

Vikram Jayaram

List of Publications by Year in descending order

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76
papers

1,339
citations

331670

21
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395702

33
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77
all docs

77
docs citations

77
times ranked

1058
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of phase transformation behaviour and microstructural development of electroless Ni-B coating. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 8269-8276.	5.6	61
2	Synthesis and Densification of Monolithic Zirconium Carbide by Reactive Hot Pressing. <i>Journal of the American Ceramic Society</i> , 2010, 93, 1341-1346.	3.8	59
3	Development of Nano-Composite Microstructures in ZrO ₂ -Al ₂ O ₃ via the Solution Precursor Method. <i>Journal of the American Ceramic Society</i> , 1995, 78, 1489-1494.	3.8	55
4	Fabrication and mechanisms of densification of ZrB ₂ -based ultra high temperature ceramics by reactive hot pressing. <i>Journal of the European Ceramic Society</i> , 2010, 30, 129-138.	5.7	55
5	A new method for fracture toughness determination of graded (Pt,Ni)Al bond coats by microbeam bend tests. <i>Philosophical Magazine</i> , 2012, 92, 3326-3345.	1.6	53
6	Low-Temperature Processing of ZrB ₂ -ZrC Composites by Reactive Hot Pressing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008, 39, 1496-1505.	2.2	49
7	Crack stability in edge-notched clamped beam specimens: modeling and experiments. <i>International Journal of Fracture</i> , 2014, 188, 213-228.	2.2	47
8	Strength of hot pressed ZrB ₂ -SiC composite after exposure to high temperatures (1000-1700 Å°C). <i>Journal of the European Ceramic Society</i> , 2012, 32, 4455-4467.	5.7	46
9	Heat conduction mechanisms in hot pressed ZrB ₂ and ZrB ₂ -SiC composites. <i>Journal of the European Ceramic Society</i> , 2013, 33, 1615-1624.	5.7	46
10	Flow Kinetics in Porous Ceramics: Understanding with Non-Uniform Capillary Models. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3040-3046.	3.8	43
11	Densification mechanisms during hot pressing of ZrB ₂ -20vol.% SiC composite. <i>Scripta Materialia</i> , 2013, 69, 370-373.	5.2	42
12	Soft chemical routes to the synthesis of extended solid solutions of wurtzite ZnO-MO (M=Mg,Co,Ni). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 304-306, 800-804.	5.6	40
13	Fracture Testing at Small-Length Scales: From Plasticity in Si to Brittleness in Pt. <i>Jom</i> , 2016, 68, 94-108.	1.9	39
14	Severe wear of a near eutectic aluminium-silicon alloy. <i>Acta Materialia</i> , 2011, 59, 6069-6082.	7.9	33
15	Diffusion, defects and understanding the growth of a multicomponent interdiffusion zone between Pt-modified B ₂ NiAl bond coat and single crystal superalloy. <i>Acta Materialia</i> , 2020, 195, 35-49.	7.9	31
16	Dense Amorphous Zirconia-Alumina by Low-Temperature Consolidation of Spray-Pyrolyzed Powders. <i>Journal of the American Ceramic Society</i> , 1999, 82, 2613-2618.	3.8	28
17	Optimization of clamped beam geometry for fracture toughness testing of micron-scale samples. <i>Philosophical Magazine</i> , 2015, 95, 1945-1966.	1.6	28
18	Effect of microstructure on the hardness and dry sliding behavior of electroless Ni-B coating. <i>Materialia</i> , 2018, 4, 47-64.	2.7	28

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19	Growth of Al ₂ O ₃ /Al composites from Al _i -Zn alloys. <i>Acta Materialia</i> , 1996, 44, 819-829.	7.9	25
20	Reactive Hot Pressing of Titanium Nitride/Titanium Diboride Composites at Moderate Pressures and Temperatures. <i>Journal of the American Ceramic Society</i> , 2004, 87, 1872-1878.	3.8	22
21	Total internal reflection (TIR) Raman tribometer: a new tool for in situ study of friction-induced material transfer. <i>RSC Advances</i> , 2013, 3, 5401.	3.6	22
22	Bulk, Dense, Nanocrystalline Yttrium Aluminum Garnet by Consolidation of Amorphous Powders at Low Temperatures and High Pressures. <i>Journal of the American Ceramic Society</i> , 2003, 86, 247-251.	3.8	21
23	Characterization of Thermal Stability and High-Temperature Tribological Behavior of Electroless Ni-B Coating. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 3217-3236.	2.2	21
24	Residual strength of hot pressed zirconium diboride (ZrB ₂) after exposure to high temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 535, 189-196.	5.6	19
25	Synthesis of Bulk, Dense, Nanocrystalline Yttrium Aluminum Garnet from Amorphous Powders. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3638-3641.	3.8	18
26	Reactive hot pressing of ZrB ₂ -ZrC _x ultra-high temperature ceramic composites with the addition of SiC particulate. <i>Journal of the European Ceramic Society</i> , 2010, 30, 3263-3266.	5.7	18
27	Pressure and thermally induced stages of wear in dry sliding of a steel ball against an aluminium-silicon alloy flat. <i>Wear</i> , 2010, 268, 1080-1090.	3.1	18
28	Deformation and structural densification in Al ₂ O ₃ -Y ₂ O ₃ glass. <i>Acta Materialia</i> , 2011, 59, 82-92.	7.9	17
29	Effect of Zirconium on the Densification of Reactively Hot-Pressed Zirconium Carbide. <i>Journal of the American Ceramic Society</i> , 2014, 97, 3092-3102.	3.8	17
30	Computational modeling of reactive hot pressing of zirconium carbide. <i>Journal of Materials Research</i> , 2015, 30, 1876-1886.	2.6	16
31	The influence of Zr layer thickness on contact deformation and fracture in a Zr-Ni-Zr multilayer coating. <i>Journal of Materials Science</i> , 2012, 47, 1621-1630.	3.7	14
32	Total internal reflection Raman spectroscopy of poly(alpha-olefin) oils in a lubricated contact. <i>RSC Advances</i> , 2014, 4, 22205-22213.	3.6	14
33	In-situ study of microscale fracture of diffusion aluminide bond coats: Effect of platinum. <i>Journal of Materials Research</i> , 2015, 30, 3343-3353.	2.6	14
34	The edge-notched clamped beam bend specimen as a fracture toughness test geometry. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 105, 102409.	4.7	13
35	Creep of Metallic Materials in Bending. <i>Jom</i> , 2019, 71, 3565-3583.	1.9	12
36	Effect of addition of Pt, Pd and Ir to $\hat{1}^2$ -NiAl-bond coat on oxidation resistance and growth of interdiffusion zone. <i>Surface and Coatings Technology</i> , 2021, 426, 127766.	4.8	12

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37	Microstructure Control and Wear of Al ₂ O ₃ -SiC-(Al, Si) Composites Made by Melt Oxidation. Journal of the American Ceramic Society, 1996, 79, 770-772.	3.8	11
38	Low-Temperature High-Pressure Consolidation of Amorphous Al ₂ O ₃ -15 mol% Y ₂ O ₃ . Journal of the American Ceramic Society, 2005, 88, 2696-2701.	3.8	11
39	Role of interface curvature on stress distribution under indentation for ZrN/Zr multilayer coating. Thin Solid Films, 2014, 571, 283-289.	1.8	11
40	Low-temperature stiffening of air plasma-sprayed 7 wt% Y ₂ O ₃ -stabilized ZrO ₂ . Journal of the American Ceramic Society, 2020, 103, 2076-2089.	3.8	11
41	Microstructural equivalence between bending and uniaxial creep. Scripta Materialia, 2020, 186, 99-103.	5.2	11
42	Reactive hot pressing of TiB ₂ -C and TiC at 1200°C. Ceramics International, 2013, 39, 5955-5961.	4.8	10
43	Effect of applied pressure on densification of monolithic ZrC ceramic by reactive hot pressing. Journal of Materials Research, 2016, 31, 506-515.	2.6	10
44	High Throughput Determination of Creep Parameters Using Cantilever Bending: Part I - Steady-State. Journal of Materials Research, 2020, 35, 353-361.	2.6	10
45	Sliding Wear of Al ₂ O ₃ -SiC-(Al,Si) Composites against a Steel Counterface. Journal of the American Ceramic Society, 1997, 80, 219-224.	3.8	9
46	High Throughput Determination of Creep Parameters Using Cantilever Bending: Part II - Primary and Steady-State through Uniaxial Equivalency. Journal of Materials Research, 2020, 35, 362-371.	2.6	9
47	Effect of microstructure on fracture behavior of freestanding plasma sprayed 7 wt.% Y ₂ O ₃ stabilized ZrO ₂ . Journal of the European Ceramic Society, 2021, 41, 4294-4301.	5.7	9
48	Segregation in the MgO-MgAl ₂ O ₄ system processed from nitrate precursors. Journal of Materials Research, 1999, 14, 3319-3327.	2.6	8
49	Oxide films by combustion pyrolysis of solution precursors. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 359, 18-23.	5.6	8
50	Detailed investigation of contact deformation in ZrN/Zr multilayer—understanding the role of volume fraction, bilayer spacing, and morphology of interfaces. Journal of Materials Research, 2013, 28, 3146-3156.	2.6	8
51	Customized High-Temperature Bending with DIC for High-Throughput Determination of Creep Parameters: Technique, Instrumentation, and Optimization. Jom, 2020, 72, 4522-4538.	1.9	8
52	Small-Scale Mechanical Testing. Annual Review of Materials Research, 2022, 52, 473-523.	9.3	8
53	Crack growth resistance (R-curve) behaviour and thermo-physical properties of Al ₂ O ₃ particle-reinforced AlN/Al matrix composites. Composites Part A: Applied Science and Manufacturing, 2007, 38, 1038-1050.	7.6	7
54	Application of bending creep for examining effect of service conditions on creep response of steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138398.	5.6	7

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55	Hysteretic and time dependent deformation of plasma sprayed zirconia ceramics. <i>Acta Materialia</i> , 2020, 194, 394-402.	7.9	7
56	Effect of liquid precursor pyrolysis on phase selection in the MgO-MgAl ₂ O ₄ system. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 226-228, 930-937.	5.6	6
57	Kinetics of Pressureless Infiltration of Al-Mg Melts into Porous Alumina Preforms. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2008, 39, 108-115.	2.1	6
58	Low-temperature densification of Ti-2TiB Composites Through Reactive Hot Pressing with Excess Ti Additions. <i>Journal of the American Ceramic Society</i> , 2009, 92, 311-317.	3.8	6
59	Study of fracture behaviour of bond coats on nickel superalloy by three-point bending of microbeams. <i>Surface and Coatings Technology</i> , 2009, 204, 586-592.	4.8	6
60	Reactive Pulsed Laser Deposition of Titanium Nitride Thin Films: Effect of Reactive Gas Pressure on the Structure, Composition, and Properties. <i>Journal of Materials</i> , 2013, 2013, 1-5.	0.1	6
61	Fatigue behavior of a freestanding Pt-aluminide (PtAl) bond coat at ambient temperature. <i>Surface and Coatings Technology</i> , 2021, 427, 127787.	4.8	6
62	Reactive Pulsed Laser Deposition of titanium nitride thin film: Optimization of process parameters using Secondary Ion Mass Spectrometry. <i>Applied Surface Science</i> , 2010, 256, 3077-3080.	6.1	5
63	On the Low Temperature Densification of Reactively Hot Pressed Non-Stoichiometric ZrC and (Zr,Ti)C. <i>Materials Today: Proceedings</i> , 2016, 3, 3077-3085.	1.8	5
64	Effect of Humidity on Wear of TiN Coatings: Role of Capillary Condensation. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 6084-6092.	2.2	5
65	Stiffness based technique to probe cyclic damage accumulation in micro-structurally graded bond coats via micro-beam bending tests. <i>Philosophical Magazine</i> , 2019, 99, 2016-2050.	1.6	5
66	Creep Micromechanics in Meso-Length Scale Samples. <i>Acta Materialia</i> , 2021, 205, 116535.	7.9	5
67	Co-fired anode-supported solid oxide fuel cell for internal reforming of hydrocarbon fuel. <i>Energy, Ecology and Environment</i> , 2021, 6, 55-68.	3.9	4
68	Effect of Phases on the Frictional Properties of Electroless Ni-B Nano-Composite Coating. <i>Advances in Science and Technology</i> , 0, , .	0.2	1
69	Co-Cu-YSZ-GDC as an anode material for internal reforming SOFC?. <i>Nanomaterials and Energy</i> , 2018, 7, 44-51.	0.2	1
70	Reactive hot pressing of TiC 0.5 ceramic at low applied pressure with 1 wt% Ni additive. <i>Journal of the American Ceramic Society</i> , 2021, 104, 5461-5466.	3.8	1
71	Crack velocity measurements through continuous stiffness monitoring of cyclically loaded notched micro-beams of thin graded Pt-Ni-Al bond coats. <i>International Journal of Fracture</i> , 2021, 227, 15-37.	2.2	1
72	Damage accumulation in plasma sprayed zirconia under cyclic loading. <i>Journal of the American Ceramic Society</i> , 0, , .	3.8	1

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73	Deposition of ZnO Films by Combustion Flame Pyrolysis of Solution Precursors. International Journal of Applied Ceramic Technology, 2010, 7, 482-492.	2.1	0
74	Synthesis and characterization of nickel/barium hexa-aluminate composite coatings. Bulletin of Materials Science, 2012, 35, 977-988.	1.7	0
75	Processing of Ultra-High Temperature Ceramics for Hostile Environments. , 2013, , 100-124.		0
76	Metastable Phase Selection and Low-Temperature Plasticity in Chemically Synthesized Amorphous Al ₂ O ₃ -ZrO ₂ and Al ₂ O ₃ -Y ₂ O ₃ . , 2014, , 115-151.		0