

Alexandre Boulle

List of Publications by Year in descending order

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79
papers

1,504
citations

304743

22
h-index

395702

33
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80
all docs

80
docs citations

80
times ranked

1752
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization and modelling of the ion-irradiation induced disorder in 6H-SiC and 3C-SiC single crystals. Journal Physics D: Applied Physics, 2010, 43, 455408.	2.8	86
2	Effect of tensile and compressive strains on the transport properties of SmNiO ₃ layers epitaxially grown on (001) SrTiO ₃ and LaAlO ₃ substrates. Applied Physics Letters, 2007, 91, .	3.3	69
3	Optical properties of an epitaxial Na _{0.5} Bi _{0.5} TiO ₃ thin film grown by laser ablation: Experimental approach and density functional theory calculations. Journal of Applied Physics, 2010, 107, .	2.5	61
4	A high-resolution X-ray diffractometer for the study of imperfect materials. Journal of Applied Crystallography, 2002, 35, 606-614.	4.5	56
5	Lead-free Na _{0.5} Bi _{0.5} TiO ₃ ferroelectric thin films grown by Pulsed Laser Deposition on epitaxial platinum bottom electrodes. Thin Solid Films, 2008, 517, 592-597.	1.8	48
6	Advanced techniques for characterization of ion beam modified materials. Current Opinion in Solid State and Materials Science, 2015, 19, 19-28.	11.5	48
7	Electrical properties of (110) epitaxial lead-free ferroelectric Na _{0.5} Bi _{0.5} TiO ₃ thin films grown by pulsed laser deposition: Macroscopic and nanoscale data. Journal of Applied Physics, 2012, 111, .	2.5	46
8	Phenomenological analysis of heterogeneous strain fields in epitaxial thin films using x-ray scattering. Journal Physics D: Applied Physics, 2005, 38, 3907-3920.	2.8	44
9	Strain-profile determination in ion-implanted single crystals using generalized simulated annealing. Journal of Applied Crystallography, 2010, 43, 1046-1052.	4.5	42
10	Prospects for 3C-SiC bulk crystal growth. Journal of Crystal Growth, 2008, 310, 976-981.	1.5	38
11	Comprehensive study of the effect of the irradiation temperature on the behavior of cubic zirconia. Journal of Applied Physics, 2014, 115, .	2.5	35
12	Strain and stress build-up in He-implanted UO ₂ single crystals: an X-ray diffraction study. Journal of Materials Science, 2011, 46, 4683-4689.	3.7	34
13	X-ray study of antiphase domains and their stability in MBE grown GaP on Si. Journal of Crystal Growth, 2011, 323, 409-412.	1.5	34
14	<i>RaDMaX</i>: a graphical program for the determination of strain and damage profiles in irradiated crystals. Journal of Applied Crystallography, 2016, 49, 311-316.	4.5	29
15	A new method for the determination of strain profiles in epitaxial thin films using X-ray diffraction. Journal of Applied Crystallography, 2003, 36, 1424-1431.	4.5	28
16	From amorphous phase separations to nanostructured materials in sol-gel derived ZrO ₂ :Eu ³⁺ /SiO ₂ and ZnO/SiO ₂ composites. Journal of Non-Crystalline Solids, 2006, 352, 2152-2158.	3.1	28
17	The amorphization of 3C-SiC irradiated at moderately elevated temperatures as revealed by X-ray diffraction. Acta Materialia, 2017, 140, 250-257.	7.9	27
18	Size distribution of black spot defects and their contribution to swelling in irradiated SiC. Journal of Nuclear Materials, 2016, 476, 132-139.	2.7	25

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19	Statistical Nature of Atomic Disorder in Irradiated Crystals. Physical Review Letters, 2016, 116, 245501.	7.8	25
20	X-Ray diffraction line broadening by stacking faults in SrBi ₂ Nb ₂ O ₉ /SrTiO ₃ epitaxial thin films. Thin Solid Films, 2001, 391, 42-46.	1.8	23
21	Miscut angles measurement and precise sample positioning with a four circle diffractometer. Applied Surface Science, 2001, 180, 322-327.	6.1	22
22	Investigation of strain relaxation mechanisms and transport properties in epitaxial SmNiO ₃ films. Journal of Applied Physics, 2008, 103, 123501.	2.5	22
23	The role of strain-induced structural changes in the metal-insulator transition in epitaxial SmNiO ₃ films. Journal of Physics Condensed Matter, 2008, 20, 145216.	1.8	21
24	Microstructural study of SnO ₂ thin layers deposited on sapphire by sol-gel dip-coating. Thin Solid Films, 2009, 518, 1-5.	1.8	21
25	Oxygen incorporation effects in annealed epitaxial La(1-x)Sr _x MnO ₃ thin films. Journal of Applied Physics, 2011, 109, 123913.	2.5	21
26	Double-Position-Boundaries Free 3C-SiC Epitaxial Layers Grown on On-Axis 4H-SiC. ECS Journal of Solid State Science and Technology, 2014, 3, P75-P81.	1.8	21
27	Growth of LiNbO ₃ thin films on sapphire by pulsed-laser deposition for electro-optic modulators. Applied Surface Science, 2007, 253, 8263-8267.	6.1	20
28	Polarization Rotation in Ferroelectric Tricolor PbTiO ₃ /SrTiO ₃ /PbZr _{0.2} Ti _{0.8} O ₃ Superlattices. ACS Applied Materials & Interfaces, 2015, 7, 19906-19913.	8.0	20
29	Combined strain and composition-induced effects in the metal-insulator transition of epitaxial VO ₂ films. Applied Physics Letters, 2017, 111, .	3.3	20
30	Lattice strain in irradiated materials unveils a prevalent defect evolution mechanism. Physical Review Materials, 2018, 2, .	2.4	20
31	Microstructural analysis in epitaxial zirconia layers. Applied Surface Science, 2002, 188, 80-84.	6.1	18
32	Instrumental aspects in X-ray diffraction on polycrystalline materials. Powder Diffraction, 2005, 20, 294-305.	0.2	18
33	The surface roughness effect on electrochemical properties of La _{0.5} Sr _{0.5} Fe _{0.7} Ga _{0.3} O _{3-δ} perovskite for oxygen transport membranes. Journal of Membrane Science, 2019, 588, 117199.	8.2	17
34	Ceramic nanocomposites obtained by sol-gel coating of submicron powders. Acta Materialia, 2001, 49, 811-816.	7.9	16
35	On the use of one-dimensional position sensitive detector for x-ray diffraction reciprocal space mapping: Data quality and limitations. Review of Scientific Instruments, 2005, 76, 063912.	1.3	16
36	Synthesis of tin oxide nanosized crystals embedded in silica matrix through sol-gel process using alkoxide precursors. Journal of Non-Crystalline Solids, 2009, 355, 951-959.	3.1	16

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37	Two-dimensional versus three-dimensional post-deposition grain growth in epitaxial oxide thin films. Thin Solid Films, 2007, 515, 7080-7085.	1.8	15
38	Role of nanostructure on the optical waveguiding properties of epitaxial LiNbO ₃ films. Journal Physics D: Applied Physics, 2009, 42, 145403.	2.8	15
39	Epitaxial stabilization of SmNiO ₃ films on (001) SrTiO ₃ substrates. Journal Physics D: Applied Physics, 2007, 40, 4872-4876.	2.8	14
40	Defect structure of pulsed laser deposited LiNbO ₃ /Al ₂ O ₃ layers determined by X-ray diffraction reciprocal space mapping. Thin Solid Films, 2003, 429, 55-62.	1.8	13
41	The 3C-6H polytypic transition in SiC as revealed by diffuse x-ray scattering. Applied Physics Letters, 2009, 94, 201904.	3.3	13
42	Nanostructured sapphire vicinal surfaces as templates for the growth of self-organized oxide nanostructures. Applied Surface Science, 2009, 256, 924-928.	6.1	13
43	Depth-dependent phase change in Gd ₂ O ₃ epitaxial layers under ion irradiation. Applied Physics Letters, 2015, 107, .	3.3	12
44	Analysis of strain and disordering kinetics based on combined RBS-channeling and X-ray diffraction atomic-scale modelling. Acta Materialia, 2020, 201, 63-71.	7.9	12
45	Control of the morphology of oxide nano-islands through the substrate miscut angle. Progress in Solid State Chemistry, 2005, 33, 327-332.	7.2	11
46	Quantitative analysis of diffuse X-ray scattering in partially transformed 3C-SiC single crystals. Journal of Applied Crystallography, 2010, 43, 867-875.	4.5	11
47	Self-organized ultrathin FePt nanowires produced by glancing-angle ion-beam codeposition on rippled alumina surfaces. Nanoscale, 2015, 7, 1437-1445.	5.6	11
48	Diffuse X-ray scattering from 180° ferroelectric stripe domains: polarization-induced strain, period disorder and wall roughness. Journal of Applied Crystallography, 2016, 49, 845-855.	4.5	11
49	<i>DxTools</i> : processing large data files recorded with the Bruker D8 diffractometer. Journal of Applied Crystallography, 2017, 50, 967-974.	4.5	11
50	Strain engineering 4H-SiC with ion beams. Applied Physics Letters, 2019, 114, .	3.3	11
51	X-Ray diffraction from epitaxial oxide layers grown from sol-gel. Thin Solid Films, 2003, 434, 1-6.	1.8	10
52	Recent advances in high-resolution X-ray diffractometry applied to nanostructured oxide thin films: The case of yttria stabilized zirconia epitaxially grown on sapphire. Applied Surface Science, 2006, 253, 95-105.	6.1	10
53	Diffuse X-ray scattering from ion-irradiated materials: a parallel-computing approach. Journal of Applied Crystallography, 2015, 48, 252-261.	4.5	10
54	Mechanical response of UO ₂ single crystals submitted to low-energy ion irradiation. Journal of Nuclear Materials, 2015, 467, 505-511.	2.7	10

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55	A new way to prepare tin oxide precursor polymeric gels. <i>Journal of Sol-Gel Science and Technology</i> , 2010, 55, 15-18.	2.4	9
56	Properties of LiNbO ₃ based heterostructures grown by pulsed-laser deposition for optical waveguiding application. <i>Thin Solid Films</i> , 2010, 518, 4654-4657.	1.8	9
57	Structural and electrical properties of Bi _{0.5} Na _{0.5} TiO ₃ based superlattices grown by pulsed laser deposition. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	9
58	Nacre-like alumina composites based on heteroaggregation. <i>Journal of the European Ceramic Society</i> , 2020, 40, 5773-5778.	5.7	9
59	Planar faults in layered Bi-containing perovskites studied by X-ray diffraction line profile analysis. <i>Journal of Applied Crystallography</i> , 2001, 34, 699-703.	4.5	8
60	Characterization of stacking faults in thick 3C-SiC crystals using high-resolution diffuse X-ray scattering. <i>Journal of Crystal Growth</i> , 2008, 310, 982-987.	1.5	8
61	Strain profiles in thin films: influence of a coherently diffracting substrate and thickness fluctuations. <i>Journal of Applied Crystallography</i> , 2009, 42, 85-92.	4.5	8
62	Implantation of high concentration noble gases in cubic zirconia and silicon carbide: A contrasted radiation tolerance. <i>Journal of Nuclear Materials</i> , 2014, 451, 14-23.	2.7	8
63	How relative defect migration energies drive contrasting temperature-dependent microstructural evolution in irradiated ceramics. <i>Physical Review Materials</i> , 2018, 2, .	2.4	8
64	Influence of thickness on the epitaxial stabilisation of SmNiO ₃ thin films. <i>Surface and Coatings Technology</i> , 2007, 201, 9021-9024.	4.8	7
65	Strain effect in PbTiO ₃ /PbZr _{0.2} Ti _{0.8} O ₃ superlattices: From polydomain to monodomain structures. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	7
66	3C-SiC Heteroepitaxy on Hexagonal SiC Substrates. <i>Materials Science Forum</i> , 2013, 740-742, 257-262.	0.3	7
67	Structural observation of piezoelectric inhomogeneity in a mixed-orientation Na _{0.5} Bi _{0.5} TiO ₃ perovskite thin film. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	7
68	Ordered misfit dislocations in epitaxial Gd doped CeO ₂ thin films deposited on (001)YSZ single crystal substrates. <i>Applied Surface Science</i> , 2018, 433, 668-673.	6.1	7
69	Structural Aspects of the Superionic Transition in AX ₂ Compounds With the Fluorite Structure. <i>Frontiers in Chemistry</i> , 2021, 9, 723507.	3.6	7
70	Growth and relaxation of (Zr,Y)O ₂ epitaxial layers analyzed by XRD reciprocal space mapping. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004, 109, 42-46.	3.5	6
71	Influence of strain relaxation on the structural stabilization of SmNiO ₃ films epitaxially grown on (001) SrTiO ₃ substrates. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2007, 144, 32-37.	3.5	6
72	Texture and interface characterization of iridium thin films grown on MgO substrates with different orientations. <i>Journal of Materials Science</i> , 2020, 55, 1753-1764.	3.7	6

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73	Symmetry degeneration and room temperature ferroelectricity in ion-irradiated SrTiO ₃ . Journal of Physics Condensed Matter, 2020, 32, 355405.	1.8	6
74	Planar faults in Aurivillius compounds: An X-ray diffraction study. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 615-632.	0.6	5
75	Strain relaxation in He implanted UO ₂ polycrystals under thermal treatment: An in situ XRD study. Journal of Nuclear Materials, 2016, 476, 63-76.	2.7	5
76	High-performance Python for crystallographic computing. Journal of Applied Crystallography, 2019, 52, 882-897.	4.5	3
77	Nondestructive Evaluation of Photo-Electrical Properties of 3C-SiC (111) Homoepitaxial Layers Grown by CVD. Materials Science Forum, 0, 679-680, 153-156.	0.3	1
78	Advances in original fibres fabrication using innovative techniques. Optical and Quantum Electronics, 2007, 39, 1033-1045.	3.3	0
79	On the Stability of 3C-SiC Single Crystals at High Temperatures. Materials Science Forum, 0, 717-720, 493-496.	0.3	0