

Vikram Jayaram

List of Publications by Year in descending order

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76
papers

1,339
citations

331670

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395702

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77
all docs

77
docs citations

77
times ranked

1058
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Small-Scale Mechanical Testing. Annual Review of Materials Research, 2022, 52, 473-523. | 9.3 | 8 |
| 2 | Co-fired anode-supported solid oxide fuel cell for internal reforming of hydrocarbon fuel. Energy, Ecology and Environment, 2021, 6, 55-68. | 3.9 | 4 |
| 3 | Creep Micromechanics in Meso-Length Scale Samples. Acta Materialia, 2021, 205, 116535. | 7.9 | 5 |
| 4 | Reactive hot pressing of TiC 0.5 ceramic at low applied pressure with 1 wt% Ni additive. Journal of the American Ceramic Society, 2021, 104, 5461-5466. | 3.8 | 1 |
| 5 | 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 |
| 6 | Effect of addition of Pt, Pd and Ir to γ -NiAl-bond coat on oxidation resistance and growth of interdiffusion zone. Surface and Coatings Technology, 2021, 426, 127766. | 4.8 | 12 |
| 7 | Fatigue behavior of a freestanding Pt-aluminide (PtAl) bond coat at ambient temperature. Surface and Coatings Technology, 2021, 427, 127787. | 4.8 | 6 |
| 8 | Crack velocity measurements through continuous stiffness monitoring of cyclically loaded notched micro-beams of thin graded Pt-NiAl bond coats. International Journal of Fracture, 2021, 227, 15-37. | 2.2 | 1 |
| 9 | 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 |
| 10 | The edge-notched clamped beam bend specimen as a fracture toughness test geometry. Theoretical and Applied Fracture Mechanics, 2020, 105, 102409. | 4.7 | 13 |
| 11 | 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 |
| 12 | Hysteretic and time dependent deformation of plasma sprayed zirconia ceramics. Acta Materialia, 2020, 194, 394-402. | 7.9 | 7 |
| 13 | Microstructural equivalence between bending and uniaxial creep. Scripta Materialia, 2020, 186, 99-103. | 5.2 | 11 |
| 14 | 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 |
| 15 | High Throughput Determination of Creep Parameters Using Cantilever Bending: Part I - Steady-State. Journal of Materials Research, 2020, 35, 353-361. | 2.6 | 10 |
| 16 | Diffusion, defects and understanding the growth of a multicomponent interdiffusion zone between Pt-modified B2 NiAl bond coat and single crystal superalloy. Acta Materialia, 2020, 195, 35-49. | 7.9 | 31 |
| 17 | Creep of Metallic Materials in Bending. Jom, 2019, 71, 3565-3583. | 1.9 | 12 |
| 18 | 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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|----|---|-----|-----------|
| 19 | Stiffness based technique to probe cyclic damage accumulation in micro-structurally graded bond coats via micro-beam bending tests. Philosophical Magazine, 2019, 99, 2016-2050. | 1.6 | 5 |
| 20 | Effect of Humidity on Wear of TiN Coatings: Role of Capillary Condensation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 6084-6092. | 2.2 | 5 |
| 21 | Co-Cu-YSZ-GDC as an anode material for internal reforming SOFC?. Nanomaterials and Energy, 2018, 7, 44-51. | 0.2 | 1 |
| 22 | Effect of microstructure on the hardness and dry sliding behavior of electroless Ni-B coating. Materialia, 2018, 4, 47-64. | 2.7 | 28 |
| 23 | Characterization of Thermal Stability and High-Temperature Tribological Behavior of Electroless Ni-B Coating. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3217-3236. | 2.2 | 21 |
| 24 | On the Low Temperature Densification of Reactively Hot Pressed Non-Stoichiometric ZrC and (Zr,Ti)C. Materials Today: Proceedings, 2016, 3, 3077-3085. | 1.8 | 5 |
| 25 | 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 |
| 26 | Fracture Testing at Small-Length Scales: From Plasticity in Si to Brittleness in Pt. Jom, 2016, 68, 94-108. | 1.9 | 39 |
| 27 | Computational modeling of reactive hot pressing of zirconium carbide. Journal of Materials Research, 2015, 30, 1876-1886. | 2.6 | 16 |
| 28 | In-situ study of microscale fracture of diffusion aluminide bond coats: Effect of platinum. Journal of Materials Research, 2015, 30, 3343-3353. | 2.6 | 14 |
| 29 | Optimization of clamped beam geometry for fracture toughness testing of micron-scale samples. Philosophical Magazine, 2015, 95, 1945-1966. | 1.6 | 28 |
| 30 | Effect of Zirconium on the Densification of Reactively Hot-Pressed Zirconium Carbide. Journal of the American Ceramic Society, 2014, 97, 3092-3102. | 3.8 | 17 |
| 31 | Total internal reflection Raman spectroscopy of poly(alpha-olefin) oils in a lubricated contact. RSC Advances, 2014, 4, 22205-22213. | 3.6 | 14 |
| 32 | Crack stability in edge-notched clamped beam specimens: modeling and experiments. International Journal of Fracture, 2014, 188, 213-228. | 2.2 | 47 |
| 33 | Role of interface curvature on stress distribution under indentation for ZrN/Zr multilayer coating. Thin Solid Films, 2014, 571, 283-289. | 1.8 | 11 |
| 34 | 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 |
| 35 | Densification mechanisms during hot pressing of ZrB ₂ -20vol.% SiC composite. Scripta Materialia, 2013, 69, 370-373. | 5.2 | 42 |
| 36 | Reactive hot pressing of Ti-B-C and Ti-C at 1200°C. Ceramics International, 2013, 39, 5955-5961. | 4.8 | 10 |

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|----|---|-----|-----------|
| 37 | Total internal reflection (TIR) Raman tribometer: a new tool for in situ study of friction-induced material transfer. RSC Advances, 2013, 3, 5401. | 3.6 | 22 |
| 38 | Heat conduction mechanisms in hot pressed ZrB ₂ and ZrB ₂ -SiC composites. Journal of the European Ceramic Society, 2013, 33, 1615-1624. | 5.7 | 46 |
| 39 | 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 |
| 40 | Reactive Pulsed Laser Deposition of Titanium Nitride Thin Films: Effect of Reactive Gas Pressure on the Structure, Composition, and Properties. Journal of Materials, 2013, 2013, 1-5. | 0.1 | 6 |
| 41 | Processing of Ultra-High Temperature Ceramics for Hostile Environments. , 2013, , 100-124. | | 0 |
| 42 | A new method for fracture toughness determination of graded (Pt,Ni)Al bond coats by microbeam bend tests. Philosophical Magazine, 2012, 92, 3326-3345. | 1.6 | 53 |
| 43 | Strength of hot pressed ZrB ₂ -SiC composite after exposure to high temperatures (1000-1700 °C). Journal of the European Ceramic Society, 2012, 32, 4455-4467. | 5.7 | 46 |
| 44 | Synthesis and characterization of nickel/barium hexa-aluminate composite coatings. Bulletin of Materials Science, 2012, 35, 977-988. | 1.7 | 0 |
| 45 | Residual strength of hot pressed zirconium diboride (ZrB ₂) after exposure to high temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 535, 189-196. | 5.6 | 19 |
| 46 | The influence of Zr layer thickness on contact deformation and fracture in a ZrN-Zr multilayer coating. Journal of Materials Science, 2012, 47, 1621-1630. | 3.7 | 14 |
| 47 | Characterization of phase transformation behaviour and microstructural development of electroless Ni-B coating. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8269-8276. | 5.6 | 61 |
| 48 | Severe wear of a near eutectic aluminium-silicon alloy. Acta Materialia, 2011, 59, 6069-6082. | 7.9 | 33 |
| 49 | Deformation and structural densification in Al ₂ O ₃ -Y ₂ O ₃ glass. Acta Materialia, 2011, 59, 82-92. | 7.9 | 17 |
| 50 | Deposition of ZnO Films by Combustion Flame Pyrolysis of Solution Precursors. International Journal of Applied Ceramic Technology, 2010, 7, 482-492. | 2.1 | 0 |
| 51 | Reactive Pulsed Laser Deposition of titanium nitride thin film: Optimization of process parameters using Secondary Ion Mass Spectrometry. Applied Surface Science, 2010, 256, 3077-3080. | 6.1 | 5 |
| 52 | Fabrication and mechanisms of densification of ZrB ₂ -based ultra high temperature ceramics by reactive hot pressing. Journal of the European Ceramic Society, 2010, 30, 129-138. | 5.7 | 55 |
| 53 | Reactive hot pressing of ZrB ₂ -ZrC _x ultra-high temperature ceramic composites with the addition of SiC particulate. Journal of the European Ceramic Society, 2010, 30, 3263-3266. | 5.7 | 18 |
| 54 | Pressure and thermally induced stages of wear in dry sliding of a steel ball against an aluminium-silicon alloy flat. Wear, 2010, 268, 1080-1090. | 3.1 | 18 |

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|----|---|-----|-----------|
| 55 | Synthesis and Densification of Monolithic Zirconium Carbide by Reactive Hot Pressing. Journal of the American Ceramic Society, 2010, 93, 1341-1346. | 3.8 | 59 |
| 56 | Low-Temperature Densification of TiN-TiB ₂ Composites Through Reactive Hot Pressing with Excess Ti Additions. Journal of the American Ceramic Society, 2009, 92, 311-317. | 3.8 | 6 |
| 57 | Study of fracture behaviour of bond coats on nickel superalloy by three-point bending of microbeams. Surface and Coatings Technology, 2009, 204, 586-592. | 4.8 | 6 |
| 58 | Low-Temperature Processing of ZrB ₂ -ZrC Composites by Reactive Hot Pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1496-1505. | 2.2 | 49 |
| 59 | Kinetics of Pressureless Infiltration of Al-Mg Melts into Porous Alumina Preforms. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 108-115. | 2.1 | 6 |
| 60 | 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 |
| 61 | Flow Kinetics in Porous Ceramics: Understanding with Non-Uniform Capillary Models. Journal of the American Ceramic Society, 2007, 90, 3040-3046. | 3.8 | 43 |
| 62 | Synthesis of Bulk, Dense, Nanocrystalline Yttrium Aluminum Garnet from Amorphous Powders. Journal of the American Ceramic Society, 2007, 90, 3638-3641. | 3.8 | 18 |
| 63 | 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 |
| 64 | Reactive Hot Pressing of Titanium Nitride-Titanium Diboride Composites at Moderate Pressures and Temperatures. Journal of the American Ceramic Society, 2004, 87, 1872-1878. | 3.8 | 22 |
| 65 | 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 |
| 66 | Bulk, Dense, Nanocrystalline Yttrium Aluminum Garnet by Consolidation of Amorphous Powders at Low Temperatures and High Pressures. Journal of the American Ceramic Society, 2003, 86, 247-251. | 3.8 | 21 |
| 67 | Soft chemical routes to the synthesis of extended solid solutions of wurtzite ZnO-MO (M=Mg,Co,Ni). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 304-306, 800-804. | 5.6 | 40 |
| 68 | Segregation in the MgO-MgAl ₂ O ₄ system processed from nitrate precursors. Journal of Materials Research, 1999, 14, 3319-3327. | 2.6 | 8 |
| 69 | Dense Amorphous Zirconia-Alumina by Low-Temperature Consolidation of Spray-Pyrolyzed Powders. Journal of the American Ceramic Society, 1999, 82, 2613-2618. | 3.8 | 28 |
| 70 | 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 |
| 71 | Effect of liquid precursor pyrolysis on phase selection in the MgO-MgAl ₂ O ₄ system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 226-228, 930-937. | 5.6 | 6 |
| 72 | Growth of Al ₂ O ₃ /Al composites from Al-Zn alloys. Acta Materialia, 1996, 44, 819-829. | 7.9 | 25 |

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|----|--|-----|-----------|
| 73 | 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 |
| 74 | Development of Nano-Composite Microstructures in ZrO ₂ -Al ₂ O ₃ via the Solution Precursor Method. Journal of the American Ceramic Society, 1995, 78, 1489-1494. | 3.8 | 55 |
| 75 | Effect of Phases on the Frictional Properties of Electroless Ni-B Nano-Composite Coating. Advances in Science and Technology, 0, , . | 0.2 | 1 |
| 76 | Damage accumulation in plasma sprayed zirconia under cyclic loading. Journal of the American Ceramic Society, 0, , . | 3.8 | 1 |