

# 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  
g-index

80  
all docs

80  
docs citations

80  
times ranked

1752  
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural Aspects of the Superionic Transition in AX <sub>2</sub> Compounds With the Fluorite Structure. <i>Frontiers in Chemistry</i> , 2021, 9, 723507.	3.6	7
2	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
3	Analysis of strain and disordering kinetics based on combined RBS-channeling and X-ray diffraction atomic-scale modelling. <i>Acta Materialia</i> , 2020, 201, 63-71.	7.9	12
4	Symmetry degeneration and room temperature ferroelectricity in ion-irradiated SrTiO <sub>3</sub> . <i>Journal of Physics Condensed Matter</i> , 2020, 32, 355405.	1.8	6
5	Nacre-like alumina composites based on heteroaggregation. <i>Journal of the European Ceramic Society</i> , 2020, 40, 5773-5778.	5.7	9
6	The surface roughness effect on electrochemical properties of La <sub>0.5</sub> Sr <sub>0.5</sub> Fe <sub>0.7</sub> Ga <sub>0.3</sub> O <sub>3-<math>\delta</math></sub> perovskite for oxygen transport membranes. <i>Journal of Membrane Science</i> , 2019, 588, 117199.	8.2	17
7	Strain engineering 4H-SiC with ion beams. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	11
8	High-performance Python for crystallographic computing. <i>Journal of Applied Crystallography</i> , 2019, 52, 882-897.	4.5	3
9	Ordered misfit dislocations in epitaxial Gd doped CeO <sub>2</sub> thin films deposited on (001)YSZ single crystal substrates. <i>Applied Surface Science</i> , 2018, 433, 668-673.	6.1	7
10	Lattice strain in irradiated materials unveils a prevalent defect evolution mechanism. <i>Physical Review Materials</i> , 2018, 2, .	2.4	20
11	How relative defect migration energies drive contrasting temperature-dependent microstructural evolution in irradiated ceramics. <i>Physical Review Materials</i> , 2018, 2, .	2.4	8
12	<i>DxTools</i> : processing large data files recorded with the Bruker D8 diffractometer. <i>Journal of Applied Crystallography</i> , 2017, 50, 967-974.	4.5	11
13	The amorphization of 3C-SiC irradiated at moderately elevated temperatures as revealed by X-ray diffraction. <i>Acta Materialia</i> , 2017, 140, 250-257.	7.9	27
14	Combined strain and composition-induced effects in the metal-insulator transition of epitaxial VO <sub>2</sub> films. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	20
15	Diffuse X-ray scattering from 180° ferroelectric stripe domains: polarization-induced strain, period disorder and wall roughness. <i>Journal of Applied Crystallography</i> , 2016, 49, 845-855.	4.5	11
16	Strain relaxation in He implanted UO <sub>2</sub> polycrystals under thermal treatment: An in situ XRD study. <i>Journal of Nuclear Materials</i> , 2016, 476, 63-76.	2.7	5
17	Size distribution of black spot defects and their contribution to swelling in irradiated SiC. <i>Journal of Nuclear Materials</i> , 2016, 476, 132-139.	2.7	25
18	Statistical Nature of Atomic Disorder in Irradiated Crystals. <i>Physical Review Letters</i> , 2016, 116, 245501.	7.8	25

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19	<i>i&gt;RaDMaX&lt;/i&gt;: a graphical program for the determination of strain and damage profiles in irradiated crystals. Journal of Applied Crystallography, 2016, 49, 311-316.</i>	4.5	29
20	Depth-dependent phase change in Gd <sub>2</sub> O <sub>3</sub> epitaxial layers under ion irradiation. Applied Physics Letters, 2015, 107, .	3.3	12
21	Advanced techniques for characterization of ion beam modified materials. Current Opinion in Solid State and Materials Science, 2015, 19, 19-28.	11.5	48
22	Diffuse X-ray scattering from ion-irradiated materials: a parallel-computing approach. Journal of Applied Crystallography, 2015, 48, 252-261.	4.5	10
23	Mechanical response of UO <sub>2</sub> single crystals submitted to low-energy ion irradiation. Journal of Nuclear Materials, 2015, 467, 505-511.	2.7	10
24	Polarization Rotation in Ferroelectric Tricolor PbTiO <sub>3</sub> /SrTiO <sub>3</sub> /PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> Superlattices. ACS Applied Materials & Interfaces, 2015, 7, 19906-19913.	8.0	20
25	Self-organized ultrathin FePt nanowires produced by glancing-angle ion-beam codeposition on rippled alumina surfaces. Nanoscale, 2015, 7, 1437-1445.	5.6	11
26	Structural and electrical properties of Bi <sub>0.5</sub> Na <sub>0.5</sub> TiO <sub>3</sub> based superlattices grown by pulsed laser deposition. Journal of Applied Physics, 2014, 116, .	2.5	9
27	Comprehensive study of the effect of the irradiation temperature on the behavior of cubic zirconia. Journal of Applied Physics, 2014, 115, .	2.5	35
28	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
29	Implantation of high concentration noble gases in cubic zirconia and silicon carbide: A contrasted radiation tolerance. Journal of Nuclear Materials, 2014, 451, 14-23.	2.7	8
30	Structural observation of piezoelectric inhomogeneity in a mixed-orientation Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> perovskite thin film. Applied Physics Letters, 2014, 105, .	3.3	7
31	3C-SiC Heteroepitaxy on Hexagonal SiC Substrates. Materials Science Forum, 2013, 740-742, 257-262.	0.3	7
32	Electrical properties of (110) epitaxial lead-free ferroelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> thin films grown by pulsed laser deposition: Macroscopic and nanoscale data. Journal of Applied Physics, 2012, 111, .	2.5	46
33	Strain effect in PbTiO <sub>3</sub> /PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> superlattices: From polydomain to monodomain structures. Journal of Applied Physics, 2012, 112, .	2.5	7
34	Strain and stress build-up in He-implanted UO <sub>2</sub> single crystals: an X-ray diffraction study. Journal of Materials Science, 2011, 46, 4683-4689.	3.7	34
35	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
36	Oxygen incorporation effects in annealed epitaxial La(1-x)Sr <sub>x</sub> MnO <sub>3</sub> thin films. Journal of Applied Physics, 2011, 109, 123913.	2.5	21

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37	A new way to prepare tin oxide precursor polymeric gels. Journal of Sol-Gel Science and Technology, 2010, 55, 15-18.	2.4	9
38	Properties of LiNbO <sub>3</sub> based heterostructures grown by pulsed-laser deposition for optical waveguiding application. Thin Solid Films, 2010, 518, 4654-4657.	1.8	9
39	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
40	Strain-profile determination in ion-implanted single crystals using generalized simulated annealing. Journal of Applied Crystallography, 2010, 43, 1046-1052.	4.5	42
41	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
42	Optical properties of an epitaxial Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> thin film grown by laser ablation: Experimental approach and density functional theory calculations. Journal of Applied Physics, 2010, 107, .	2.5	61
43	The 3C-6H polytypic transition in SiC as revealed by diffuse x-ray scattering. Applied Physics Letters, 2009, 94, 201904.	3.3	13
44	Role of nanostructure on the optical waveguiding properties of epitaxial LiNbO <sub>3</sub> films. Journal Physics D: Applied Physics, 2009, 42, 145403.	2.8	15
45	Strain profiles in thin films: influence of a coherently diffracting substrate and thickness fluctuations. Journal of Applied Crystallography, 2009, 42, 85-92.	4.5	8
46	Microstructural study of SnO <sub>2</sub> thin layers deposited on sapphire by sol-gel dip-coating. Thin Solid Films, 2009, 518, 1-5.	1.8	21
47	Nanostructured sapphire vicinal surfaces as templates for the growth of self-organized oxide nanostructures. Applied Surface Science, 2009, 256, 924-928.	6.1	13
48	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
49	Prospects for 3C-SiC bulk crystal growth. Journal of Crystal Growth, 2008, 310, 976-981.	1.5	38
50	Characterization of stacking faults in thick 3C-SiC crystals using high-resolution diffuse X-ray scattering. Journal of Crystal Growth, 2008, 310, 982-987.	1.5	8
51	Lead-free Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> ferroelectric thin films grown by Pulsed Laser Deposition on epitaxial platinum bottom electrodes. Thin Solid Films, 2008, 517, 592-597.	1.8	48
52	Investigation of strain relaxation mechanisms and transport properties in epitaxial SmNiO <sub>3</sub> films. Journal of Applied Physics, 2008, 103, 123501.	2.5	22
53	The role of strain-induced structural changes in the metal-insulator transition in epitaxial SmNiO <sub>3</sub> films. Journal of Physics Condensed Matter, 2008, 20, 145216.	1.8	21
54	Epitaxial stabilization of SmNiO <sub>3</sub> films on (001) SrTiO <sub>3</sub> substrates. Journal Physics D: Applied Physics, 2007, 40, 4872-4876.	2.8	14

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55	Effect of tensile and compressive strains on the transport properties of SmNiO <sub>3</sub> layers epitaxially grown on (001) SrTiO <sub>3</sub> and LaAlO <sub>3</sub> substrates. Applied Physics Letters, 2007, 91, .	3.3	69
56	Influence of thickness on the epitaxial stabilisation of SmNiO <sub>3</sub> thin films. Surface and Coatings Technology, 2007, 201, 9021-9024.	4.8	7
57	Two-dimensional versus three-dimensional post-deposition grain growth in epitaxial oxide thin films. Thin Solid Films, 2007, 515, 7080-7085.	1.8	15
58	Growth of LiNbO <sub>3</sub> thin films on sapphire by pulsed-laser deposition for electro-optic modulators. Applied Surface Science, 2007, 253, 8263-8267.	6.1	20
59	Influence of strain relaxation on the structural stabilization of SmNiO <sub>3</sub> films epitaxially grown on (001) SrTiO <sub>3</sub> substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2007, 144, 32-37.	3.5	6
60	Advances in original fibres fabrication using innovative techniques. Optical and Quantum Electronics, 2007, 39, 1033-1045.	3.3	0
61	From amorphous phase separations to nanostructured materials in sol-gel derived ZrO <sub>2</sub> :Eu <sup>3+</sup> /SiO <sub>2</sub> and ZnO/SiO <sub>2</sub> composites. Journal of Non-Crystalline Solids, 2006, 352, 2152-2158.	3.1	28
62	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
63	Instrumental aspects in X-ray diffraction on polycrystalline materials. Powder Diffraction, 2005, 20, 294-305.	0.2	18
64	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
65	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
66	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
67	Growth and relaxation of (Zr,Y)O <sub>2</sub> epitaxial layers analyzed by XRD reciprocal space mapping. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 109, 42-46.	3.5	6
68	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
69	X-Ray diffraction from epitaxial oxide layers grown from sol-gel. Thin Solid Films, 2003, 434, 1-6.	1.8	10
70	Defect structure of pulsed laser deposited LiNbO <sub>3</sub> /Al <sub>2</sub> O <sub>3</sub> layers determined by X-ray diffraction reciprocal space mapping. Thin Solid Films, 2003, 429, 55-62.	1.8	13
71	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
72	A high-resolution X-ray diffractometer for the study of imperfect materials. Journal of Applied Crystallography, 2002, 35, 606-614.	4.5	56

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73	Microstructural analysis in epitaxial zirconia layers. Applied Surface Science, 2002, 188, 80-84.	6.1	18
74	Miscut angles measurement and precise sample positioning with a four circle diffractometer. Applied Surface Science, 2001, 180, 322-327.	6.1	22
75	Planar faults in layered Bi-containing perovskites studied by X-ray diffraction line profile analysis. Journal of Applied Crystallography, 2001, 34, 699-703.	4.5	8
76	X-Ray diffraction line broadening by stacking faults in SrBi <sub>2</sub> Nb <sub>2</sub> O <sub>9</sub> /SrTiO <sub>3</sub> epitaxial thin films. Thin Solid Films, 2001, 391, 42-46.	1.8	23
77	Ceramic nanocomposites obtained by sol-gel coating of submicron powders. Acta Materialia, 2001, 49, 811-816.	7.9	16
78	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
79	On the Stability of 3C-SiC Single Crystals at High Temperatures. Materials Science Forum, 0, 717-720, 493-496.	0.3	0