric GaFeO ₃ Epitaxial Thin Films. Physical Review Letters, 2013, 111, 087601.	7.8	99
86	Degradation of organic photovoltaic devices: a review. Nanomaterials and Energy, 2013, 2, 42-58.	0.2	10
87	Engineering polarization rotation in ferroelectric bismuth titanate. Applied Physics Letters, 2013, 102, .	3.3	12
88	Understanding the role of thickness and morphology of the constituent layers on the performance of inverted organic solar cells. Solar Energy Materials and Solar Cells, 2013, 116, 135-143.	6.2	45
89	Dielectric response and magnetoelectric coupling in single crystal gallium ferrite. AIP Advances, 2013, 3, .	1.3	17
90	Microstructure and interfacial chemistry of pure and La-doped BiFeO ₃ thin films. Microscopy Research and Technique, 2013, 76, 1304-1309.	2.2	0

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91	Thin film transistors fabricated by evaporating pentacene under electric field. Journal of Applied Physics, 2013, 114, 154517.	2.5	17
92	Spin glass-like phase below $\sim 4210 \text{ K}$ in magnetoelectric gallium ferrite. Applied Physics Letters, 2012, 100, 112904.	3.3	43
93	Effect of site-disorder on magnetism and magneto-structural coupling in gallium ferrite: A first-principles study. Journal of Applied Physics, 2012, 111, .	2.5	16
94	Effects of site disorder, off-stoichiometry and epitaxial strain on the optical properties of magnetoelectric gallium ferrite. Journal of Physics Condensed Matter, 2012, 24, 435501.	1.8	14
95	Multiferroic Memories. Advances in Condensed Matter Physics, 2012, 2012, 1-12.	1.1	96
96	Compositional dependence of structural parameters, polyhedral distortion and magnetic properties of gallium ferrite. Solid State Communications, 2012, 152, 1181-1185.	1.9	48
97	A First-Principles Study of Structure-Property Correlation and the Origin of Ferrimagnetism in Gallium Ferrite. Advances in Materials Physics and Chemistry, 2012, 02, 1-4.	0.7	10
98	Quasi-Cubic Magnetite/Silica Core-Shell Nanoparticles as Enhanced MRI Contrast Agents for Cancer Imaging. PLoS ONE, 2011, 6, e21857.	2.5	58
99	Probing magnetoelastic coupling and structural changes in magnetoelectric gallium ferrite. Journal of Physics Condensed Matter, 2011, 23, 445403.	1.8	45
100	Absence of morphotropic phase boundary effects in $\text{BiFeO}_3\text{-PbTiO}_3$ thin films grown via a chemical multilayer deposition method. Applied Physics A: Materials Science and Processing, 2011, 104, 395-400.	2.3	17
101	An investigation in $\text{InGaO}_3(\text{ZnO})_m$ pellets as cause of variability in thin film transistor characteristics. Bulletin of Materials Science, 2011, 34, 447-454.	1.7	5
102	Electronic structure, Born effective charges and spontaneous polarization in magnetoelectric gallium ferrite. Journal of Physics Condensed Matter, 2011, 23, 325902.	1.8	39
103	Effect of PEDOT:PSS Layer and ITO Ozonization in Arylenevinylene- co -Pyrrolevinylene (AVPV) Based Solar Cell Devices. Materials Sciences and Applications, 2011, 02, 1702-1707.	0.4	0
104	Influence of Zr doping on the structure and ferroelectric properties of BiFeO_3 thin films. Journal of Applied Physics, 2010, 107, .	2.5	74
105	First-principles calculations of Born effective charges and spontaneous polarization of ferroelectric bismuth titanate. Journal of Physics Condensed Matter, 2010, 22, 165902.	1.8	27
106	Structural changes and ferroelectric properties of $\text{BiFeO}_3\text{-PbTiO}_3$ thin films grown via a chemical multilayer deposition method. Journal of Applied Physics, 2009, 105, .	2.5	24
107	Photovoltaic effect in arylenevinylene-co-pyrrolevinylene (AVPV). Solar Energy Materials and Solar Cells, 2009, 93, 211-214.	6.2	3
108	BiFeO_3 ceramics synthesized by mechanical activation assisted versus conventional solid-state-reaction process: A comparative study. Journal of Alloys and Compounds, 2009, 477, 780-784.	5.5	102

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109	Impedance spectroscopy studies on polycrystalline BiFeO ₃ thin films on Pt/Si substrates. Journal of Applied Physics, 2009, 105, .	2.5	85
110	Magnetic studies of multiferroic Bi _{1-x} Sm _x FeO ₃ ceramics synthesized by mechanical activation assisted processes. Journal of Physics Condensed Matter, 2009, 21, 026007.	1.8	62
111	Effect of cooling conditions on the magnetic structure of multiferroic BiFeO ₃ synthesized by mechanical activation. Hyperfine Interactions, 2008, 187, 81-86.	0.5	1
112	Phase stability in ferroelectric bismuth titanate: a first-principles study. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, 368-375.	0.3	33
113	Structural, dielectric and ferroelectric study of Ba _{0.9} Sr _{0.1} Zr _x Ti _{1-x} O ₃ ceramics prepared by the sol-gel method. Physica B: Condensed Matter, 2008, 403, 1819-1823.	2.7	64
114	Phase evolution, magnetic and electrical properties in Sm-doped bismuth ferrite. Journal of Applied Physics, 2008, 103, .	2.5	156
115	Organic Field Effect Transistor using BaTiO ₃ -Mn Doped and P(VDF-TrFE) for Non Volatile Memory Application. Materials Research Society Symposia Proceedings, 2008, 1071, 1.	0.1	0
116	Sol-Gel Synthesis and Characterization of BiFeO ₃ -PbTiO ₃ Thin Films. Materials Research Society Symposia Proceedings, 2007, 997, 1.	0.1	1
117	Investigation of Magnetic Behaviour of Mechanical Activation Derived Multiferroic BiFeO ₃ . Materials Research Society Symposia Proceedings, 2007, 997, 1.	0.1	0
118	Comparative wear performance of titanium based coatings for automotive applications using exhaust gas recirculation. Surface and Coatings Technology, 2007, 201, 6182-6188.	4.8	12
119	Development of high strength hydroxyapatite by solid-state-sintering process. Ceramics International, 2007, 33, 419-426.	4.8	249
120	Novel Low-Temperature Synthesis of Ferroelectric Neodymium-Doped Bismuth Titanate Nanoparticles. Journal of the American Ceramic Society, 2007, 90, 1295-1298.	3.8	7
121	DEPOSITION AND CHARACTERIZATION OF PULSED-LASER-DEPOSITED AND CHEMICAL-SOLUTION-DERIVED SM-SUBSTITUTED BISMUTH TITANATE FILMS. Integrated Ferroelectrics, 2006, 79, 113-121.	0.7	0
122	Growth and characterization of pulsed-laser-deposited polycrystalline Bi _{3.33} Sm _{0.67} Ti ₃ O ₁₂ ferroelectric thin films. Materials Letters, 2005, 59, 2583-2587.	2.6	3
123	Structural and electrical properties of samarium-substituted bismuth titanate ferroelectric thin films on Pt/TiO _x /SiO ₂ /Si substrates. Thin Solid Films, 2005, 484, 188-195.	1.8	19
124	Pulsed Laser Deposition of Epitaxial SrBi ₂ Ta ₂ O ₉ Films with Controlled Orientation. Ferroelectrics, 2002, 268, 89-94.	0.6	2
125	Epitaxial Growth of Fully a-/b-axis Oriented SrBi ₂ Ta ₂ O ₉ Films. Integrated Ferroelectrics, 2002, 44, 1-8.	0.7	3
126	Growth and characterization of epitaxial SrBi ₂ Ta ₂ O ₉ films on (110) SrTiO ₃ substrates. Integrated Ferroelectrics, 2000, 31, 13-21.	0.7	10