

# Carlos G Levi

## List of Publications by Year in descending order

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145  
papers

9,602  
citations

29994

54  
h-index

39575

94  
g-index

147  
all docs

147  
docs citations

147  
times ranked

3820  
citing authors

| #  | ARTICLE                                                                                                                                                                                                                                                                                          | IF  | CITATIONS |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1  | Emerging materials and processes for thermal barrier systems. <i>Current Opinion in Solid State and Materials Science</i> , 2004, 8, 77-91.                                                                                                                                                      | 5.6 | 557       |
| 2  | Thermochemical Interaction of Thermal Barrier Coatings with Molten CaO?MgO?Al <sub>2</sub> O <sub>3</sub> ?SiO <sub>2</sub> (CMAS) Deposits. <i>Journal of the American Ceramic Society</i> , 2006, 89, 3167-3175.                                                                               | 1.9 | 471       |
| 3  | The influence of oxides on the performance of advanced gas turbines. <i>Journal of the European Ceramic Society</i> , 2008, 28, 1405-1419.                                                                                                                                                       | 2.8 | 453       |
| 4  | Environmental degradation of thermal-barrier coatings by molten deposits. <i>MRS Bulletin</i> , 2012, 37, 932-941.                                                                                                                                                                               | 1.7 | 425       |
| 5  | Phase equilibria and solidification in Ti-Al alloys. <i>Acta Metallurgica</i> , 1989, 37, 1321-1336.                                                                                                                                                                                             | 2.1 | 398       |
| 6  | Infiltrationâ€inhibiting Reaction of Gadolinium Zirconate Thermal Barrier Coatings with CMAS Melts. <i>Journal of the American Ceramic Society</i> , 2008, 91, 576-583.                                                                                                                          | 1.9 | 352       |
| 7  | Mechanisms of cracking and delamination within thick thermal barrier systems in aero-engines subject to calcium-magnesium-alumino-silicate (CMAS) penetration. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 490, 26-35. | 2.6 | 238       |
| 8  | Processing and Performance of an Allâ€Oxide Ceramic Composite. <i>Journal of the American Ceramic Society</i> , 1998, 81, 2077-2086.                                                                                                                                                             | 1.9 | 217       |
| 9  | Silicate Deposit Degradation of Engineered Coatings in Gas Turbines: Progress Toward Models and Materials Solutions. <i>Annual Review of Materials Research</i> , 2017, 47, 297-330.                                                                                                             | 4.3 | 205       |
| 10 | Thermochemical compatibility between alumina and ZrO <sub>2</sub> â€GdO <sub>3</sub> /2 thermal barrier coatings. <i>Acta Materialia</i> , 2005, 53, 3281-3292.                                                                                                                                  | 3.8 | 164       |
| 11 | Hydrothermal synthesis of KNbO <sub>3</sub> and NaNbO <sub>3</sub> powders. <i>Journal of Materials Research</i> , 2003, 18, 338-345.                                                                                                                                                            | 1.2 | 162       |
| 12 | Distributed Porosity as a Control Parameter for Oxide Thermal Barriers Made by Physical Vapor Deposition. <i>Journal of the American Ceramic Society</i> , 2001, 84, 2937-2946.                                                                                                                  | 1.9 | 147       |
| 13 | Opportunities for TBCs in the ZrO <sub>2</sub> â€YO <sub>1.5</sub> â€TaO <sub>2.5</sub> system. <i>Surface and Coatings Technology</i> , 2007, 201, 6044-6050.                                                                                                                                   | 2.2 | 146       |
| 14 | Microstructure and texture of EB-PVD TBCs grown under different rotation modes. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 360, 319-329.                                                                              | 2.6 | 126       |
| 15 | Phase Stability of Y <sub>2</sub> O <sub>3</sub> -Zirconia-Based Thermal Barrier Coatings: Mechanistic Insights. <i>Journal of the American Ceramic Society</i> , 2011, 94, s168.                                                                                                                | 1.9 | 119       |
| 16 | CMAS degradation of environmental barrier coatings. <i>Surface and Coatings Technology</i> , 2007, 202, 653-657.                                                                                                                                                                                 | 2.2 | 118       |
| 17 | Effects of cation substitution and temperature on the interaction between thermal barrier oxides and molten CMAS. <i>Journal of the European Ceramic Society</i> , 2015, 35, 681-691.                                                                                                            | 2.8 | 118       |
| 18 | The structure of Î³-alumina evolved from the melt and the Î³ â†’ Î³' transformation. <i>Acta Metallurgica</i> , 1989, 37, 569-578.                                                                                                                                                               | 2.1 | 116       |

| #  | ARTICLE                                                                                                                                                                                                                           | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Stability and CMAS Resistance of Ytterbium-Silicate/Hafnate EBCs/TBC for SiC Composites. Journal of the American Ceramic Society, 2015, 98, 278-286.                                                                              | 1.9 | 116       |
| 20 | Molten silicate reactions with plasma sprayed ytterbium silicate coatings. Surface and Coatings Technology, 2016, 288, 151-162.                                                                                                   | 2.2 | 115       |
| 21 | Effects of Matrix Porosity on the Mechanical Properties of a Porous Matrix, Al-Oxide Ceramic Composite. Journal of the American Ceramic Society, 2001, 84, 2594-2602.                                                             | 1.9 | 106       |
| 22 | Thermal conductivity of single- and multi-phase compositions in the ZrO <sub>2</sub> -Y <sub>2</sub> O <sub>3</sub> -Ta <sub>2</sub> O <sub>5</sub> system. Journal of the European Ceramic Society, 2014, 34, 3085-3094.         | 2.8 | 106       |
| 23 | Phase selection in electrohydrodynamic atomization of alumina. Journal of Materials Research, 1988, 3, 969-983.                                                                                                                   | 1.2 | 102       |
| 24 | Metastable Phase Selection and Partitioning for Zr(1-x)Al <sub>x</sub> O(2-x/2) Materials Synthesized with Liquid Precursors. Journal of the American Ceramic Society, 1994, 77, 2069-2075.                                       | 1.9 | 98        |
| 25 | Calcium-Magnesium Alumino-Silicate Interaction with Yttrium Monosilicate Environmental Barrier Coatings. Journal of the American Ceramic Society, 2010, 93, 3504-3511.                                                            | 1.9 | 98        |
| 26 | Nucleation and growth of Al <sub>2</sub> O <sub>3</sub> /metal composites by oxidation of aluminum alloys. Journal of Materials Research, 1991, 6, 1964-1981.                                                                     | 1.2 | 92        |
| 27 | Low temperature/low pressure hydrothermal synthesis of barium titanate: Powder and heteroepitaxial thin films. Journal of Materials Research, 1995, 10, 1784-1789.                                                                | 1.2 | 92        |
| 28 | Effect of Ytria Content on the Zirconia Unit Cell Parameters. Journal of the American Ceramic Society, 2011, 94, 4548-4555.                                                                                                       | 1.9 | 92        |
| 29 | Alumina Grown during Deposition of Thermal Barrier Coatings on NiCrAlY. Journal of the American Ceramic Society, 2003, 86, 676-85.                                                                                                | 1.9 | 91        |
| 30 | Low thermal conductivity without oxygen vacancies in equimolar YO <sub>1.5</sub> +TaO <sub>2.5</sub> - and YbO <sub>1.5</sub> +TaO <sub>2.5</sub> -stabilized tetragonal zirconia ceramics. Acta Materialia, 2010, 58, 4424-4431. | 3.8 | 88        |
| 31 | Phase Evolution upon Aging of Air-Plasma Sprayed Zirconia Coatings: Synchrotron X-Ray Diffraction. Journal of the American Ceramic Society, 2013, 96, 290-298.                                                                    | 1.9 | 87        |
| 32 | Equilibrium relationships between thermal barrier oxides and silicate melts. Acta Materialia, 2016, 120, 302-314.                                                                                                                 | 3.8 | 87        |
| 33 | Interaction of yttrium disilicate environmental barrier coatings with calcium-magnesium-iron alumino-silicate melts. Acta Materialia, 2018, 145, 451-461.                                                                         | 3.8 | 83        |
| 34 | Microstructure evolution during conventional and rapid solidification of a Ti-50at%Al alloy. Scripta Metallurgica, 1987, 21, 1341-1346.                                                                                           | 1.2 | 82        |
| 35 | A model study of displacement instabilities during cyclic oxidation. Acta Materialia, 2002, 50, 1263-1273.                                                                                                                        | 3.8 | 82        |
| 36 | Interaction of molten silicates with thermal barrier coatings under temperature gradients. Acta Materialia, 2015, 89, 396-407.                                                                                                    | 3.8 | 80        |

| #  | ARTICLE                                                                                                                                                                                                                                         | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Metastability and microstructure evolution in the synthesis of inorganics from precursors11Paper presented at Sympos. Synergistic Synthesis of Inorganic Materials, March 1996, SchloÅŸ Ringberg, Germany.. Acta Materialia, 1998, 46, 787-800. | 3.8 | 79        |
| 38 | The evolution of metastable borides in a Ti–Al–B alloy. Acta Metallurgica Et Materialia, 1992, 40, 3395-3406.                                                                                                                                   | 1.9 | 76        |
| 39 | Hydrothermal synthesis of perovskite and pyrochlore powders of potassium tantalate. Journal of Materials Research, 2002, 17, 3168-3176.                                                                                                         | 1.2 | 75        |
| 40 | Molten silicate interactions with thermal barrier coatings. Surface and Coatings Technology, 2014, 251, 74-86.                                                                                                                                  | 2.2 | 74        |
| 41 | The high temperature $\beta$ field in the titanium-aluminum phase diagram. Scripta Metallurgica, 1988, 22, 1131-1136.                                                                                                                           | 1.2 | 73        |
| 42 | Metastability of the Fluorite, Pyrochlore, and Perovskite Structures in the $\text{PbO} \cdot \text{ZrO}_2 \cdot \text{TiO}_2$ System. Journal of the American Ceramic Society, 2000, 83, 873-881.                                              | 1.9 | 73        |
| 43 | Thermochemical compatibility of ytterbia–(hafnia/silica) multilayers for environmental barrier coatings. Acta Materialia, 2013, 61, 6743-6755.                                                                                                  | 3.8 | 73        |
| 44 | Phase equilibria in the $\text{TiO}_2 \cdot \text{YO}_{1.5} \cdot \text{ZrO}_2$ system. Journal of the European Ceramic Society, 2008, 28, 2509-2520.                                                                                           | 2.8 | 72        |
| 45 | Application of Metastable Phase Diagrams to Silicate Thin Films for Alternative Gate Dielectrics. Japanese Journal of Applied Physics, 2003, 42, 3593-3597.                                                                                     | 0.8 | 71        |
| 46 | Solidification microstructure of supercooled Ti-Al alloys containing intermetallic phases. Acta Metallurgica, 1989, 37, 2517-2530.                                                                                                              | 2.1 | 70        |
| 47 | Melting and Crystallization of Silicate Systems Relevant to Thermal Barrier Coating Damage. Journal of the American Ceramic Society, 2015, 98, 1642-1649.                                                                                       | 1.9 | 70        |
| 48 | Phase Evolution upon Aging of Air Plasma Sprayed $\text{t} \cdot \text{ZrO}_2$ Zirconia Coatings: $\langle \text{sc} \rangle \langle \text{sc} \rangle$ Microstructure Evolution. Journal of the American Ceramic Society, 2013, 96, 299-307.   | 1.9 | 63        |
| 49 | Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. Journal of the American Ceramic Society, 2012, 95, 3699-3712.                                                                          | 1.9 | 59        |
| 50 | The thermal behavior of CMAS-infiltrated thermal barrier coatings. Surface and Coatings Technology, 2015, 272, 350-356.                                                                                                                         | 2.2 | 59        |
| 51 | Heat flow in atomized metal droplets. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1980, 11, 21-27.                                                                                        | 0.5 | 57        |
| 52 | Characterization of $\text{Al}_2\text{O}_3 \cdot \text{ZrO}_2$ powders produced by electrohydrodynamic atomization. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1990, 124, 65-81.       | 2.6 | 57        |
| 53 | Hydrothermal epitaxy of $\text{KNbO}_3$ thin films and nanostructures. Journal of Crystal Growth, 2006, 286, 457-464.                                                                                                                           | 0.7 | 56        |
| 54 | Microstructural analysis of rapidly solidified Ti–Al–X powders. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1990, 124, 83-101.                                                          | 2.6 | 55        |

| #  | ARTICLE                                                                                                                                                                                                                                  | IF  | CITATIONS |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Development of Nano-Composite Microstructures in ZrO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> via the Solution Precursor Method. <i>Journal of the American Ceramic Society</i> , 1995, 78, 1489-1494.                               | 1.9 | 55        |
| 56 | Phase equilibria in the ZrO <sub>2</sub> -YO <sub>1.5</sub> -TaO <sub>2.5</sub> system at 1500 Å°C. <i>Journal of the European Ceramic Society</i> , 2017, 37, 4888-4901.                                                                | 2.8 | 55        |
| 57 | A probe for the high temperature deformation of thermal barrier oxides. <i>Acta Materialia</i> , 2004, 52, 1479-1487.                                                                                                                    | 3.8 | 52        |
| 58 | Vapor deposited samarium zirconate thermal barrier coatings. <i>Surface and Coatings Technology</i> , 2009, 203, 3157-3167.                                                                                                              | 2.2 | 51        |
| 59 | A thermogravimetric study of the oxidative growth of Al <sub>2</sub> O <sub>3</sub> /Al alloy composites. <i>Journal of Materials Research</i> , 1991, 6, 1982-1995.                                                                     | 1.2 | 50        |
| 60 | Roles of composition and temperature in silicate deposit-induced recession of yttrium disilicate. <i>Acta Materialia</i> , 2018, 160, 34-46.                                                                                             | 3.8 | 49        |
| 61 | Toughening of Nontransformable <i>Y</i> â€²â€²YSZ by Addition of Titania. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3896-3901.                                                                                          | 1.9 | 48        |
| 62 | Response of molten silicate infiltrated Gd <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> thermal barrier coatings to temperature gradients. <i>Acta Materialia</i> , 2017, 132, 538-549.                                                   | 3.8 | 48        |
| 63 | Accelerated discovery of oxidation resistant CoNi-base <i>Y</i> â€²â€² alloys with high L12 solvus and low density. <i>Materials and Design</i> , 2020, 189, 108445.                                                                     | 3.3 | 48        |
| 64 | The creep and fracture resistance of <i>Y</i> -TiAl reinforced with Al <sub>2</sub> O <sub>3</sub> fibers. <i>Acta Metallurgica Et Materialia</i> , 1993, 41, 2681-2690.                                                                 | 1.9 | 47        |
| 65 | Phase stability of Y + Gd Co-Doped Zirconia. <i>International Journal of Materials Research</i> , 2003, 94, 163-170.                                                                                                                     | 0.8 | 46        |
| 66 | Phase equilibria and crystal chemistry in the calciaâ€²silicaâ€²yttria system. <i>Journal of the European Ceramic Society</i> , 2016, 36, 1743-1754.                                                                                     | 2.8 | 46        |
| 67 | Crystallization Behavior and Microstructure Evolution of (Al,Fe) <sub>2</sub> O <sub>3</sub> Synthesized from Liquid Precursors. <i>Journal of the American Ceramic Society</i> , 1996, 79, 1745-1755.                                   | 1.9 | 45        |
| 68 | Effects of Combustor Rig Exposure on a Porous-Matrix Oxide Composite. <i>International Journal of Applied Ceramic Technology</i> , 2005, 2, 133-140.                                                                                     | 1.1 | 43        |
| 69 | Phase selection in precursor-derived yttrium aluminum garnet and related Al <sub>2</sub> O <sub>3</sub> â€²Y <sub>2</sub> O <sub>3</sub> compositions. <i>Journal of Materials Research</i> , 2005, 20, 1017-1025.                       | 1.2 | 43        |
| 70 | A kinetic Monte Carlo simulation of film growth by physical vapor deposition on rotating substrates. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 391, 390-401. | 2.6 | 42        |
| 71 | <i>In Situ</i> Diffraction Study of the Highâ€²Temperature Decomposition of <i>Y</i> -Zirconia. <i>Journal of the American Ceramic Society</i> , 2015, 98, 247-254.                                                                      | 1.9 | 42        |
| 72 | Metastable Phase Selection and Partitioning in ZrO <sub>2</sub> -MgO Processed from Liquid Precursors. <i>Journal of the American Ceramic Society</i> , 1992, 75, 946-952.                                                               | 1.9 | 41        |

| #  | ARTICLE                                                                                                                                                                                                                                                            | IF  | CITATIONS |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | The potential of rapid solidification in oxide-dispersion-strengthened copper alloy development. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1991, 142, 277-289.                               | 2.6 | 40        |
| 74 | Phase stability of thermal barrier oxides: A comparative study of Y and Yb additions. <i>International Journal of Materials Research</i> , 2007, 98, 1177-1187.                                                                                                    | 0.1 | 40        |
| 75 | Thermal barrier coating toughness: Measurement and identification of a bridging mechanism enabled by segmented microstructure. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 564, 324-330. | 2.6 | 40        |
| 76 | Microstructure evolution of ZrO <sub>2</sub> -YbTaO <sub>4</sub> thermal barrier coatings. <i>Acta Materialia</i> , 2015, 96, 133-142.                                                                                                                             | 3.8 | 40        |
| 77 | Controlling Mechanical Properties of Porous Mullite/Alumina Mixtures Via Precursor-Derived Alumina. <i>Journal of the American Ceramic Society</i> , 2005, 88, 367-375.                                                                                            | 1.9 | 39        |
| 78 | Hybrid intermetallic Ru/Pt-modified bond coatings for thermal barrier systems. <i>Surface and Coatings Technology</i> , 2007, 202, 349-361.                                                                                                                        | 2.2 | 39        |
| 79 | Microstructure Evolution of SiC/Al <sub>2</sub> O <sub>3</sub> /Al-Alloy Composites Produced by Melt Oxidation. <i>Journal of the American Ceramic Society</i> , 1993, 76, 1777-1787.                                                                              | 1.9 | 37        |
| 80 | The evolution of microcrystalline structures in supercooled metal powders. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1988, 19, 699-708.                                                                      | 1.4 | 36        |
| 81 | Influence of Yb:Hf Ratio on Ytterbium Hafnate/Molten Silicate (<sc>CMAS</sc>) Reactivity. <i>Journal of the American Ceramic Society</i> , 2016, 99, 651-659.                                                                                                      | 1.9 | 36        |
| 82 | Reactions of molten silicate deposits with yttrium monosilicate. <i>Journal of the American Ceramic Society</i> , 2020, 103, 2919-2932.                                                                                                                            | 1.9 | 34        |
| 83 | Opportunities for improved TBC durability in the CeO <sub>2</sub> -TiO <sub>2</sub> -ZrO <sub>2</sub> system. <i>Surface and Coatings Technology</i> , 2013, 221, 44-52.                                                                                           | 2.2 | 33        |
| 84 | Hydrothermal epitaxy of KTaO <sub>3</sub> thin films. <i>Journal of Materials Research</i> , 2002, 17, 2852-2858.                                                                                                                                                  | 1.2 | 32        |
| 85 | Phase equilibria in the calcia-gadolinia-silica system. <i>Journal of Alloys and Compounds</i> , 2017, 695, 1397-1404.                                                                                                                                             | 2.8 | 32        |
| 86 | Metastable extension of the fluorite phase field in Y <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> and its effect on grain growth. <i>Acta Metallurgica Et Materialia</i> , 1994, 42, 1829-1846.                                                                  | 1.9 | 28        |
| 87 | Ferroelastic switching of doped zirconia: Modeling and understanding from first principles. <i>Physical Review B</i> , 2014, 90, .                                                                                                                                 | 1.1 | 28        |
| 88 | Rapid Assessment of Oxidation Behavior in Co-Based $\hat{1}3/\hat{1}3\hat{a}E^2$ Alloys. <i>Oxidation of Metals</i> , 2018, 90, 485-498.                                                                                                                           | 1.0 | 27        |
| 89 | The structure of complex monoborides in $\hat{1}3$ -TiAl alloys with Ta and B additions. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 2381-2391.                                                                                                             | 1.9 | 26        |
| 90 | Dissolution and diffusion kinetics of yttria-stabilized zirconia into molten silicates. <i>Journal of the European Ceramic Society</i> , 2021, 41, 1984-1994.                                                                                                      | 2.8 | 26        |

| #   | ARTICLE                                                                                                                                                                                                                                                                   | IF  | CITATIONS |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91  | Environmentally compatible double coating concepts for sapphire fiber-reinforced $\text{Ti}_3\text{-TiAl}$ . <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 161, 285-293.                          | 2.6 | 25        |
| 92  | Diffusion limited crystallization and phase partitioning in $\text{ZrO}_2$ -metal oxide binary systems. <i>Journal of Sol-Gel Science and Technology</i> , 1994, 2, 317-321.                                                                                              | 1.1 | 25        |
| 93  | Thermal Insulation Coatings of $\text{LaPO}_4$ . <i>Ceramic Engineering and Science Proceedings</i> , 0, , 367-374.                                                                                                                                                       | 0.1 | 25        |
| 94  | Microstructure Evolution of $\text{ZrO}_2$ - $(\text{Fe}_2\text{O}_3)$ . <i>TJ ETQq0 0 0 rgBT /Overlock 10 Tf 50 627 Td (Al&lt;sub&gt;2&lt;/sub&gt;O&lt;sub&gt;3&lt;/sub&gt;)</i> . <i>American Ceramic Society</i> , 1997, 80, 1684-1690.                                | 1.9 | 25        |
| 95  | Phase equilibria in the $\text{ZrO}_2$ - $\text{YO}_{1.5}$ - $\text{TaO}_{2.5}$ system at 1250 $^\circ\text{C}$ . <i>Journal of the European Ceramic Society</i> , 2018, 38, 4523-4532.                                                                                   | 2.8 | 25        |
| 96  | Peritectic solidification of $\text{Ti-Al-Ta}$ alloys in the region of $\text{Ti}_3\text{-TiAl}$ . <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1992, 156, 153-166.                                    | 2.6 | 24        |
| 97  | Bimetallic low thermal-expansion panels of Co-base and silicide-coated Nb-base alloys for high-temperature structural applications. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 3973-3980. | 2.6 | 23        |
| 98  | The role of ceramic and glass science research in meeting societal challenges: Report from an NSF-sponsored workshop. <i>Journal of the American Ceramic Society</i> , 2017, 100, 1777-1803.                                                                              | 1.9 | 23        |
| 99  | Recent advances in oxide-oxide composite technology. <i>Advanced Composite Materials</i> , 1999, 8, 17-23.                                                                                                                                                                | 1.0 | 22        |
| 100 | Early Stages of Composite Formation by Oxidation of Liquid Aluminum Alloys. <i>Journal of the American Ceramic Society</i> , 1995, 78, 609-622.                                                                                                                           | 1.9 | 21        |
| 101 | Novel oxide-dispersion-strengthened copper alloys from rapidly solidified precursors: Part 2. Creep behavior. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995, 26, 873-881.                                           | 1.1 | 21        |
| 102 | Crystallization behavior of $\text{Li}_{1-5x}\text{Ta}_{1+x}\text{O}_3$ glasses synthesized from liquid precursors. <i>Journal of Materials Research</i> , 1996, 11, 2376-2387.                                                                                           | 1.2 | 21        |
| 103 | Selective active oxidation in hafnium boride-silicon carbide composites above 2000 $^\circ\text{C}$ . <i>Journal of the European Ceramic Society</i> , 2016, 36, 3697-3707.                                                                                               | 2.8 | 21        |
| 104 | Thermochemistry and phase stability of the polymorphs of yttrium tantalate, $\text{YTao}_4$ . <i>Journal of the European Ceramic Society</i> , 2021, 41, 1629-1638.                                                                                                       | 2.8 | 20        |
| 105 | A computational modeling framework for reaction and failure of environmental barrier coatings under silicate deposits. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5196-5213.                                                                             | 1.9 | 19        |
| 106 | Solidification paths of $\text{Ti-Ta-Al}$ alloys. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 2745-2758.                                                                                                                                                           | 1.9 | 17        |
| 107 | In-situ-grown reinforcements for titanium aluminides. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1991, 144, 25-36.                                                                                   | 2.6 | 17        |
| 108 | Sub-solidus phase equilibria in the $\text{YO}_{1.5}$ - $\text{TaO}_{2.5}$ system. <i>Journal of the European Ceramic Society</i> , 2018, 38, 4786-4798.                                                                                                                  | 2.8 | 17        |

| #   | ARTICLE                                                                                                                                                                                                                              | IF  | CITATIONS |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | Oxidation Behavior Across Composition Space Relevant to Co-based $\text{Ti}^{3+}$ Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5445-5458.                                | 1.1 | 17        |
| 110 | Interactions between zirconia-yttria-tantala thermal barrier oxides and silicate melts. Acta Materialia, 2020, 185, 171-180.                                                                                                         | 3.8 | 17        |
| 111 | Yttrium Bearing Silicon Carbide Matrices for Robust Ceramic Composites. Journal of the American Ceramic Society, 2013, 96, 1300-1308.                                                                                                | 1.9 | 16        |
| 112 | Phase evolution in the $\text{YO}_{1.5}\text{TiO}_2\text{ZrO}_2$ system around the pyrochlore region. Acta Materialia, 2005, 53, 2957-2968.                                                                                          | 3.8 | 14        |
| 113 | Shear band formation in columnar thermal barrier oxides. Acta Materialia, 2005, 53, 3765-3773.                                                                                                                                       | 3.8 | 14        |
| 114 | Water Vapor Effects on the CMAS Degradation of Thermal Barrier Coatings. Oxidation of Metals, 2017, 88, 73-85.                                                                                                                       | 1.0 | 13        |
| 115 | Reactive alloy melt infiltration for SiC composite matrices: Mechanistic insights. Journal of the American Ceramic Society, 2017, 100, 5471-5481.                                                                                    | 1.9 | 13        |
| 116 | Reactive crystallization in $\text{HfO}_2$ exposed to molten silicates. Journal of the European Ceramic Society, 2021, 41, 5686-5695.                                                                                                | 2.8 | 13        |
| 117 | Novel oxide-dispersion-strengthened copper alloys from rapidly solidified precursors: Part 1. Microstructural development. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 859-871. | 1.1 | 12        |
| 118 | THE ROLE OF SCARF ANGLE IN THE PERFORMANCE OF ALUMINUM MATRIX COMPOSITE JOINTS. Acta Materialia, 1997, 45, 2765-2775.                                                                                                                | 3.8 | 11        |
| 119 | Extended solubility of CoO in ZnO and effects on magnetic properties. Journal of Materials Research, 2006, 21, 791-801.                                                                                                              | 1.2 | 11        |
| 120 | Microstructure Evolution of Biphasic $\text{TiNi}_{1+x}\text{Sn}$ Thermoelectric Materials. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4116-4127.                              | 1.1 | 11        |
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