# Alexander Belov

List of Publications by Year
in descending order



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|---|---|---|---|
| 41 papers | 530 citations | 687363 13 h-index | 677142 22 g-index |
| 41 all docs | 41 docs citations | 41 times ranked | 402 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Evolution ofsp2networks with substrate temperature in amorphous carbon films: Experiment and theory. Physical Review B, 2005, 72, . | 3.2 | 61 |
| 2 | ta-C deposition simulations: Film properties and time-resolved dynamics of film formation. Physical Review B, 2003, 68, . | 3.2 | 58 |
| 3 | Real temperature of nanoparticles in electron microscope beams. Philosophical Magazine Letters, 1991, 63, 275-279. | 1.2 | 37 |
| 4 | Strain and x-ray diffraction from axial nanowire heterostructures. Physical Review B, 2012, 85, . | 3.2 | 31 |
| 5 | Dissociation of screw dislocations in (001) low-angle twist boundaries: A source of the 30 o partial dislocations in silicon. Philosophical Magazine Letters, 1999, 79, 531-538. | 1.2 | 28 |
| 6 | Elastic fields of dislocations piercing the interface of an anisotropic bicrystal. Physica Status Solidi (B): Basic Research, 1983, 119, 565-578. | 1.5 | 25 |
| 7 | Simulation of microstructure evolution in polycrystalline ferroelectricsâ€“ferroelasticsâ˜†. Acta Materialia, 2006, 54, 3463-3469. | 7.9 | 24 |
| 8 | Dislocations Emerging at Planar Boundaries. Modern Problems in Condensed Matter Sciences, 1992, 31, 391-446. | 0.1 | 19 |
| 9 | Viscoplastic models for ferroelectric ceramics. Journal of the European Ceramic Society, 2005, 25, 2567-2571. | 5.7 | 19 |
| 10 | Calculation of intrinsic stresses in amorphous carbon films grown by molecular dynamics simulation: from atomic to macroscopic scale. Computational Materials Science, 2002, 24, 154-158. | 3.0 | 17 |
| 11 | Atomistic study of the (001), 90Â° twist boundary in silicon. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 55-65. | 0.6 | 16 |
| 12 | Atomic scale simulation of structural relaxation processes in tetrahedral amorphous carbon. Computational Materials Science, 2003, 27, 30-35. | 3.0 | 14 |
| 13 | Extended Point Defect Structures at Intersections of Screw Dislocations in Si: A Molecular Dynamics Study. Physica Status Solidi A, 1999, 171, 159-166. | 1.7 | 13 |
| 14 | Viscoplastic behaviour of perovskite type ferroelectrics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 118, 7-11. | 3.5 | 13 |
| 15 | Determination of the positions of impurity centers in a dislocation core in a NaCl crystal from magnetoplasticity spectra. JETP Letters, 2014, 99, 82-88. | 1.4 | 13 |
| 16 | Creep in Soft PZT: The Effect of Internal Fields. Ferroelectrics, 2009, 391, 12-21. | 0.6 | 12 |
| 17 | Critical Angles in Bending of Rotationally Inhomogeneous Elastic Wedges. Journal of Applied Mechanics, Transactions ASME, 1995, 62, 429-440. | 2.2 | 11 |
| 18 | Scaling regimes and anomalies of wedge disclination stresses in anisotropic rotationally inhomogeneous media. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1993, 68, 1215-1231. | 0.6 | 10 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Simulation of the non-equilibrium processes for tetrahedral amorphous carbon: Deposition and structural relaxation. Nuclear Instruments & Methods in Physics Research B, 2003, 202, 242-248. | 1.4 | 10 |
| 20 | The analogue of the Carothers' effect and stress anomalies in the theory of disclinations. Philosophical Magazine Letters, 1991, 64, 207-210. | 1.2 | 9 |
| 21 | Formation and evolution of sp2 clusters in amorphous carbon networks as predicted by molecular dynamics annealing simulations. Diamond and Related Materials, 2005, 14, 1014-1018. | 3.9 | 9 |
| 22 | Universal weight functions for elastically anisotropic, angularly inhomogeneous media with notches or cracks. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 73, 1621-1646. | 0.6 | 7 |
| 23 | The Evaluation of Activation Parameters for Ferroelectric Switching in Soft PZT Ceramics. Ferroelectrics, 2009, 391, 42-50. | 0.6 | 7 |
| 24 | A wedge disclination along the vertex of the wedge-like inhomogeneity in an elastically anisotropic solid. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1992, 65, 1429-1444. | 0.6 | 6 |
| 25 | Higher order weight functions in fracture mechanics of inhomogeneous anisotropic solids. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 1471-1483. | 0.6 | 6 |
| 26 | Enhanced semi-empirical potentials in molecular dynamics simulations of wafer bonding. Materials Science in Semiconductor Processing, 2000, 3, 129-135. | 4.0 | 6 |
| 27 | Elastic constants of tetrahedral amorphous carbon films: the effect of intrinsic stresses. Surface and Coatings Technology, 2002, 151-152, 128-132. | 4.8 | 6 |
| 28 | Domain Wall Interactions and Transformation of Domain Pattern Near the Improper Ferroelastic Phase Transition of K 2 Ba(NO 2 ) 4. Ferroelectrics, 2003, 290, 133-140. | 0.6 | 6 |
| 29 | Micromechanics of Ferroelectrics: From Domain Walls to Piezoceramic Devices. Ferroelectrics, 2007, 351, 79-87. | 0.6 | 6 |
| 30 | Relaxation kinetics in amorphous carbon films: An insight from atomic scale simulation. Thin Solid Films, 2005, 482, 74-78. | 1.8 | 5 |
| 31 | Molecular dynamics modelling of silicon wafer bonding. Computational Materials Science, 1997, 9, 108-115. | 3.0 | 4 |
| 32 | Atomic processes at bonded Si-interfaces studied by molecular dynamics: tayloring densities and bandgaps?. Computational Materials Science, 2002, 24, 33-41. | 3.0 | 4 |
| 33 | Atomistic study of ion-beam deposition conditions for hard amorphous carbon. Computational Materials Science, 2003, 27, 16-22. | 3.0 | 4 |
| 34 | Low-frequency spectra of dislocation paths in NaCl crystals in the electron spin resonance scheme. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 1086-1091. | 0.6 | 4 |
| 35 | 1/E2 Law: Solution of the Unsolved Problem in the Physics of Ferroelectrics. JETP Letters, 2018, 108, 221-225. | 1.4 | 3 |
| 36 | Anomalies of compatibility stresses in elastically anisotropic solids with wedge-like inhomogeneities. Physica Scripta, 1992, T44, 113-121. | 2.5 | 2 |

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|---|---|---|---|
| 37 | Atomic structures of dislocation intersections at (001) low-angle twist and shear boundaries in silicon. Philosophical Magazine Letters, 1999, 79, 107-114. | 1.2 | 2 |
| 38 | Elastic Properties of Diamond-Like Amorphous Carbon Films Grown by Computer Simulation of Ion-Beam Deposition Process. Materials Research Society Symposia Proceedings, 2000, 648, 1. | 0.1 | 1 |
| 39 | Fast Polarization Reversal in Polycrystalline Ferroelectric Thin Films: The Origin of Size Effects. Ferroelectrics, 2019, 544, 27-32. | 0.6 | 1 |
| 40 | Atomistic study of the (001 ), 90 o twist boundary in silicon. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 55-65. | 0.6 | 1 |
| 41 | First-principles estimate of Peierls energy in sodium chloride. Crystallography Reports, 2017, 62, 270-274. | 0.6 | 0 |