

JOURNAL PAPERS

Peer-reviewed and conference papers cited over 3300X - h-index: 32 (source: Scopus – March 21, 2021)

Journal Publications (peer-reviewed) (in reverse chronological order)

- 69) R. Musalek, T. Tesar, J. Medricky, F. Lukac and R. S. Lima, "High Temperature Cycling of Plasma Sprayed Multilayered NiCrAlY/YSZ/GZO/YAG Thermal Barrier Coatings Prepared from Liquid Feedstocks", Journal of Thermal Spray Technology, 30(1-2) (2021) 81-96.
- 68) B. M. H. Guerreiro, R. S. Lima, N. Curry, M. Leitner and K. Körner, "The influence of plasma Composition in the Deposition Efficiency, Thermal Conductivity, Bond Strength and Thermal Cyclic Performance of Yttria Stabilized Zirconia (8YSZ) Thermal Barrier Coatings", Journal of Thermal Spray Technology, 30(1-2) (2021) 59-68.
- 67) K. N. Lee, D. Zhu and R. S. Lima, "Perspectives on Environmental Barrier Coatings (EBCs) Manufactured via Air Plasma Spray (APS) on Ceramic Matrix Composites (CMCs): A Tutorial Paper", Journal of Thermal Spray Technology, 30(1-2) (2021) 40-58 (**invited paper - Journal Editor's Choice Article Award 2021**).
- 66) **R. S. Lima**, "Perspectives on Thermal Gradients in Porous ZrO_2 -7-8wt% Y_2O_3 (YSZ) Thermal Barrier Coatings (TBCs) Manufactured by Air Plasma Spray (APS)", Coatings, (2020) 10 812 1-18 (doi:10.3390/coatings10090812) – open access: <https://www.mdpi.com/805290> (**invited paper**).
- 65) **R. S. Lima**, B. M. H. Guerreiro, N. Curry, M. Leitner and K. Körner, "Environmental, Economical and Performance Impacts of Ar/H₂ & N₂/H₂ Plasma Sprayed YSZ TBCs", Journal of Thermal Spray Technology, 29(1-2) (2020) 74-89.
- 64) M. Aghasibeig, F. Tarasi, **R. S. Lima**, A. Dolatabadi and C. Moreau, "A Review on Suspension Thermal Spray Patented Technology Evolution", Journal of Thermal Spray Technology, 28(7) (2019) 1579-1605 (**Journal Editor's Choice Article Award 2019**).
- 63) **R. S. Lima**, B. M. H. Guerreiro and M. Aghasibeig, "Microstructural Characterization and Room Temperature Erosion Behavior of As-deposited SPS, EB-PVD and APS YSZ-based TBCs", Journal of Thermal Spray Technology, 28(1-2) (2019) 223-232.
- 62) **R. S. Lima** and B. R. Marple, "Insights on the High Temperature Operational Limits of ZrO_2 - Y_2O_3 TBCs Manufactured via Air Plasma Spray", Journal of Materials Engineering and Performance, 26(3) (2017) 1272-1282.
- 61) L. Vernhes, C. Bekins, N. Lourdel, D. Poirier, **R. S. Lima**, D. Li and J. E. Klemberg-Sapieha, "Nanostructured and Conventional Cr_2O_3 , TiO_2 , and TiO_2 - Cr_2O_3 Thermal-Sprayed Coatings for Metal-Seated Ball Valve Applications in Hydrometallurgy", Journal of Thermal Spray Technology, 25(5) (2016) 1068-1078.

- 60) **R. S. Lima**, B. R. Marple and P. Marcoux, "Thermal Gradient Behavior of TBCs Subjected to a Laser Gradient Test Rig: Simulating an Air-to-Air Combat Flight", Journal of Thermal Spray Technology, 25(1-2) (2016) 282-290.
- 59) **R. S. Lima**, D. Nagy and B. R. Marple, "Bond Coat Engineering Influence on the Evolution of the Microstructure, Bond Strength and Failure of TBCs Subjected to Thermal Cycling", Journal of Thermal Spray Technology, 24(1-2) (2015) 152-159.
- 58) E. Irissou, A. Dadouche and **R. S. Lima**, "Tribological Characterization of Plasma Sprayed CoNiCrAlY-BN Abradable Coatings", Journal of Thermal Spray Technology, 23(1-2) (2014) 252-261.
- 57) D. Poirier, J.-G. Legoux and **R. S. Lima**, "Engineering HVOF-sprayed Cr₃C₂-NiCr Coatings: the Effect of Particle Morphology and Spraying Parameters on the Microstructure, and High Temperature Wear Performance", Journal of Thermal Spray Technology, 22(2-3) (2013) 280-289.
- 56) C. V. Cojocar, D. Levesque, C. Moreau and **R. S. Lima**, "Performance of Thermally Sprayed Si/Mullite/BSAS Environmental Barrier Coatings Exposed to Thermal Cycling in Water Vapor Environment", Surface and Coatings Technology, 216 (2013) 215-223.
- 55) J. Mesquita-Guimarães, E. Garcia, P. Miranzo, M. I. Osendi, C. V. Cojocar and **R. S. Lima**, "Mullite-YSZ Multilayered Environmental Barrier Coatings Tested in Cycling Conditions under Water Vapour Atmosphere", Surface and Coatings Technology, 209 (2012) 103-109.
- 54) F. Tarasi, M. Medraj, A. Dolatabadi, **R. S. Lima** and C. Moreau, "Thermal Cycling of Suspension Plasma Sprayed Alumina-YSZ Coatings Containing Amorphous Phases", Journal of the American Ceramic Society, 95[8] (2012) 2614-2621.
- 53) S. Dimitrievska, M. N. Bureau, J. Antoniou, F. Mwale, A. Petit, **R. S. Lima** and B. R. Marple, "Titania-hydroxyapatite Nanocomposite Coatings Support Human Mesenchymal Stem Cells Osteogenic Differentiation", Journal of Biomedical Materials Research: Part A, 98A (2011) 576-588.
- 52) P. Fauchais, G. Montavon, **R. S. Lima** and B. R. Marple, "Engineering a New Class of Nano-based Microstructures from Agglomerated Nanostructured Particles, Suspensions and Solutions: An Invited Review", Journal of Physics D: Applied Physics, 44(9) (2011) 093001 (53pp) (invited review paper).
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- Temperature in Water Vapor Environment", Journal of Thermal Spray Technology, 20(1-2) (2011) 92-99.
- 49) E. Garcia, J. Mesquita-Guimarães, P. Miranzo, M. I. Osendi, C. V. Cojocar, Y. Wang, C. Moreau and **R. S. Lima**, "Phase Composition and Microstructural Responses of Graded Mullite/YSZ Coatings under Water Vapor Environments", Journal of Thermal Spray Technology, 20(1-2) (2011) 83-91.
- 48) P. Puetz, X. Huang, **R. S. Lima**, Q. Yang and L. Zhao, "Characterization of Transient Oxide Formation on CoNiCrAlY after Heat Treatment in Vacuum and Air", Surface and Coatings Technology, 205 (2010) 647-657.
- 47) B. Jeffery, M. Pepler, **R. S. Lima** and A. McDonald, "Bactericidal Effects of HVOF-sprayed Nanostructured TiO₂ on Pseudomonas aeruginosa", Journal of Thermal Spray Technology, 19(1-2) (2010) 344-349.
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- 44) **R. S. Lima** and B. R. Marple, "Toward Highly Sintering-Resistant Nanostructured ZrO₂-7wt%Y₂O₃ Coatings for TBC Applications by Employing Differential Sintering", Journal of Thermal Spray Technology, 17(5-6) (2008) 846-852.
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- 42) R. Soltani, T. W. Coyle, J. Mostaghimi, **R. S. Lima**, C. Moreau, "Thermo-physical properties of plasma sprayed Ytria Stabilized Zirconia Coatings", Surface and Coatings Technology, 202 (2008) 3954-3959.
- 41) **R. S. Lima** and B. R. Marple, "Nanostructured YSZ Thermal Barrier Coatings Engineered to Counteract Sintering Effects", Materials Science and Engineering A, 485 (2008) 182-193.
- 40) W. R. Chen, X. Wu, B. R. Marple, **R. S. Lima**, P. C. Patnaik, "Pre-oxidation and TGO Growth Behaviour of an Air-Plasma-Sprayed Thermal Barrier Coating", Surface and Coatings Technology, 202 (2008) 3787-3796.
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- 37) M. Gaona, **R. S. Lima**, B. R. Marple, "Influence of Particle Temperature and Velocity on the Microstructure and Mechanical Behaviour of High Velocity Oxy-Fuel (HVOF) Sprayed Nanostructured Titania Coatings", Journal of Materials Processing Technology, 198 (2008) 426-435.
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- 35) B. R. Marple, **R. S. Lima**, C. Moreau, S. E. Kruger, L. Xie, M. R. Dorfman, "Yttria-Stabilized Zirconia Thermal Barriers Sprayed Using $\text{N}_2\text{-H}_2$ and Ar-H_2 Plasmas: Influence of Processing and Heat Treatment on Coating Properties", Journal of Thermal Spray Technology, 16(5-6) (2007) 791-797.
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- 32) **R. S. Lima** and B. R. Marple, "Thermal Spray Coatings Engineered from Nanostructured Ceramic Agglomerated Powders for Structural, Thermal Barrier and Biomedical Applications: A Review", Journal of Thermal Spray Technology, 16(1) (2007) 40-63 (**invited review paper**).
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