

Ashish Ganvir List of Publications

1. Submitted/planned for 2022-2023, journal-refereed, Original research (A1)

2022-2023

- 1.1** K. Pandian, M. Neikter, F. Bahbou, **A. Ganvir**, T. Hansson, and R. Pederson; Fatigue behavior of low-temperature HIP treated EBM built Ti-6Al-4V, Submitted to Additive Manufacturing, in 2022
- 1.2** A. Hasani, M. Luya, S. Goel, S. Joshi, M. M Grazyna, A. Salminen, **A. Ganvir**; Laser interaction and associated effect on liquid feedstock plasma sprayed solid-state-battery LTO electrode, under preparation, 2022
- 1.3** A. Hasani, M. Luya, S. Goel, S. Joshi, J. Reuteler, M. M Grazyna, A. Salminen, **A. Ganvir** ; Fundamental understanding of solid-solid interfacial reactions at liquid feedstock processed LTO-Aluminum current collector and LTO-LLZO solid electrolyte interfaces using synchrotron experiments, under preparation, 2022
- 1.4** T. Kantonen, C. Nayak, S. Goel, E. Polatidis, J. Capek, A. Salminen, **A. Ganvir**; Processing of Novel Nickel free steel using laser powder bed fusion additive manufacturing, under preparation, 2022
- 1.5** C. Nayak, Kamboj, T. Kantonen, S. Goel, A. Salminen, **A. Ganvir** ; Bio-tribo corrosion and in-vitro assessment of laser powder bed fusion additively manufactured Novel Nickel free steels, under preparation, 2022
- 1.6** C. Nayak, Kamboj, T. Kantonen, S. Goel, N. Markocsan, A. Salminen, **A. Ganvir**; Surface modification of liquid feedstock plasma sprayed hydroxyapatite coatings by direct laser processing technique, under preparation, 2022
- 1.7** M. H. Nasab, C. de Formanoir, G. Masinelli, L. Schlenger, S. Van petegem, **A. Ganvir**, F. Marone, K. Wasmer, A. Salminen, R. Logé; Thermo-mechanical instabilities in Laser Powder Bed Fusion (LPBF): A coupled operando investigation by means of X-ray Imaging and Acoustic Emission, under preparation, 2022
- 1.8** C. de Formanoir, M. H. Nasab, G. Masinelli, **A. Ganvir**, K. Wasmer, S. Van petegem, F. Marone, A. Salminen, R. Logé; Healing of keyhole porosity by means of defocused laser beam remelting: operando observation by X-ray imaging and acoustic-emission-based detection, under preparation, 2022
- 1.9** C. Nayak, **A. Ganvir**, S. Joshi, S. Goel; Fundamental understanding of the influence of post-treatments of Laser Powder Bed Fusion (LPBF) 3D-printed Alloy 718, under preparation, 2022
- 1.10** J. Capek, **A. Ganvir**, T. Kantonen, S. Goel, A. Salminen, E. Polatidis; Microstructure and deformation behavior of microstructurally manipulated multi-phase laser powder bed fusion 3D-printed novel low nickel steels, under preparation, 2022

- 1.11** J. Capek, **A. Ganvir**, T. Kantonen, S. Goel, A. Salminen, E. Polatidis; In-situ deformation under compression and tension for microstructurally manipulated multi-phase laser powder bed fusion 3D-printed novel low nickel steels, under preparation, 2022

2. Published Journal article-refereed, Original research (A1)

2021

- 2.1** **A. Ganvir**, A. R. Jahagirdar, A. Mulone, L. Örnfeldt, S. Björklund, U. Klement, S. Joshi, “Novel utilization of liquid feedstock in high velocity air fuel (HVAF) spraying to deposit solid lubricant reinforced wear resistant coatings”, *Journal of Materials Processing and Technology*, Vol 295, 117203, 2021
- 2.2** **A. Ganvir**, S. Goel, S. Govindarajan, A. R. Jahagirdar, S. Björklund, U. Klement, S. Joshi, “Tribological performance assessment of Al₂O₃-YSZ composite coatings deposited by hybrid powder-suspension plasma spraying”, ‘*Surface and Coatings Technology*’, Volume 409, 15, 126907, 2021
- 2.3** **A. Ganvir**, S. Nagar, N. Markocsan, K. Balani, “Deposition of hydroxyapatite coatings by axial plasma spraying: influence of feedstock characteristics on coating microstructure, phase and mechanical properties”, *Journal of the European Ceramic Society*, Volume 41, Issue 8, pp 4637-4649, 2021,
- 2.4** **A. Ganvir**, M. Gupta, N. Kumar, N. Markocsan, “Effect of suspension characteristics on the performance of thermal barrier coatings deposited by suspension plasma spray”, Volume 47, Issue 1, pp 272-283, 2021

2020

- 2.5** Y. E. Zafer, S. Goel, **A. Ganvir**, A. Jansson, S. Joshi, Encapsulation of Electron Beam Melting Produced Alloy 718 to Reduce Surface Connected Defects by Hot Isostatic Pressing, *Materials* ,13(5), 1226, 2020

2019

- 2.6** P. Hameed, V. Gopal, S. Bjorklund, **A. Ganvir**, D. Sen, N. Markocsan, G. Manivasagam “Axial suspension plasma spraying: An ultimate technique to tailor Ti6Al4V surface with HA for orthopedic applications”, *Colloids and Surfaces B: Bio interfaces* 173, 806-815, 2019
- 2.7** W Algenaid, **A. Ganvir**, RF Calinas, J Varghese, KV Rajulapati, S Joshi, “Influence of microstructure on the erosion behavior of suspension plasma sprayed thermal barrier coatings” *Surface and Coatings Technology* 375, 86-99, 2019
- 2.8** **A. Ganvir**, S Björklund, Y Yao, S VSS Vadali, U Klement, S Joshi, “A Facile Approach to Deposit Graphenaceous Composite Coatings by Suspension Plasma Spraying” *Coatings* 9 (3), 171, 2019
- 2.9** **A. Ganvir**, N. Curry, R. Calinas, N. Markocsan, S. Joshi, “Experimental visualization of microstructure evolution during suspension plasma spraying of thermal barrier coatings” *Journal of the European Ceramic Society*, Vol 39, Issues 2–3, pp 470-481, 2019

2018

- 2.10** J. Ekberg, **A. Ganvir**, U. Klement, S. Creci, and L. Nordstierna, “The Influence of Heat Treatments on the Porosity of Suspension Plasma-Sprayed Yttria-Stabilized Zirconia Coatings,” *J. Therm. Spray Technol.*, pp. 1–11, Jan. 2018.
- 2.11** **A. Ganvir**, S. Joshi, N. Markocsan, and R. Vassen, “Tailoring columnar microstructure of axial suspension plasma sprayed TBCs for superior thermal shock performance,” *Materials and Design*, vol. 144, pp. 192–208, April 2018
- 2.12** **A. Ganvir**, V. Vaidhyanathan, N. Markocsan, M. Gupta, Z. Pala, and F. Lukac, “Failure analysis of thermally cycled columnar thermal barrier coatings produced by high-velocity-air fuel and axial-suspension-plasma spraying: A design perspective,” *Ceram. Int.*, vol. 44, no. 3, pp. 3161–3172, Feb. 2018.

2017

- 2.13** U. Klement, J. Ekberg, and **A. Ganvir**, “EBSD Analysis and Assessment of Porosity in Thermal Barrier Coatings Produced by Axial Suspension Plasma Spraying (ASPS),” *Mater. Sci. Forum*, vol. 879, pp. 972–977, 2017.
- 2.14** **A. Ganvir**, C. Kumara, M. Gupta, and P. Nylen, “Thermal Conductivity in Suspension Sprayed Thermal Barrier Coatings: Modeling and Experiments,” *J. Therm. Spray Technol.*, vol. 26, no. 1–2, pp. 1–12, Jan. 2017.

2016

- 2.15** **A. Ganvir**, N. Markocsan, and S. Joshi, “Influence of Isothermal Heat Treatment on Porosity and Crystallite Size in Axial Suspension Plasma Sprayed Thermal Barrier Coatings for Gas Turbine Applications,” *Coatings*, vol. 7, no. 1, p. 4, Dec. 2016.
- 2.16** **A. Ganvir** et al., “Influence of Microstructure on Thermal Properties of Axial Suspension Plasma-Sprayed YSZ Thermal Barrier Coatings,” *J. Therm. Spray Technol.*, vol. 25, no. 1–2, pp. 202–212, Jan. 2016.

2015

- 2.17** **A. Ganvir**, N. Curry, S. Bjorklund, N. Markocsan, and P. Nylen, “Characterization of Microstructure and Thermal Properties of YSZ Coatings Obtained by Axial Suspension Plasma Spraying (ASPS),” *J. Therm. Spray Technol.*, vol. 24, no. 7, pp. 1195–1204, Jun. 2015.
- 2.18** **A. Ganvir**, N. Curry, S. Govindarajan, and N. Markocsan, “Characterization of Thermal Barrier Coatings Produced by Various Thermal Spray Techniques Using Solid Powder, Suspension, and Solution Precursor Feedstock Material,” *Int. J. Appl. Ceram. Technol.*, Sep. 2015.
- 2.19** **A. Ganvir**, N. Curry, N. Markocsan, P. Nylén, and F.-L. Toma, “Comparative study of suspension plasma sprayed and suspension high velocity oxy-fuel sprayed YSZ thermal barrier coatings,” *Surf. Coat. Technol.*, vol. 268, pp. 70–76, Apr. 2015.

3. Conference proceedings & presentations (A4)

2022

- 3.1 A. Ganvir**, “Additive and related layer-by-layer manufacturing processes at University of Turku” in laser forum, organized by Finnish Welding Society, September 7- 8, 2022 Hotelli Aquarius, Uusikaupunki, Finland, 2022
- 3.2 A. Ganvir**, “Additive manufacturing at University of Turku” in Webinar on Materials Economy and AI, organized by Finnish Indian Consortia for Research and Education (FICORE), May 13, 2022, Finland, 2022
- 3.3 A. Ganvir**, Additive manufacturing of next-generation solid-state-lithium-batteries, in seminar on Critical Materials in Circular Economy of Cities Academy Programme, organized by Academy of Finland, Helsinki, September 21-22, Helsinki, 2022

2021

- 3.4 A. Ganvir**, “Additive Manufacturing and Surface Engineering” in Webinar on Breakfast with Professors, organized by City of Turku, Finland, May 21, 2021, Turku, Finland, 2021

2020

- 3.5 A. Ganvir**, “Additive Manufacturing in Aerospace” in seminar on Additive Manufacturing, organized by Centre for Additive Manufacture – Metal (CAM2), Gothenburg, Sweden, February 27th, 2020

2019

- 3.6** W. Algenaid, **A. Ganvir**, S. Joshi, M. Gupta, “Influence of Microstructure on the Erosion Behavior of Suspension Plasma Sprayed Thermal Barrier Coatings” in International Thermal Spray Conference (May 26-29, 2019, Yokohama, Japan), Yokohama, Japan 2019

2018

- 3.7 A. Ganvir**, N. Markocsan, K. Balani, S. Nagar, “Axial suspension plasma sprayed hydroxyapatite coatings: Understanding the relationship between process parameters, microstructure and properties” in International Thermal Spray Conference (May 07-10, 2018, Orlando, Florida, USA), Orlando, USA 2018
- 3.8** N. Markocsan, S. Bjorklund, **A. Ganvir**, Axial Suspension Plasma Sprayed Titanium Oxide Coatings N. Markocsan, M. Gupta, Xin-Hai Li , B. Kellman, O. Aranke, A. Ganvir, “Effect of spray parameters on porosity and lifetime of suspension plasma sprayed thermal barrier coatings”, in International Thermal Spray Conference (May 07-10, 2018, Orlando, Florida, USA), Orlando, USA 2018
- 3.9 A. Ganvir**, R. Calinas, N. Markocsan, N. Curry, S. Joshi, “Evolution of microstructure in suspension plasma sprayed TBCs” in International Thermal Spray Conference (May 07-10, 2018, Orlando, Florida, USA), Orlando, USA 2018

2017

- 3.10** **A. Ganvir**, N. Markocsan, M. Gupta, R. F. Calinas, N. Vitorino, J. Ekberg, F. Lukac, “Influence of suspension characteristics on microstructure of axial suspension plasma sprayed coatings” in International Thermal Spray Conference (June 07–09, 2017, Düsseldorf, Germany), Düsseldorf, Germany, 2017
- 3.11** **A. Ganvir**, N. Markocsan, M. Gupta, R. Calinas “Understanding the functional performance of columnar TBCs produced by axial suspension plasma spraying” in Thermal Spray of Suspensions & Solutions Symposium (TS4) (September 13–17, 2017, GE Global research center, Niskayuna, USA), Niskayuna, NYC, USA, 2017
- 3.12** **A. Ganvir**, N. Markocsan, R. Vassen “Sintering behavior of columnar thermal barrier coatings produced by axial suspension plasma spraying” in European congress and exhibition on advanced materials and processes (EUROMAT), September 17–22, 2017, Thessaloniki, Greece
- 3.13** **A. Ganvir**, N. Markocsan, R. Vassen, S. Joshi “Sintering behavior of columnar thermal barrier coatings produced by axial suspension plasma spraying” in Material science and Technology (MS & T), October 8-12, 2017, Pittsburgh, Pennsylvania, USA

2016

- 3.14** **A. Ganvir**, N. Markocsan, F. Lukac, Z. Pala “Influence of microstructure on thermocyclic fatigue and thermal shock resistance of axial SPS TBCs” in International Thermal Spray Conference (May 11–14, 2015, Shanghai, China), Shanghai, China, 2016
- 3.15** **A. Ganvir**, C. Kumara, M. Gupta, and P. Nylén, “Thermal Conductivity in Suspension Sprayed Thermal Barrier Coatings: Modelling and Experiments,” in Thermal Spray 2016: Proceedings from the International Thermal Spray Conference (May 11–14, 2015, Shanghai, China), Shanghai, China, 2016

2015

- 3.16** **A. Ganvir**, N. Markocsan, P. Newbatt “Influence of Coating Morphology on Thermal Properties and Lifetime of Axial Suspension Plasma Sprayed Thermal Barrier Coatings” in Thermal Spray of Suspensions & Solutions Symposium (TS4), December 02 - 03, 2015, Montreal, Canada
- 3.17** **A. Ganvir**, N. Curry, N. Markocsan, P. Nylen, M. Vilemova, and Z. Pala, “Influence of Microstructure on Thermal Properties of Columnar Axial Suspension Plasma Sprayed Thermal Barrier Coatings,” in Thermal Spray 2015: Proceedings from the International Thermal Spray Conference (May 11–14, 2015, Long Beach, California, USA), Long Beach, California, 2015, pp. 498–505.

2014

- 3.18** S. Goel, **A. Ganvir**, N. Markocsan “Image analysis of microstructural features of Suspension Plasma Sprayed coatings” in 6th Asian Thermal Spray Conference, November 24-26, 2014, Hyderabad, India

- 3.19** P. Nylén, N. Curry, **A. Ganvir**, N. Markocsan “Suspension Plasma Sprayed Thermal Barrier Coatings” in 6th Asian Thermal Spray Conference, November 24-26, 2014, Hyderabad, India
- 3.20** **A. Ganvir**, N. Curry, G. Sivakumar, N. Markocsan, S. Joshi, P. Nylén “New Thermal Barrier Coatings Using Fluid Feedstock Material” in 28th International Conference on Surface Modification Technologies (SMT28-2014), June, 16-18, 2014, Tampere, Finland
- 3.21** **A. Ganvir**, N. Markocsan, P. Nylén “Suspension plasma spraying: A potential technique to achieve unique microstructures for Thermal Barrier Coatings” in 6th International Workshop on Suspension and Solution Thermal Spraying (S2TS), October, 8-9, 2014, Tours, France

4. Theses (G)

- 4.1** **A. Ganvir**, “Design of suspension plasma sprayed thermal barrier coatings”, PhD thesis, June 2018.
- 4.2** **A. Ganvir**, “Microstructure and Thermal Conductivity of Liquid Feedstock Plasma Sprayed Thermal Barrier Coatings,” Licentiate thesis, February 2016.
- 4.3** **A. Ganvir**, “Comparative analysis of Thermal Barrier Coatings produced using Suspension and Solution Precursor Feedstock” Master’s thesis, May 2014.
- 4.4** **A. Ganvir**, Microstructural & Mechanical properties of YSZ & GDC doped electrolyte used in the SOFC, Bachelor’s thesis, November 2012.