

Catherine Bishop

List of Publications by Year in descending order

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papers

905
citations

623734

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47
all docs

47
docs citations

47
times ranked

1117
citing authors

#	ARTICLE	IF	CITATIONS
1	Microstructural Modeling and Design of Rechargeable Lithium-Ion Batteries. Journal of the Electrochemical Society, 2005, 152, A255.	2.9	269
2	Abnormal grain growth in undoped strontium and barium titanate. Acta Materialia, 2010, 58, 290-300.	7.9	68
3	Thermodynamically consistent variational principles with applications to electrically and magnetically active systems. Acta Materialia, 2004, 52, 11-21.	7.9	62
4	High efficiency water splitting photoanodes composed of nano-structured anatase-rutile TiO ₂ heterojunctions by pulsed-pressure MOCVD. Applied Catalysis B: Environmental, 2018, 224, 904-911.	20.2	51
5	Nanostructured TiO ₂ anatase-rutile-carbon solid coating with visible light antimicrobial activity. Scientific Reports, 2019, 9, 1883.	3.3	47
6	Continuum modelling and representations of interfaces and their transitions in materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 422, 102-114.	5.6	38
7	Crystallography and Morphology of MC Carbides in Niobium-Titanium Modified As-Cast HP Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3373-3385.	2.2	37
8	A diffuse interface model of interfaces: Grain boundaries in silicon nitride. Acta Materialia, 2005, 53, 4755-4764.	7.9	29
9	Effect of compositional changes on microstructure in additively manufactured aluminum alloy 2139. Materials Characterization, 2018, 143, 50-58.	4.4	27
10	Relating atomistic grain boundary simulation results to the phase-field model. Computational Materials Science, 2002, 25, 378-386.	3.0	26
11	Microstructure and Carburization Detection in HP Alloy Pyrolysis Tubes. Metallography, Microstructure, and Analysis, 2015, 4, 273-285.	1.0	24
12	Effect of charge separation on the stability of large wavelength fluctuations during spinodal decomposition. Acta Materialia, 2003, 51, 1517-1524.	7.9	23
13	Reduced interfacial adhesion in glass fibre-epoxy composites due to water absorption via molecular dynamics simulations. Composites Part A: Applied Science and Manufacturing, 2019, 118, 99-105.	7.6	21
14	Characterization of photocatalytic, wetting and optical properties of TiO ₂ thin films and demonstration of uniform coating on a 3-D surface in the mass transport controlled regime. Surface and Coatings Technology, 2017, 326, 402-410.	4.8	16
15	Al ₂ O ₃ coatings on stainless steel using pulsed-pressure MOCVD. Surface and Coatings Technology, 2013, 230, 208-212.	4.8	15
16	Microstructural Characterization and Image Analysis in Ex-Service HP Alloy Stainless Steel Tubes for Ethylene Pyrolysis. Metallography, Microstructure, and Analysis, 2016, 5, 178-187.	1.0	11
17	Electrochemical behaviour of titanium-bearing slag relevant for molten oxide electrolysis. Electrochimica Acta, 2020, 354, 136619.	5.2	10
18	Deposition of Bio-Integration Ceramic Hydroxyapatite by Pulsed-Pressure MOCVD Using a Single Liquid Precursor Solution. Chemical Vapor Deposition, 2010, 16, 55-63.	1.3	9

#	ARTICLE	IF	CITATIONS
19	Equilibrium moisture content of a crosslinked epoxy network via molecular dynamics simulations. Modelling and Simulation in Materials Science and Engineering, 2016, 24, 055002.	2.0	9
20	Thermodynamically consistent variational principles for charged interfaces. Acta Materialia, 2021, 205, 116525.	7.9	9
21	Formation of aluminium carbide by cast iron and liquid aluminium interaction. International Journal of Cast Metals Research, 2014, 27, 321-328.	1.0	8
22	Distribution of $\{111\}$ misorientations in polycrystalline strontium titanate. Journal of the European Ceramic Society, 2009, 29, 3023-3029.	5.7	7
23	A Microstructural Study of Grain Boundary Engineered Alloy 800H. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 763-772.	2.2	7
24	Phase coexistence near the polymorphic phase boundary. Acta Materialia, 2019, 164, 577-585.	7.9	7
25	Microstructural phase coexistence kinetics near the polymorphic phase boundary. Acta Materialia, 2021, 206, 116579.	7.9	7
26	Electrochemical Study on the Reduction of Si and Ti from molten $TiO_2 \cdot Al_2O_3 \cdot MgO \cdot CaO$ Slag. Journal of the Electrochemical Society, 2021, 168, 062502.	2.9	7
27	Antimicrobial and biofilm-disrupting nanostructured TiO_2 coating demonstrating photoactivity and dark activity. FEMS Microbiology Letters, 2021, 368, .	1.8	6
28	Time-Temperature-Precipitation Relations for Nitrides and Evaluation of Internal Oxidation Theory for Nitridation of Austenitic Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4456-4470.	2.2	5
29	Modeling of flash sintering of ionic ceramics. MRS Bulletin, 2021, 46, 67-75.	3.5	5
30	Carbide formation accompanying internal nitridation of austenitic stainless steel. Materials Characterization, 2022, 184, 111662.	4.4	5
31	A Deformation Mechanism Map for Incoloy 800H Optimized Using the Genetic Algorithm. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4098-4110.	2.2	4
32	Growth stages of nano-structured mixed-phase titania thin films and effect on photocatalytic activity. Thin Solid Films, 2019, 685, 136-144.	1.8	4
33	The role of faceting in biaxially textured thin films: Columnar morphology and abnormal tilting. Journal of Applied Physics, 2020, 128, .	2.5	4
34	Process-Induced Nanostructures on Anatase Single Crystals via Pulsed-Pressure MOCVD. Materials, 2020, 13, 1668.	2.9	4
35	Implications of Direct Use of Slag from Ironmaking Processes as Molten Oxide Electrolyte. Jom, 2021, 73, 1899-1908.	1.9	4
36	Titania-based photocatalytic coatings on stainless steel hospital fixtures. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 1028-1035.	0.8	3

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37	Continuous Grain Size Gradients in Austenitic Incoloy 800H: Design, Processing, and Characterization. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1719-1731.	2.2	3
38	Effects of post-deposition heat treatment on nanostructured TiO ₂ -C composite structure and antimicrobial properties. Surface and Coatings Technology, 2021, 409, 126857.	4.8	3
39	Determination of the Partial Contributions to the Electrical Conductivity of TiO ₂ -SiO ₂ -Al ₂ O ₃ -MgO-CaO Slags: Role of the Experimental Processing Conditions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 798-806.	2.1	3
40	Hybrid materials design to control creep in metallic pipes. Materials and Design, 2015, 84, 25-35.	7.0	2
41	Titania Solid Thin Films Deposited by ppâ€MOCVD Exhibiting Visible Light Photocatalytic Activity. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700578.	1.8	2
42	Failure of commercial extruded catalysts in simple compression and bulk thermal cycling. International Journal of Applied Ceramic Technology, 2018, 15, 74-88.	2.1	2
43	Physics-based optimization of Landau parameters for ferroelectrics: application to BZTâ€“50BCT. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 075001.	2.0	2
44	EBSD Characterization of Pilgered Alloy 800H After Heat Treatment. Materials Performance and Characterization, 2016, 5, 20160062.	0.3	0
45	Phase field model of faceted anatase TiO ₂ dendrites in low pressure chemical vapor deposition. Applied Physics Letters, 2021, 119, 221602.	3.3	0